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ORIGINAL PAPER

Pathological Gamblers: Inpatients' versus Outpatients' Characteristics

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Abstract Several researchers and clinicians have questioned the advantages and disadvantages of inpatient and outpatient treatment for people suffering from pathological gambling. This study compares the characteristics of pathological gamblers seeking inpatient and outpatient treatment. A total of 233 pathological gamblers (inpatients = 134, outpatients = 99) participated in the study. Results show that inpatients have more severe gambling problems than those receiving outpatient services. Similar results were obtained on most other related variables such as anxiety, depression, alcohol consumption, and comorbidity. These results are discussed in terms of the costs and benefits of these two treatment modalities.

Keywords Inpatient · Outpatient · Pathological gamblers · Characteristics of gamblers · Severity of gambling problems

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Introduction

The effectiveness and the cost of treatment for addiction problems have long been the subject of research. Two major treatment modalities are available to individuals seeking help: inpatient or outpatient facilities. For inpatient treatment, the individual receives accommodation for a period of 21–28 days. Alternately, outpatient treatment is provided in a clinic that usually does not offer accommodation. It generally consists of 1- or 2-h weekly sessions lasting several weeks. In light of recent attention given to gambling problems, questions have been raised concerning the necessity of these two types of treatment. No study has yet assessed the characteristics of gamblers in relation to one or the other modality. However, results of an unpublished study evaluating a treatment program for gamblers (Audet et al., 2003) suggested that inpatients treatment have more severe problems than outpatients. Also, 95% of individuals receiving inpatient treatment completed the program, compared to only one third of the outpatient group.

Before comparing the relative efficacy of the two treatment modalities, it may prove useful to first identify the characteristics of individuals seeking treatment (Annis, 1986). In comparison to the treatment of alcoholism, an increase in alcohol consumption is associated with a significant increase in hospital inpatient treatment for alcoholism (Adrian, Ferguson, & Dini, 1998). Historically, inpatient treatments were considered the best option for alcoholics; patients admitted to the hospital were referred by professionals and had severe and chronic alcohol problems with acute medical and psychiatric problems (Annis, 1986). Patients with more severe substance abuse disorders, as well as emotional and behavioural disorders are still more likely to receive inpatient treatment. However, these observations concern referrals to inpatient care. Since many patients refer themselves into treatment, it would be interesting to see whether these same client characteristics affect treatment choice in a broader admission sample. No study has yet examined the characteristics of pathological gamblers seeking inpatient and outpatient treatment.

The objective of this study is to determine and compare the characteristics of gamblers receiving inpatient treatment, as well as of those receiving outpatient treatment. It intends to answer the following questions: (1) Do the characteristics of pathological gamblers differ according to the treatment modality they receive? (2) Do individuals that succeed, fail or abandon their treatment share the same characteristics whether they are treated as in or outpatients?

Methods

Participants

The participants were pathological gamblers diagnosed with the DSM-IV (APA, 1994). They were enrolled in one of the five treatment centres available in the greater Quebec City area. Three centres offer inpatient and two centres offer outpatient services. All of them are specialized in the treatment of problem gambling. A total of 233 gamblers participated in the study; 134 participants received inpatient treatment and 99 received outpatient treatment. They were volunteers and chose the type of treatment themselves. For practical and clinical reasons, gamblers were not randomly assigned to one of the two treatment modalities. Therefore, the relative

efficacy of both modalities is only briefly presented on an exploratory basis. Since the study took place in a natural setting, it was impossible to determine the exact number of individuals who refused to participate.

Treatment

Inpatient treatment[1] was based on residence for 21–28 days, whereas outpatient treatment consisted of therapy meetings of 1–2 h per week for an average of 15 weeks. Participants could also join a self-help group if they wanted to. Both in and outpatient treatments used cognitive-behavioural treatment methods (adapted from Ladouceur, Sylvain, Boutin, & Doucet, 2002).

Procedure

Participants were recruited between October 2002 and May 2004. Potential participants were assessed for pathological gambling according to the DSM-IV (APA, 1994) and on several variables using a semi-structured interview and standardized questionnaires. The same measures were used before and after treatment, which, in the latter case, took place immediately after the last session was conducted.

Dependent Variables

1. Characteristics of the Gambler

(a) *DSM-IV criteria for pathological gambling*: The number of DSM-IV criteria (time frame: 1 week) that were met for a diagnosis of pathological gambling was assessed through a clinical interview (score of 0–10) (APA, 1994). A score of 5 or more indicated pathological gambling.
(b) *Perception of control*: Participants rated their perception of control over their gambling problem on a scale of 0–100. This provided further information regarding clinical changes. A score of 70 or more indicated significant clinical change criteria (Ladouceur et al., 2001, 2003; Sylvain, Ladouceur, & Boisvert, 1997).
(c) *Self-efficacy perception*: After describing 1–3 personally relevant, high-risk situations, participants rated the extent of their belief that they could refrain from gambling in these situations, on a scale of 0–100. A score of 70 or more indicated significant clinical change criteria (Ladouceur et al., 2001, 2003; Sylvain et al., 1997).
(d) *Urge to gamble*: Participants indicated their desire to gamble on a scale of 0–100. A score of 30 or less indicated significant clinical change criteria (Ladouceur et al., 2001, 2003; Sylvain et al., 1997).
(e) *Frequency of gambling*: Participants indicated: (a) the number of gambling sessions, (b) the number of hours spent gambling, and (c) the total amount of money spent on gambling during the previous week (Ladouceur et al., 2001, 2003; Sylvain et al., 1997).
(f) *Diagnostic Interview for Pathological Gambling-Revised (DIPG-R)* (Ladouceur et al., 2002): This semi-structured interview permitted exploration of

[1] The three centres that offer inpatient treatment were Maison Claude Bilodeau, Centre CASA and Maison au seuil de l'harmonie; whereas the two centres that offer outpatient treatment were Centre de réadaptation Ubald-Villeneuve and Centre de réadaptation ALTO.

a variety of data associated with the participant's gambling problem (onset, maintenance, duration, severity, and consequences), other addictions (present and past) and general history (family and personal) (see Ladouceur et al., 2002).

2. Characteristics Associated with Personality Type and Psychopathology

(a) Comorbidity with other mental health related problems (other addictions and suicidal behaviour) was measured by the *DIPG-R* described above.
(b) Comorbidity with personality disorders was assessed by the *Millon Clinical Multiaxial Inventory-III (MCMI-III)* (Millon, Millon, & Davis, 1994). This is a self-report instrument designed to help the clinician assess *DSM-IV*-related personality disorders and clinical syndromes. The instrument is useful in assessing Axis I and Axis II disorders based on the new *DSM-IV* classification system and identifying personality disorders that underlie a patient's present symptoms.
(c) Impulsiveness was assessed by the *Eysenck Impulsiveness Scale (EIS)* (Eysenck & Eysenck, 1977). This 43-item scale evaluates four subscales of impulsivity: non-planning, risk-taking, narrow impulsivity and liveliness.
(d) The *Beck Anxiety Inventory (BAI)* (Beck, Epstein, Brown, & Steer, 1988) lists 21 items measuring the intensity of cognitive, affective and somatic anxious symptoms experienced during the past week. Scores range from 0 to 63. A validated French version of the *BAI* was used (see Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994).
(e) The *Beck Depression Inventory (BDI)* includes 21 items covering the principal depression symptoms experienced during the past week (Beck, Steer, & Brown, 1996). Scores range from 0 to 63. A validated French version of the *BDI* was used (see Bourque & Beaudette, 1982).
(f) Alcohol consumption and dependence during the last 12 months were evaluated by the *DEBA-Alcohol* questionnaire *(Screening/Evaluation of the need for help—Alcohol)*. This questionnaire screens for at-risk consumers and assesses the severity of consumption (Tremblay, Rouillard, April, & Sirois, 2001). The degree of alcohol dependence was evaluated by a French version of the *Severity of Alcohol Dependence Data (SADD)* (Raistrick, Dunbar, & Davidson, 1983), integrated into the *DEBA-Alcohol* questionnaire.
(g) Drug consumption and dependence during the last 12 months were evaluated by the *DEBA-Drugs* questionnaire *(Screening/Evaluation of the need for help—Drugs)*. This questionnaire screens for at-risk consumers and assesses the severity of consumption (Tremblay, Rouillard, April, & Sirois, 2001).

3. Socio-Demographic Characteristics

Participants gave information about their age, sex, nationality, marital status, occupation, profession, income etc.

Results

Objective 1: Do pathological gamblers' characteristics differ according to their treatment modality?

Socio-Demographic Data

The participants ($N = 233$) were primarily men (inpatients = 74.6%, outpatients = 70.7%) with an average age of 42.7 for inpatients ($SD = 11.2$, $n = 132$) and 43 for outpatients ($SD = 12.9$, $n = 97$). Fewer inpatients had jobs ($\chi^2(1, 153) = 4.08$, $P < .05$). No significant differences were found between the groups for marital status and for level of education.

A greater number of inpatients (68.7%) than outpatients (25%) had already received help for gambling, $\chi^2(1, 195) = 33.098$, $P < .001$. However, more inpatients ($M = 1.84$, $SD = 1.42$, $n = 37$) than outpatients ($M = 1.15$, $SD = .376$, $n = 13$) have dropped out of treatment, $F(1, 46.226) = 7.124$, $P = .01$).

Gambling Variables

All participants met the DSM-IV criteria for pathological gambling. The total DSM-IV score was higher for inpatients ($M = 8.0$, $SD = 1.7$, $n = 127$) than for outpatients ($M = 6.7$; $SD = 1.6$, $n = 99$), $F(1, 224) = 32.132$, $P < .001$). During the last week prior to entering treatment, inpatients ($M = 1.96$, $SD = 2.25$, $n = 113$) gambled more frequently than outpatients ($M = .94$, $SD = 1.65$, $n = 81$), $F(1, 192) = 11.97$, $P < .001$. Inpatients ($M = 7.51$, $SD = 9.93$, $n = 115$) also gambled more hours than outpatients ($M = 2.34$, $SD = 5.10$, $n = 80$), $F(1, 193) = 18.341$, $P < .001$. Inpatients ($M = \$791.55$, $SD = \$2{,}294.74$, $n = 117$) wagered more money than outpatients ($M = \$272.85$, $SD = \$871.22$, $n = 80$); $F(1, 160) = 4.937$, $P < .05$. Outpatients ($M = 39\%$, $SD = 26.8$, $n = 96$) reported a perception of greater control than inpatients ($M = 27.3\%$, $SD = 30$, $n = 116$), $F(1, 210) = 8.677$, $P < .01$.

Inpatients reported greater negative consequences of gambling. They reported more harmful effects on their work, $\chi^2(3, 173) = 16.615$, $P < .001$, more have lost their job (inpatients = 22%, outpatients = 3%), $\chi^2(1, 83) = 5.784$, $P < .05$, $P = .023$, and were more depressed, $\chi^2(3, 196) = 29.015$, $P < .001$.

The average amount of money lost by inpatients ($M = \$150{,}257.73$, $SD = \$213{,}882.73$, $n = 97$) was higher than that lost by outpatients ($M = \$50{,}500$, $SD = \$66{,}613.22$, $n = 79$), $F(1, 118.166) = 18.856$, $P < .001$. In addition, a higher percentage of inpatients said that they lacked the funds to meet their everyday needs (inpatients = 22.9%, outpatients = 11%), $\chi^2(1, 187) = 4.473$, $P < .05$. Finally, though a greater number of inpatients had declared bankruptcy (inpatients = 39.4%, outpatients = 23.2%), $\chi^2(1, 191) = 5.656$, $P < .05$, more outpatients abandoned their leisure activities because of gambling (inpatients = 7.6%, outpatients = 17.1%), $\chi^2(1, 187) = 3.964$, $P < .05$.

The reasons that led participants to choose one modality of treatment over the other differed for the two groups. Outpatients preferred this modality for the following reasons: to maintain their work (38.6%), to remain close to their family, spouse or friends (27.7%), they did not consider their problem severe enough for inpatient treatment (25.3%), to keep their daily activities (24.1%), could not afford paying for inpatient treatment (8.4%) and inpatient treatment did not work for them (5%). Inpatients chose this method for the following reasons: outpatient treatment did not work for them (26%), they needed to concentrate solely on their gambling problem (25%), they wanted support and supervision on a 24 h a day basis (24%),

they preferred to stay away from gambling activities (21%), and they wanted to engage in a process that they considered to be their ''last chance'' (14%).

Comorbidity

The percentage of patients having three problems on Axis 1 was higher for inpatients (inpatients = 57.5%, outpatients = 20.8%), $\chi^2(1, 216) = 29.60$, $P < .001$. The percentage of participants having a schizoid-related problem was higher for inpatients (9.7%) than for outpatients (1%), $\chi^2(1, 232) = 7.5$, $P < .01$ and the same held true for participants with alcohol abuse problems (inpatients = 32.8%, outpatients = 12.2%), $\chi^2(1, 232) = 13.106$, $P < .001$.

Inpatients suffered from a greater number of personality disorders (Axis 2), such as antisocial personality disorder, $\chi^2(1, 232) = 4.399$, $P < .05$, borderline personality, $\chi^2(1, 232) = 12.615$, $P < .001$ and non-specific personality disorder, $\chi^2(1, 232) = 8.697$, $P < .01$. Nonetheless, more outpatients were afflicted with histrionic personality disorder, $\chi^2(1, 232) = 5.565$, $P < .05$.

On the Beck Depression Inventory, inpatients had a significantly higher score ($M = 24.5$, $SD = 10.6$, $n = 129$) than outpatients ($M = 17.5$, $SD = 9.9$, $n = 99$), $F(1, 226) = 25.154$, $P < .001$. A significant difference was found in the percentage of patients who had thought about committing suicide over the past 12 months (inpatients = 67.3%, outpatients = 38.6%), $\chi^2(1, 187) = 15.393$, $P < .001$. A greater number of inpatients had attempted suicide (22.8% compared to 3.9%), $\chi^2(1, 177) = 12.264$, $P < .001$. On the Beck Anxiety Inventory, inpatients also obtained a higher score ($M = 19.8$, $SD = 12.7$, $n = 129$) than outpatients ($M = 14.2$, $SD = 10.5$, $n = 98$), $F(1, 225) = 12.717$, $P < .001$.

Alcohol consumption was higher for inpatients on number of alcoholic beverages consumed per day ($M = 4.9$ compared to $M = 3.2$, $F(1, 130) = 9.625$, $P < .01$) and per week ($M = 15$ compared to $M = 9.3$, $F(1, 123) = 5.39$, $P < .05$). Inpatients reported more drug-related problems (inpatients = 14.7%, outpatients = 1.6%), $\chi^2(1, 158) = 7.623$, $P < .01$ and alcohol-related problems (inpatients = 24%, outpatients = 4.7%), $\chi^2(1, 160) = 10.478$, $P < .01$.

On the Eysenck Impulsivity Questionnaire, inpatients had a higher score ($M = 25.1$, $SD = 7.4$, $n = 129$) than outpatients ($M = 21.4$, $SD = 6.4$, $n = 98$), $F(1, 225) = 15.987$, $P < .001$.

Post-treatment Evaluation (Differences Between Pre-treatment and Post-treatment)

Treatment Outcomes

Since participants were not randomly allocated to groups, the relative impact of treatment is presented on an exploratory basis. The DSM-IV score was significantly reduced between the pre- and the post-treatment for both inpatients, $F(1, 90) = 95.96$, $P < .001$ and outpatients $F(1, 33) = 310.125$, $P < .001$. However, at post-treatment, inpatients' DSM-IV score was higher than that of outpatients, $F(1, 222) = 23.966$, $P < .001$. For both groups, the score was lower than 5, that is, lower than the threshold for pathological gambling diagnosis.

The perception of control over their gambling problem increased for both groups from pre- to post-treatment evaluation: for inpatients, $F(1, 91) = 194.535$, $P < .001$ and for outpatients, $F(1, 33) = 56.678$, $P < .001$, and was high (80.6% and 82.3%, respectively). The urge to gamble decreased from pre- to post-treatment evaluation for inpatients, $F(1, 88) = 49.005$, $P < .001$, as well as for outpatients, $F(1, 33) = 13.472$, $P < .001$. The ANCOVA indicated no difference between inpatients and outpatients during the post-test. Perception of efficacy significantly increased for both outpatients, $F(1, 28) = 17.357$, $P < .001$ and, particularly, for inpatients, $F(1, 100) = 39.741$, $P < .001$, but there was no difference between the two groups during the post-test (76% and 77%, respectively).

Discussion

This study compared the characteristics of pathological gamblers treated as inpatients or outpatients. Results indicate that inpatients had more severe problems than outpatients. This severity issue amongst inpatients was found on most variables. Inpatients distinguished themselves from outpatients on several gambling related variables as well as on comorbid problems. This confirms observations reported by Audet et al. (2003) and by Nielsen and Rojskjaer (2005).

These results may be interpreted in the following lines of thought. First, when patients perceive their problems as very severe, they may spontaneously believe that they need intensive care. This may explain the positive results obtain in the inpatient treatment modality (see Bandura, 1997). Second, personal choice about a specific treatment modality needs to be supported by empirical data. Random allocation to inpatient and outpatient treatment will determine what is the best match in order to obtain the best results. But such a procedure creates ethical problems that may refrain scientific inquiry.

At the end of the treatment, significant improvements were found for both inpatients and outpatients. All participants benefited from the therapy. However, the interpretation of this finding requires caution. While the protocol was not designed to compare the relative effectiveness of the two methods of treatment, a rigorous study would have required random assignment of participants to one group or the other. In this study, participants themselves chose the method of treatment. Moreover, a control group would have been required in order to control for the effect of the treatment.

Each modality offers advantages and disadvantages. If the needs and personality of the patients are clearly identified, it may be possible to match them according to their profile and their specific needs. Several authors suggest using this matching of patients (Annis, 1986; Finney, Hahn, & Moos, 1996; Rychtarik et al., 2000). Such a procedure, through improving the patient's satisfaction, could reduce dropouts and lower treatment costs.

This study identified the characteristics of two groups of patients and followed their development for a short time after their treatment ended. Inpatients presented more severe problems than outpatients. This was the first study that compared pathological gamblers benefiting from inpatient and outpatient services.

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