Frequency of pathological gambling among substance abusers under treatment

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Abstract

Objective
To investigate the frequency of pathological gambling among alcohol and other substance abusers who sought specialized treatment.
Methods
Seventy-four outpatients from three different substance abuse treatment services were interviewed. The South Oaks Gambling Screen (SOGS) scale was used for the diagnosis of pathological gambling. The diagnosis of alcohol and other substances abuse was established according to the DSM-IV criteria and the Short Alcohol Dependence Data (SADD) scale. The Portuguese version of the Self-Report Questionnaire (SRQ) scale was used to detect psychiatric symptoms and the Center for Epidemiological Studies Depression Scale (CES-D) for depressive symptoms. Average scores obtained from the application of these scales were compared using the Student t-test.
Results
All subjects met the criteria for drug abuse, 61.6% met the alcohol dependence criteria, 60.3% for cocaine/crack, and 34.2% for cannabis. According to the SOGS scale, the majority of drug addicts (70.3%) were classified as social gamblers, 10.8% as problem gamblers and 18.9% as pathological gamblers. Psychiatric and depression symptoms were found in the sample. Pathological gambling patients showed more depression symptoms than non-pathological gambling patients.
Conclusions
A high frequency of pathological gambling was found among the drug addicts interviewed. It is emphasized the importance of investigating pathological gambling among patients under treatment of drug abuse and to include strategies for the treatment of this disorder.

INTRODUCTION

Pathological gambling can be defined as the recurring behavior of gambling on games of chance despite the negative consequences resulting from this activity. The individual loses control over the game, becoming incapable of controlling the time and money spent, even when losing. The American Psychiatry Association (APA) recognized pathological gambling as an impulse control disorder in 1980 in the DSM-III - Manual for the Statistical Diagnosis of Mental Disorders. Since then, this disorder has gained in importance as its prevalence has grown in many countries,[15] mainly as a consequence of the growing availability of games of chance. Besides the traditional horse race and card game betting schemes, new games have been introduced in the market such as bingo halls and electronic games.

A large number of studies point out to the similari-

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ties between pathological gambling and drugs. Custer[3] reported that the dynamics and the psychological factors which lead to pathological gambling are described as similar to those that lead to drug abuse. The comorbidity between these two disorders[18] is high and it has been suggested that there is a common genetic factor.[17]

Some studies have been conducted among alcohol and other drugs users and addicts to evaluate how far these patients are involved with betting on games of chance. Some studies suggest that pathological gambling is four to 10 times more frequent among drug addicts when compared to the general population. A study of 276 patients being treated for drug addiction in the United States showed that 33% of these patients met the criterion for pathological gambling. Lesieur,[10] in a study to identify whether there was a correlation between alcohol and other drug abuse and pathological gambling, observed that, of the patients being treated for alcohol and other drug abuse, 9% were diagnosed as pathological gamblers and 10% as problem gamblers. Eight percent of pathological gamblers were seen among cocaine-dependent patients under treatment.[4]

Petry,[12] in a study which sought to analyze psychiatric symptoms in substance abusers, divided this population in two samples: one of subjects with gambling problems and another of those without gambling problems. Of the 103 subjects interviewed, 30.1% were identified as possible pathological gamblers according to South Oaks Gambling Screen scale (SOGS). It was observed that these subjects showed greater comorbidity than the substance addicts who were not pathological gamblers. The most frequent disorders were somatization, obsessive-compulsive disorder, hostility, and paranoia.

This data points out to the importance of diagnosing pathological gambling among substance addicts. The comorbidity with other disorders seems to be related to case severity and can affect the treatment.

Significant alcohol and other drug abuse can also be found among pathological gamblers. A high use of psychoactive substances was found among pathological gamblers being treated in the United States. Ramirez et al[13] found alcohol and other drug abuse among 39% of pathological gamblers in the year preceding their admission to treatment, 47% reported drug abuse in their lifetime, 50% reported alcohol and other drug abuse by at least one of their biological parents and 36% by one or more siblings. Twenty-three percent admitted to having parents with pathological gambling problems. There is also a correlation between gambling and drug abuse between patients' siblings. Ibáñez et al,[7] in a study aimed at investigating psychiatric comorbidity in 69 pathological gamblers, reported that 62.3% of them showed some form of associated disorder, and that 33.3% were alcohol or otherwise drug-dependent. This comorbidity came in second, following personality disorders, which were seen in 42% of the gamblers.

In Brazil, despite the increase in availability of games of chance, especially bingo halls and electronic games, there are no epidemiological studies on the prevalence of gambling in the general population. Despite the large number of programs for treating drug abuse in the country, there are no studies on pathological gambling in this population. Based on the high prevalence of comorbidity in these two disorders, the aim of this study was to assess the frequency of pathological gambling in patients seeking specialized treatment for alcohol and other drug abuse, besides examining association with depression and anxiety symptoms.

METHODS

The sample consisted of 74 drug addicts that sought treatment in two public care services run by a public university: Program for Counseling and Treatment of Addiction (PROAD) and Alcohol and Drug Research Unit (UNIAD); as well as in a group of Narcotics Anonymous (NA).

Of the 74 study subjects, 34 were recruited through PROAD, 36 through UNIAD and four through NA. Interviews were conducted only in patients aged more than 18 years who had been under treatment for a maximum of one month and who were not intoxicated at the moment of the interview. Two interview questionnaires were disregarded because subjects had consumed cannabis within less than six hours prior to the interview, and one interview questionnaire was disregarded because the interview was interrupted.

The SOGS[11] was used in a version translated and adapted to Portuguese, to which were added questions concerning socio-demographic data, length of time with gambling problems, substance abused which led to the need for treatment, start age and length of time of problems related to substance use. Alcohol and other drug addiction was evaluated according to DSM-IV criteria and Short Alcohol Dependence Data (SADD)[8] questions were used to estimate alcohol consumption.

The adapted version of the Self-Report Questionnaire (SRQ) scale[6] was used to evaluate psychiatric symptoms and the Center for Epidemiological Stud-

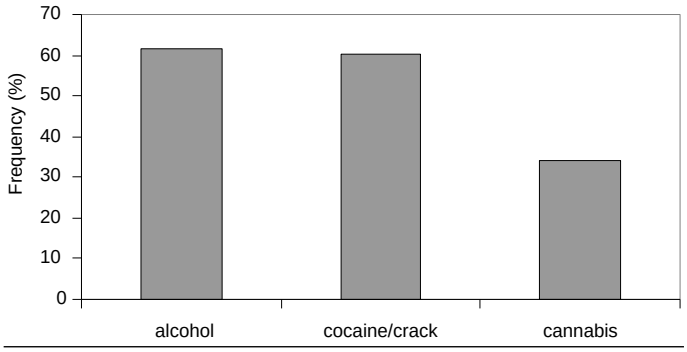

Figure 1 - Frequency of diagnosis of alcohol, cocaine/crack and cannabis dependence.

ies Depression Scale (CES-D)[16] was applied to detect depression symptoms.

The patients were interviewed individually during the first month of treatment, on a day they came in for treatment. The instruments were applied by two psychology students who had previously been trained. These students introduced themselves to the patients, explained the study objective and requested their collaboration in answering some questions. If agreed, patients were asked to sign a consent form in accordance with the Unifesp Ethics Committee requirements, allowing data use for research purposes. Filling out each questionnaire took 20 minutes on the average.

Subjects who met three or more DSM-IV drug dependence criteria were considered addicted. Alcohol dependence was rated as high, intermediate, and low according to SADD criteria: low dependence for scores between one and nine; intermediate dependence for scores between 10 and 19; and high dependence for scores above 20.

Subject scoring five or more on the SOGS scale were considered pathological gamblers. Subjects scoring three or four on the SOGS scale were considered as problem gamblers.

Using the SRQ scale, subjects were considered to have psychiatric symptoms when they answered positively to eight or more questions. Subjects with a score over 16 on the CES-D were considered to have depressive symptoms. The average scores obtained on these scales were compared using the Student t-test.

Addicted subjects were compared in relation to the following variables: if they fell within the criteria for pathological gambling and problem gambling, socio-demographic data, type of game played, drugs used and the presence of psychiatric and depressive symptoms.

RESULTS

The majority of the addicted study subjects were males (89.2%) with an average age of 29.3 years (standard deviation ±10.3 years), ranging between 18 and 78 years old. Of study subjects 76.7% were single, 20.5% were married, 2.7% were separated. In relation to schooling, 20.3% had not completed basic education, 36.5% had basic education, 37.9% had high school education and 5.4% had university education. Twenty-three percent of those interviewed reported they did not have a religious belief and 45.9% were Roman Catholics. With regard to occupation, 52.7% had some sort of paid occupation and 32.4% had full-time jobs. It was noted that 36.5% were unemployed. The median for wages reported was US$571.00, ranging from US$0.00 to US$4,286.00.

The interviewees met the criterion for dependence on different substances. According to the SADD scale, 45.9% were classified as having high alcohol dependence, 23% intermediate dependence, 20.3% low dependence and only 10.8% did not meet the criterion for dependence on this substance. According to the DSM-IV, 61.6% met criteria for alcohol addiction, 60.3% for cocaine/crack and 34.2% for cannabis, as shown in Figure 1. It is worth mentioning that an individual can meet addiction criteria for more than one substance.

The analysis of the SOGS scale revealed that 18.9% of the addicts were classified as pathological gamblers, 10.8% as problem gamblers, and 70.3% as social gamblers.

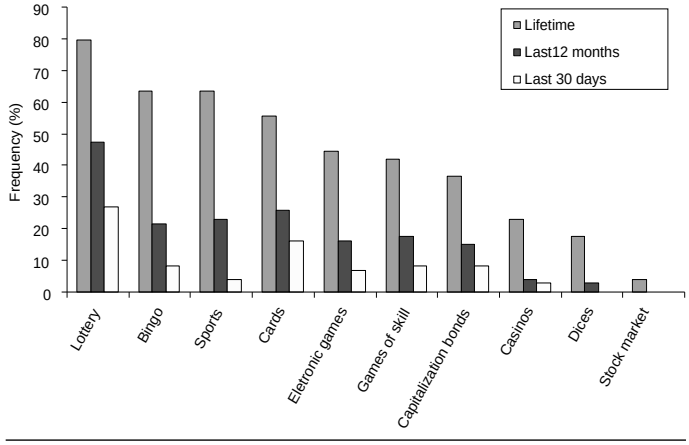

Figure 2 - Frequency of games of chance played by substance addicts in their lifetime, in the last 12 months and in the last 30 days.

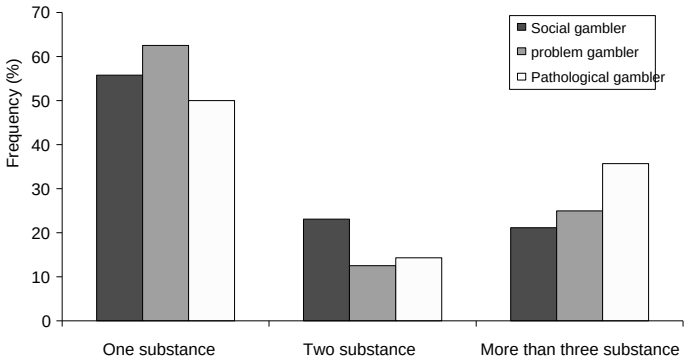

Figure 3 - Number of psychoactive substances which motivated addicts to seek treatment classified by social gamblers, problem gamblers and pathological gamblers.

Figure 2 shows the percentage of games played by the addicts during their lifetime, in the last 12 months and in the last 30 days by. The games most played during their lifetime were, in descending order, lotteries (79.7%), bingo (63.5%), sports (63.5%), electronic games (55.4%), and cards (44.6%). It was observed that, in the last 12 months and in the last 30 days categories, electronic games jumped from fourth to second place.

When questioned about the largest sum of money gambled on a day, 67.5% of the subjects reported having gambled between US$11 and US$100 and 16.2% gambled between US$101.00 and US$1,000.00.

With relation to family history, 11% reported that their father gambled and 1.4% that their mother did so; 41.9% stated that their father had alcohol problems and 5.4% that their mother had alcohol problems.

The study subjects who met the pathological gambling criterion were compared with regard to their socio-demographic data. The only significant difference found was in relation to marital status. Among the pathological gamblers there were more married subjects than among the non-pathological gamblers (42.9% and 13.5% respectively, $p<0.05$).

A change in the order of the games most played was observed. During lifetime, in descending order, cards (78.6%), bingo (78.6%), lotteries (71.4%), and games of skill (71.4%) were played most frequently. In the last 12 months, half substance abusers gambled on electronic games and bingo, followed by cards (35.7%) and lotteries (35.5%). It is important to emphasize that 35.7% of gambling substance abusers stated that in the last 30 days they had gambled at electronic games. Games of skill, cards and bingo were reported in the same period by 21.4% of the gambling addicts.

Figure 3 shows the number of psychoactive substances which motivated subjects to seek treatment, classified in relation to pathological gamblers, problem gamblers and social gamblers. There was no statistical difference in the number of drugs mentioned by the three groups.

Among addicted pathological gamblers, more than half reported alcohol abuse by family members (64.3%) and 21.4% stated that family members gambled excessively. On the other hand, among non-pathological gamblers these percentages were 43.3% and 10% respectively. There was not a significant difference between the two groups.

With regard to depressive symptoms measured by the CES-D, the average scores among study subjects were 24.0 (standard deviation ±14.3). When substances abusers classified as pathological gamblers were compared to addicted non-pathological gamblers it was seen that the former had significantly higher average scores for depressive symptoms. The averages observed were 33.2 (SD±17.9) and 21.9 (SD±12.6) respectively ($t=2.342$, gl 52, $p<0.05$).

With relation to the psychiatric symptoms assessed using the SRQ, no significant differences were observed between addicted pathological gamblers and non-pathological gamblers. The overall average score was 10.9 (SD±6.03). In the subgroup of pathological gamblers, it was 12.0 (SD±7.69) and in the subgroup of non-pathological gamblers it was 10.62 (SD±5.41).

DISCUSSION

A high frequency of pathological gambling was found among substance abusers who sought treatment. This fact is quite relevant as it corroborates the literature on comorbidity of these two disorders. The observed pathological gambling rate is higher than that found by Lesieur[10] as well as by Hall et al.[4] It is only lower than that found among addicts in hospital. Besides, this fact draws attention to the population of substance abusers as a group at risk of pathological gambling, as the data found was considerably higher than the prevalence of pathological gambling in the general population, which varies from 1 to 4%.[15]

According to the study sample, the games played most often in the last 30 days were lotteries and electronic games. On the other hand, among substance abusers diagnosed as pathological gamblers, the games most often played were electronic games, bingo, cards, and games of skill. This is probably due to the fact that

access to theses games is easy and to their great availability in the market. It is common, for example, to find slot machines, besides snooker tables and card games, in bars and snack bars, which are places often frequented by the study subjects. Bingo halls are also found in great number throughout the city. On the other hand, gambling on the Stock Exchange, betting on horses and in casinos requires larger investments, be it intellectual or financial. It should be noted that casinos are illegal and access to them is restricted. It is also interesting to note that 41.9% of the study subjects invested or had previously invested in capitalization bonds, which shows the encouragement given by modern society to behaviors by which it is possible to earn easy money effortlessly.

This study confirmed the existence of an important association between family history and addiction, given the high rate of alcohol abuse or excessive gambling on games of chance among family members. It is not possible to anticipate whether the cause of pathological gambling is genetic or environmental, but family history is considered a risk factor for this disorder.[14]

High rate of depressive symptoms was seen among the study subjects. Among pathological gamblers these symptoms were even more frequent. It is interesting to note that the rate found in this study is higher than that found in a study with pathological gamblers in a sample of the adult population or with pathological gamblers under treatment.[1] Depression has been associated with substance dependence,[16] suggesting that superimposition of these symptoms should be considered when planning treatment strategies.

With regard to the psychiatric symptoms evaluated by SRQ, they were seen among substance addicts. However, in contrast to the study carried out by Petry,[12] no differences were found among addicts classified as pathological gamblers and those who were not pathological gamblers.

The results of the present study reveal that it is important for treatment programs for substance abusers to systematically investigate the presence of pathological gamblers among their patients. These services could be an opportunity to a population normally excluded of having access to treatment. Pathological gamblers usually deny having any problems and only seek help when their condition becomes more serious.[3] Besides, treatment for pathological gambling has frequently followed the model for treatment of substance dependence, thus this disorder could be addressed in the program for substance abuse.

Further studies should include a larger sample, besides better investigating the relationship between substance dependence and pathological gambling and examining temporal relations and possible migration from one disorder to another, as well as a common biological substrate. In a treatment service for substance dependence and pathological gambling, Blume[2] observed a switch in dependence in some patients. Abstinent alcoholics went on to display pathological gambling or to eat or buy compulsively, indicating that the pattern of addictive behavior had not changed but only its object. It is still not clear how these disorders are related but studies on brain reinforcement mechanisms suggest that it can come from a substance as well as from experience, so that the definition of dependence is changing and becoming more inclusive.[5] Alcoholism, drug dependence, compulsive eating and sex have been considered addictive disorders. A common factor between substances and behaviors that cause dependence in some individuals is their potential to give pleasure or at least relieve unpleasant emotional states.[9] Thus, programs for the treatment of substance addicts should take into consideration this issue and also include strategies to increase awareness to the risk of dependence switching, especially in the case of pathological gambling.

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