

## Pathological gambling and personality disorders: An exploratory study with the IPDE

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## TITLE

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## SUMMARY

In this paper, the most frequent personality disorders related to pathological gambling are described. A sample of 50 pathological gamblers, who were assessed with the IPDE in the course of the pre-treatment assessment, and of 50 normative subjects from general population with the same demographic features (age, sex and socioeconomic level) was selected. According to the results, the 32% of clinical sample (versus the 8% of normative sample) showed at least one personality disorder. The most prevalent ones were the *Borderline* (16%), followed by the *Antisocial*, *Paranoid*, *Narcissistic* and *Non specified* (8% each one of them). Furthermore, the gamblers with personality disorders presented an average of 1.5 disorders. Gamblers with personality disorders showed a higher gambling severity and more severe symptoms of anxiety, depression and alcohol abuse. Finally, implications of this study for clinical practice and future research in this field are commented upon.

**Key words:** Pathological gambling. Personality disorders. Assessment. Comorbidity. IPDE.

## INTRODUCTION

There are several studies related to the role played by the psychiatric comorbidity in pathological gambling (Crockford & El-Guebaly, 1998), but there are only a few ones where the specific role of personality disorders in this mental disorder is analyzed.

Regarding personality traits, the results of specific profiles of pathological gamblers (in terms of neuroticism, extroversion, psychoticism, sensation seeking, etc.) are inconsistent and not conclusive, except in the case of impulsivity. There is some empirical evidence to support the relationship between impulsivity and pathological gambling (Blaszczynski, Steel & McConaghy, 1997). These studies give some support to the classification of pathological gambling within *DSM-IV-TR* (American Psychiatric Association, 2000) as an impulse control disorder.

The lack of definitive conclusions in the field of personality traits, as well as the study of the mental and personality disorders comorbidity in other addictions (*cf.* Solomon, Shollar, Solomon & Zimberg, 1993), has encouraged clinicians to conduct research about the relationship between PDs and pathological gambling (Steel & Blaszczynski, 2002).

However, it is not possible to draw definitive conclusions from the studies carried out in this field (*cf.* Black & Moyer, 1998; Blaszczynski & Steel, 1998; Lesieur & Blume, 1990; Specker, Carlson, Edmonson, Johnson & Marcotte, 1996). There are large discrepancies across studies in the prevalence of PDs, which range from 25% (Specker *et al.*, 1996) to 93% (Blaszczynski & Steel, 1998). In addition, the average number of diagnosed PDs for each patient is over 4. It is reasonable to think that there is an overdiagnosis of PDs due to the use of self-report questionnaires, apart from the apparent lack of reliability for these disorders and the extensive overlapping (Fernández-Montalvo & Echeburúa, 2001).

The present study seeks to measure PDs in pathological gamblers with a semistructured diagnostic interview (*International Personality Disorders Examination*, Journal of Personality Disorders, 2004, Vol. 18, Issue 5, pp. 500-505 <https://doi.org/10.1521/pedi.18.5.500.51326>

*IPDE*) (Loranger, 1995; Spanish version of López-Ibor, Pérez-Urdániz & Rubio, 1996), with good psychometric characteristics, produced by the World Health Organization. The aim of the study is to carry out an accurate assessment of PDs, as well as to compare the results of the clinical group to a sample of normal population with the same demographic features.

## **METHOD**

### **Subjects**

The sample for this study consisted of 100 subjects (50 pathological gamblers and 50 normative subjects from general population). All of them gave their informed consent to take part in the study.

The clinical sample consisted of patients who sought treatment at the Pathological Gambling Center of Rentería (Basque Country) during the period from October 2001 to August 2003. According to the criteria for admission to the study, the patients had to a) meet the diagnostic criteria of pathological gambling according to *DSM-IV* (American Psychiatric Association, 1994); b) have a score equal or above 4 on the Spanish version (Echeburúa, Báez, Fernández-Montalvo & Páez, 1994) of the *South Oaks Gambling Screen (SOGS)* (Lesieur & Blume, 1987) in order to prevent from false positives; c) not be suffering from another psychopathological disorder of Axis I; and d) gamble primarily with slot machines. The adoption of the last two requirements corresponds to the goal of focusing on "pure" gamblers (unafflicted by other clinical disorders) and on a homogeneous sample regarding the type of gambling involved.

Regarding the most significant demographic characteristics of the pathological gamblers selected, the mean age was 33.5 years ( $SD=10.2$ ) and all of them were men. The socioeconomic level was middle to lower-middle class.

From a gambling point of view, the average score on the *SOGS* was 11.9 ( $SD=2.5$ ), with a range from 9 to 18. Gambling behavior is characterized in mean values as being frequent (4 days/week), entailing a considerable amount of money

invested (157 €/week), and involving a substantial amount of time (8 hours/week) and of debt (3,673 €). Patients were dependent of the gambling for nearly 6 years before seeking treatment.

On the other hand, the normative control group was composed by people without mental disorders of Axis I, selected among the normal population, and matched up in age, sex and social class with the clinical group. Regarding the normal population's selected sample, it presented some similar demographic characteristics to that of pathological gamblers. In short, the mean age was 34.8 years ( $SD=9,3$ ), all of them were men and they belonged to middle to lower-middle socioeconomic level. There were no differences between both groups.

### **Assessment Measures**

The *Structured Clinical Interview* is an instrument designed with the objective of assessing, in an initial interview, pathological gambling according to the *DSM-IV* criteria, as well as the main characteristics that are present in this kind of patients.

### **Gambling variables**

The *South Oaks Gambling Screen (SOGS)* (Lesieur & Blume, 1987; Spanish version by Echeburúa *et al.*, 1994) is a screening questionnaire composed of 20 items which are related to gambling behavior, loss of control, the sources for obtaining money and the emotions involved. In the Spanish version, this assessment tool has a test-retest reliability of .98 and the internal consistency is .94. The convergent validity with *DSM-IV* criteria is .92. The range is from 0 to 19. A score higher than 4 (the cut-off point) serves to identify probable pathological gamblers (Echeburúa *et al.*, 1994).

The *Pathological Gambling Dependent Variables Questionnaire* (Echeburúa & Báez, 1994) provides some relevant information about gambling dependent variables: the amount of money, the frequency, and the time dedicated weekly to gambling on average.

### **Personality traits and disorders**

The *Impulsivity Scale (BIS-10)* (Barratt, 1985; Spanish version of Luengo, Carrillo de la Peña & Otero, 1991) consists of 33 items aimed at assessing the impulsivity (range: 0-132).

The *International Personality Disorders Examination (IPDE)* (Loranger, 1995; Spanish version of López-Ibor *et al.*, 1996) is a semistructured diagnostic interview designed to assess PDs. The *IPDE* covers all the criteria for the 11 Axis II disorders of *DSM-IV*. In order to establish reliable diagnoses, the behavior or trait must be present for at least five years to be considered and the criterion must be met before the age of 25. A self-administered *IPDE* screening questionnaire is available prior to the interview to assist in identifying personality disorders that might be of focus in the interview. Inter-rater reliability of the *IPDE* generally is good (median kappa is .73), as well as test-retest reliability (median: .87) (Blanchard & Brown, 1998).

### ***Psychopathological variables***

The *State-Trait Anxiety Inventory (STAI)* (Spielberger, Gorsuch & Lushene, 1970; Spanish version of TEA, 1982) consists of 20 items related to anxiety-trait and another 20 related to the anxiety-state. The range of scores is from 0 to 60 on each scale.

The *Beck Depression Inventory (BDI)* (Beck, Rush, Shaw & Emery, 1979; Spanish version of Vázquez & Sanz, 1999) consists of 21 items and measures the intensity of symptoms of depression (range: 0-63).

The *Alcohol Use Disorders Identification Test (AUDIT)* (Babor, De la Fuente, Saunders & Grant, 1989; Spanish version of Echeburúa, 1996) is a questionnaire elaborated by the World Health Organization for the early identification of problems related to alcohol. It consists of only 10 questions referred to the quantity and frequency of alcohol consumption, to the drink behavior and to the reactions or problems related to alcohol (range: 0-36).

The *Inadaptation Scale (IS)* (Echeburúa, Corral & Fernández-Montalvo, 2000) reflects the extent to which the subject's gambling problems affect to the maladjustment in everyday life (social, work, leisure, couple and family) (range: 0-30).

### **Procedure**

Once the clinical sample was selected according to the previously indicated criteria, the pre-treatment assessment of the pathological gamblers was conducted in 2 sessions. In the first one, data related to gambling behavior and to psychopathological characteristics were collected and the *IPDE* screening test was carried out. And in the second session, the presence of personality disorders identified in the previous screening test was assessed with the *IPDE* interview.

The assessment of the normative sample was carried out after a previous stratification in age, sex and social class with those subjects of the previous group. For assessment of this group 1 session was used to administer the *IPDE* screening test and to assess the personality disorders identified in the previous screening test with the *IPDE* interview. In this group the assessment decreased to 1 session because gambling behavior and psychopathological symptoms were not assessed.

In order to control the inter-rater reliability, two experienced clinical psychologists carried out together the clinical diagnosis of pathological gambling and of personality disorders. Regarding the gambling diagnosis, the coincidence degree between both professionals was of 100%. In the case of personality disorders, the inter-rater reliability in joint interviews was high (kappa: .87).

### **RESULTS**

#### **Personality traits and psychopathological profile of pathological gamblers**

Regarding personality traits, the mean score in the trait-anxiety scale was 21.8 ( $SD=8.4$ ), very similar to the mean value in the control group ( $M=20.2$ ;  $SD=8.9$ ) ( $t=1.35$ ; non-significant). In the case of impulsivity, gamblers obtained a mean score

of 62.1 ( $SD=15.5$ ), that denotes a higher degree of impulsivity than non-gamblers sample ( $M=55.9$ ,  $SD=15.1$ ) ( $t=2,82$ ;  $p<.05$ ).

In psychopathological variables, the mean score obtained in the scale of state-anxiety was 24.9 ( $SD=12.2$ ). This data has been compared with that of control group ( $M=20.5$ ,  $SD=10.5$ ). The obtained results showed significant differences ( $t=2,52$ ;  $p<.01$ ). Pathological gamblers had a higher level of anxiety than non-gamblers sample. In the depression inventory, patients obtained a score of 10.1 ( $SD=5.5$ ), what reflects an absence of important depressive symptoms. Regarding alcohol consumption, the mean score of pathological gamblers in the questionnaire of alcohol abuse was 5.9 ( $SD=4.1$ ). It reflects, in general, the absence of an important alcohol consumption -the cut-off point for this questionnaire is of 8 for the abuse of alcohol and of 20 for the dependence-. However, there was a subsample of 23 cases (46 per cent of gamblers) who overcame the score of 8 and who therefore abused of alcohol.

Lastly, as far as the maladaptation degree to the daily life is concerned, the mean score obtained by pathological gamblers in the appropriate scale was 9.2 ( $SD=4.6$ ), significantly higher than non-gamblers sample ( $M=2.23$ ;  $SD=0.75$ ) ( $t=6,16$ ;  $p<.001$ ). The cut-off point for this scale is of 12. When the cases were analyzed in an individualized way, 24 subjects (48 per cent of the gamblers) overcame the cut-off point in this scale, what means maladjustment to the everyday life in nearly half of the sample.

To sum up, the profile of the pathological gamblers of the sample is that of impulsive people, with mild anxious and depressive symptoms, but with a tendency to abuse of alcohol and to have problems of adaptation to the daily life.

### **Personality disorders**

In the sample of pathological gamblers, the overall prevalence rate for at least one personality disorder was 32 per cent (16 gamblers). In this 16 gamblers, the most prevalent one was the *Borderline personality disorder*, that affected to 16 per

cent of the cases, followed by the *Antisocial, Paranoid, Narcissistic* and *Non specified*, that were observed each one of them in 8 per cent of the sample. In addition, the 16 gamblers with personality disorders presented an average of 1.5 disorders (more than 1 personality disorder for person).

In the case of the normal population, the prevalence rate of personality disorders ascended to 8 per cent of the sample (4 subjects), without predominance of any specific disorder and not being affected by more than one disorder.

Comparison between groups in the overall prevalence rate of personality disorders showed statistically significant differences ( $\chi^2=7,5$ ;  $p<.05$ ). Personality disorders were more frequently diagnosed in pathological gamblers than in normative sample.

Once obtained the global percentage of personality disorders and the more prevalent ones, gamblers with and without personality disorders were compared in all variables (gambling, personality and psychopathology) studied. The results indicated the existence of significant differences in the psychopathological symptoms: gambling severity ( $t=2.6$ ;  $p<.05$ ), anxiety ( $t=3.95$ ;  $p<.01$ ), depression ( $t=4.94$ ;  $p<.001$ ) and alcohol abuse ( $t=4.03$ ;  $p<.01$ ). Gamblers with PDs showed a higher severity of symptoms in all studied variables.

## **DISCUSSION**

This research adds further evidence supporting elevated traits of impulsivity among pathological gamblers. Like in other previous studies (Blaszczynski *et al.*, 1997; Steel & Blaszczynski, 2002), the construct of impulsivity should be considered to be of importance in the conceptualization of pathological gambling and in the implementation of the treatment. The profile of the patients of this study is that of impulsive people, with mild anxious and depressive symptoms, but with a tendency to abuse of alcohol and to have problems of adaptation to the daily life.

Of the clinical sample, 16 of the 50 (32%) met *DSM-IV* diagnostic criteria for a personality disorder compared to 4 (8%) of the normal sample. That is, PDs are much

more common in pathological gamblers than in the normal population, but not so unusually frequent (ranging from 71% to 93%) as in other studies (Black & Moyer, 1998; Blaszczynski & Steel, 1998; Lesieur & Blume, 1990). This lack of consistence with previous empirical investigations is related to the assessment tool (*IPDE*), which is more accurate and conservative than self-report inventories used in those studies.

There is some overlapping of PDs in other studies. The average number of diagnosed PDs for each subject in our investigation was found to be 1.5, far from 4.7 in the study of Blaszczynski & Steel (1998). Once again the lack of consistence between these two studies could be related to the different assessment tools.

PDs found in pathological gamblers tend to be within the dramatic cluster B category. The most relevant is the borderline PD, which is present in the half of pathological gamblers with PDs. This finding is consistent with the role played by impulsivity in the development of pathological gambling.

Having a PD associated to the pathological gambling allows predict a more complicated clinical disorder, with a higher gambling severity and more severe symptoms of anxiety, depression and alcohol abuse. In these cases prognosis for therapy, at least with currently available treatments, is poor. Further research is needed to develop tailor-made treatments for these kind of patients.

The purpose of this paper is to understand the role played by the psychiatric comorbidity (referred, in this case, to PDs) in pathological gambling and to help identify them. There are different subgroups of gamblers manifesting impaired control over their behavior. In this same way the Blaszczynski & Nower (2002) pathways model, needed of more empirical testing, provides a conceptual framework that integrates research data and clinical observation to provide a structure that assists clinicians in identifying and separating distinct subgroups of gamblers that require different management strategies.



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