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Clinical Gender Differences Among Adult Pathological Gamblers Seeking Treatment

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Abstract This study aimed to examine the gender-related differences in demographics, gambling measures, psychological functioning, and motivation for therapy in an outpatient sample of pathological gamblers seeking treatment. Participants in this multisite study included 103 adult outpatients (51 women and 52 men) meeting current DSM-IV-TR criteria for PG. Logistic regression was used to examine if gender was related together to categorical and continuous independent variables. Female gamblers were older than men and more likely to be divorced or widowed and to have a lower annual income. Women became more dependent on bingo and men on slot machines. Gambling motivation and the course of illness for both sexes were also different. Female gamblers were more anxious and with a poorer self-esteem than male gamblers and more affected by depressive symptoms; in turn, men were more impulsive and higher sensation seekers than women and more affected by drug/alcohol abuse. The 68.6% of female gamblers reported being victims of intimate partner violence. There were no gender differences about the motivation for treatment. Future research should examine gambling behaviors and psychological functioning and suggest treatment approaches to address specific goals according to these gender-related differences.

Keywords Pathological gambling · Gender differences · Mental health · Psychosocial factors · Intimate partner violence

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Introduction

Over the past several decades, there has been a significant increase in the availability of legalized gambling in the developed countries. Historically, men are more likely to be gamblers than women and also more likely to develop gambling-related problems than them due in part to longstanding differences in the cultural acceptability/unacceptability of male and female gamblers (LaPlante et al. 2006). However, there is evidence that gambling problems have increased among women in recent years (Abbott 2006). In addition, pathological gambling (PG) is associated with poorer measures of mental health in women compared to men (Desai and Potenza 2008).

Little is known yet about gender-related differences among pathological gamblers in clinical samples because available data on the etiology and treatment of PG have involved predominantly male patients (Echeburúa et al. 2005).

Personality studies have described high levels of sensation seeking and impulsivity among pathological gamblers (Echeburúa et al. 2008; Fernández-Montalvo and Echeburúa 2004). And some specific personality traits have been found to be gender specific (most of all, harm avoidance in female pathological gamblers) (Granero et al. 2009).

Significant gender differences exist in the clinical presentation of PG, with men more likely to be younger and single, to have higher household incomes, to be currently working and to incur larger gambling debts than women (Desai and Potenza 2008; Grant et al. 2009). Women are more likely than men to gamble in order to relieve feelings of depression and anxiety and to escape dysphoria; and so they report bingo (a somehow social activity) as their specific gambling problem. Gambling in women is used for regulating negative emotional states associated with life events (Granero et al. 2009; Grant and Kim 2002). In addition, male pathological gamblers appear to be more likely to suffer from a current alcohol abuse, but less likely than women to suffer from comorbid anxiety or mood disorder (Ibáñez et al. 2001).

The course of illness seems to differ between men and women. The interval between the age of starting to gamble and of developing a problem with gambling seems to be longer for men (Tavares et al. 2001; Grant and Kim 2001; Ladd and Petry 2002; Potenza et al. 2006). These findings suggest a "telescoping" pattern of disease progression in women as compared with men (Grant et al. 2009; Tavares et al. 2003). The interval between the onset of gambling and its recognition as a problem appears to be shorter for women (Ibáñez et al. 2003; Ladd and Petry 2003). In sum, men and women tend to progress toward disordered gambling differently. Whereas men frequently begin gambling early in life, report slow emergence of problems and seek help well after developing problems, women start gambling later in life, then rapidly develop dependence and seek help more quickly (LaPlante et al. 2006).

As well as in other addictive disorders, motivating pathological gamblers to enter and adhere to treatment is difficult. High rates of treatment discontinuation (40–66%) are consistently seen among pathological gamblers. Rates of adherence to either psychosocial treatments or medication interventions are not better (Grant and Kim 2004). There are no data about gender-related differences in motivation to enter treatment.

As far as we know, no study has systematically examined together gender-related differences in gambling measures, psychological functioning and motivation for therapy in an outpatient sample of pathological gamblers seeking treatment. This study therefore aimed to analyze these gender-related psychological and clinical features in the studied sample. Specifically, it was hypothesized that motivation to gamble, psychological

functioning and expectancies for treatment would be somehow different in male and female gamblers and those conclusions would shed light to tailor future treatments to gender-related needs and generate more effective interventions.

Method

Participants

Participants included 103 adult outpatients (51 women and 52 men) meeting current DSM-IV-TR criteria for PG. Subjects were recruited over a 5-year period (2005–2009). All of them sought treatment in different units of pathological gambling all over Spain because of their problems and impairment related to PG. All patients were included if they met the inclusion criteria: (a) primary diagnosis of current DSM-IV-TR PG; (b) age 18 or older. The only exclusion criterion was the presence of a psychotic disorder, mental retardation, dementia or inability to understand and consent to the study. All study participants provided voluntary written informed consent.

The average age of participants was 43.09 ($SD = 13.30$). Most of them were married (44%) or single (35%). Their educational level was medium (87% with primary or high school). As regards employment status, more than half (52%) were active and their socioeconomic level was medium (62%) or medium–low (16%) (Table 1).

Measures

Gambling Measures

The *Structured Clinical Interview* is an instrument designed with the objective of assessing, in an initial interview, PG according to the DSM-IV criteria, as well as the main characteristics of these patients.

South Oaks Gambling Screen (*SOGS*) (Lesieur and Blume 1987; Spanish version by Echeburúa et al. 1994). The SOGS is a reliable and valid, 20-item, self-report screening instrument. It assesses gambling symptoms over a person's life-time. In the Spanish version, this assessment tool has a test–retest reliability of .98 and the internal consistency is .94. In our study, the internal consistency is .96. The convergent validity with DSM-IV criteria is .92. The range is from 0 to 19. A score of five or more on the SOGS indicates probable PG.

Personality Traits

Trait Anxiety Inventory (*STAI-T*) (Spielberger et al. 1970; Spanish version of TEA 1982). The STAI-T consists of 20 items related to anxiety-trait. In our study, the internal consistency is .94. The range of scores is from 0 to 60.

Impulsiveness Scale (*BIS-10*) (Barratt 1994; Spanish version of Oquendo et al. 2001). The BIS-10 consists of 33 items aimed at assessing the impulsivity. In our study, the internal consistency is .96. The range of scores is from 0 to 132.

Sensation-Seeking Scale (*SSS-V*) (Zuckerman et al. 1978). The SSS-V consists of 40 items aimed at determining the level of sensation seeking disposition. In our study, the internal consistency is .84. The range of scores is from 0 to 40.

Table 1 Socio-demographic characteristics

	Total ($N = 103$)		Men ($n = 52$)		Women ($n = 51$)		t	d
	X	SD	X	SD	X	SD		
Age	43.09	13.30	38.73	12.13	47.53	13.08	3.539***	−0.7
	N	%	n	%	N	%	χ^2 (df)	d
Family status								
Married	44	42.7	20	38.5	24	47.1	18.85 (3)***	−.4
Single	35	34.0	27	51.9	8	15.7		
Divorced	15	14.6	3	5.8	12	23.5		
Widower	9	8.7	2	3.8	7	13.7		
Educational level								
Uneducated	5	4.9	2	3.8	3	6.0	1.11 (3)	
Primary school	57	55.9	29	55.8	28	56.0		
High school	30	29.4	17	32.7	13	26.0		
College	10	9.8	4	7.7	6	12.0		
Employment status								
Active	52	52.0	32	61.5	20	41.7	6.48 (3)	
Unemployment	25	25.0	13	25.0	12	25.0		
Retirement	11	11.0	4	7.7	7	14.6		
Prolonged low	12	12.0	3	5.8	9	18.8		
Socioeconomic level								
Low	13	12.7	4	7.7	9	18.0	9.83 (4)*	.5
Medium-low	16	15.7	4	7.7	12	24.0		
Medium	62	60.8	36	69.2	26	52.0		
Medium-high	8	7.8	6	11.5	2	4.0		
High	3	2.9	2	3.8	1	2.0		

*$p < .05$, *** $p < .001$

Self-Esteem Scale (*RSE*) (Rosenberg 1965; Spanish version by Fernández-Montalvo and Echeburúa 1997). The aim of the RSE is to assess the feeling of satisfaction that a person has about him or herself. In our study the internal consistency is .80. The range of scores is from 10 to 40.

Psychopathological factors

State Anxiety Inventory (*STAI-S*) (Spielberger et al. 1970; Spanish version of TEA 1982). The STAI-S consists of 20 items related to the anxiety-state. In our study, the internal consistency is .92. The range of scores is from 0 to 60.

Beck Depression Inventory (*BDI*) (Beck et al. 1996; Spanish version of Sanz et al. 2003). The BDI consists of 21 items and measures the severity of symptoms of depression. In our study, the internal consistency is .84. The range of scores is from 0 to 63.

Alcohol Use Disorders Identification Test (*AUDIT*) (Saunders et al. 1993; Spanish version of Rubio et al. 1998). The AUDIT was designed by the World Health Organization to screen and identify people who are at risk of developing alcohol problems. This test

focuses on identifying the preliminary signs of hazardous drinking and mild dependence. 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 within the last year. In our study the internal consistency is .82. The range of scores is from 0 to 36.

Inadaptation Scale (*IS*) (Echeburúa et al. 2000). The IS reflects the extent to which the subject's gambling problems affect to the maladjustment in everyday life (social, work, leisure, couple, and family). In our study, the internal consistency is .90. The range of scores is from 0 to 30.

These measures have been extensively used in research and clinical practice, and there is substantial evidence to support their psychometric properties in the field of PG (Dowling et al. 2006; Echeburúa and Fernández-Montalvo 2008; Fernández-Montalvo and Echeburúa 2004, 2006; Granero et al. 2009).

Procedure

For subjects entering the multi-site study, informed consent was obtained after they had been given a detailed written and verbal description of the study. Participants were assessed individually using a semistructured face-to-face interview that focused on different aspects of gambling behavior. The patients then individually filled in all the questionnaires included in the study during two assessment sessions. Following the assessment phase, each participant was assigned to a psychological program based on abstinence as a goal of treatment. The results of the intervention for men/women with PG will be published in a separate paper. The assessment/treatment program was conducted on an outpatient basis at no charge by a clinical psychologist.

Data Analysis

Analyses were carried out through the SPSS version 16.0 for Windows. Differences between the two groups were tested for significance with Pearson's Chi-square test for dichotomous variables and *t*-tests for quantitative psychological features. Nonparametric alternative to the *t*-test (Mann–Whitney *U*) was used when there was reason to believe that data were not normally distributed.

Effect sizes based on Cohen's *d* estimated the clinical differences. The results were interpreted as small if *d* values were lower than 0.2, medium if *d* values ranged between 0.2 and 0.5, and large if *d* values were higher than 0.5.

Finally, logistic regression analysis (odds ratio) was used to examine the association of categorical and continuous independent variables, such as personality and psychopathological variables and substance abuse or other risk factors, with one dichotomous variable (sex or intimate partner violence, IPV, respectively).

Results

The paragraphs below present first the results of gender comparisons on sociodemographic characteristics. These are followed by the differences in gambling measures and in personality and psychopathological variables. Finally, a gender comparison is drawn for the dropout rates during assessment between pathological gamblers and a control clinical group.

Sociodemographic Characteristics

The main demographics regarding gender-related differences in pathological gamblers are displayed in Table 1. Overall, female gamblers were more than 4 years older and more likely to be divorced or widowed and to have a lower annual income than male gamblers. In addition, many gamblers had a familiar support, but this was bigger in women (92.2%) than in men (75%), X^2 (1) = 5.50, $p < .05$.

Gambling Measures

The most relevant gender differences in gambling behavior are examined in Table 2. In terms of PG severity, there were no differences in SOGS scores. Men were more early-onset gamblers and thus were more quickly to be affected by PG than women. However,

Table 2 Gambling Variables

	Total ($N = 103$)		Men ($n = 52$)		Women ($n = 51$)		t/z^1	d
	X	SD	X	SD	X	SD		
Gambling dependence (SOGS)	9.98	3.19	10.33	3.59	9.63	2.70	1.067	
Course of disorder								
Age of onset (gambling)	28.9	14.23	23.29	11.38	34.76	14.61	−4.443***	−.9
Age of onset (disorder)	36.7	13.73	33.22	13.08	40.38	13.56	−2.838**	−.5
Duration of gambling-disorder (years)	7.77	8.45	9.66	9.74	5.88	6.48	2.28*	.4
	N	%	n	%	n	%	χ^2 (df)	d
Type of gambling								
Slot machines	82	79.6	48	92.3	34	66.7	23.38 (6)***	−.3
Gambling machines	2	1.9	0	0	2	3.9		
Bingo	13	12.6	0	0	13	25.5		
Casino	2	1.9	2	3.8	0	0		
Cards	1	1.0	1	1.9	0	0		
Lottery	2	1.9	0	0	2	3.9		
Other	1	1.0	1	1.9	0	0		
Motivation for gambling								
Loneliness	16	16.0	4	8.0	12	24.0	16.44 (7)*	.5
Boredom	27	27.0	12	24.0	15	30.0		
Sadness	2	2,0	2	4.0	0	0		
Escape	3	3.0	0	0	3	6.0		
Disease	3	3.0	1	2.0	2	4.0		
Social pressure	17	17.0	10	20	7	14.0		
Winnings	16	16.0	13	26.0	3	6.0		
Multiple reasons	16	16.0	8	16.0	8	16.0		

* $p < .05$, ** $p < .01$, *** $p < .001$

z^1: U Mann–Whitney statistical (non-parametric tests)

women, even though they began to gamble later than men, they became dependent on gambling more quickly (5.88 years) than men (9.66 years).

Slot machines were the most popular gambling method for both women and men pathological gamblers. However, women became more dependent on bingo and men on slot machine gambling. Specific motivations for gambling among women included loneliness and avoidance coping strategies and among men social pressure and a way to earn money easily. Irrespective of the abundant family antecedents in alcohol abuse (35.9%) and problem gambling (37.9%) in the total sample, there were no differences in men and women. Likewise, many pathological gamblers in the total sample accumulated large debts (58.8% in men versus 42% in women), but these differences were not significant, X^2 (1) = 0.01.

Personality, Psychopathology, and Adjustment Variables

As far as personality and psychopathological factors are concerned, the main results regarding gender-related differences in pathological gamblers are displayed in Table 3. Overall, female gamblers were more anxious and suffered from a poorer self-esteem than male gamblers, and men were more impulsive and higher sensation seekers than women.

In turn, female gamblers were affected by depressive symptoms more often than men. However, alcohol abuse-related problems were more present in male than in female gamblers. Likewise, substance abuse affected three times more to men (29.5%) than to women (10.9%), X^2 (1) = 4.90, $p < .05$. Feelings of guilt and shame were prevalent in the total sample (94.2%), but there were no differences in men (92.3%) and women (96.1%), X^2 (1) = 0.67.

All patients had a remarkable history of several other psychiatric disorders (51.5%) for which they had sought professional advice, but this fact affected more to women (60.8%) than to men (40.4%), X^2 (1) = 4.29, $p < .05$.

Importantly, the 68.6% of the female gamblers reported being victims of IPV now or in the recent past.

Table 3 Personality traits and psychopathological factors

	Total ($N = 103$)		Men ($n = 52$)		Women ($n = 51$)		t/z^1	d
	X	SD	X	SD	X	SD		
Personality traits								
Anxiety (STAI-T)	30.04	11.41	26.88	10.94	33.27	11.06	−2.946**	−.6
Impulsivity (BIS-10)	63.70	16.57	61.88	16.53	66.16	16.53	−1.194	
Sensation seeking (SSS)	16.72	5.56	18.10	5.23	15.34	5.59	2.443*	.5
Self-esteem (RSE)	26.70	5.10	28.25	5.17	25.10	4.55	3.266***	.6
Psychopathological factors								
Anxiety (STAI-S)	27.94	10.58	27.56	11.58	28.31	9.60	−0.356	
Depression (BDI)	19.52	12.31	15.91	11.16	23.20	12.44	−3.100**	−.6
Inadaptation Scale (IS)	17.10	7.27	17.52	6.67	16.66	7.90	0.576	
Alcohol abuse (AUDIT)	4.69	5.58	6.09	4.52	3.27	6.22	4.489***	−.5

* $p < .05$, ** $p < .01$, *** $p < .001$

z^1: U Mann–Whitney statistical (non-parametric tests)

Table 4 Comparative dropout rates during assessment between pathological gamblers and a control clinical group

	Gamblers		Patients with other pathologies		χ^2 (df)	*d*
	n	%	*n*	%		
Dropouts					40.95 (1)***	.5
Men	10	20.4	6	3.2		
Women	10	20	10	3.3		
N	20	20.2	16	3.3		
Completers						
Men	39	79.6	179	96.8		
Women	40	80	293	96.7		
N	79	79.8	472	96.7		
Total	99	100	488	100		

*** $p < .001$

Logistic Regression

Logistic regression was used to examine if gender was related together to categorical and continuous independent variables. After performing bivariate correlations with all of them, only the statistically significant variables (anxiety-trait, sensation-seeking and substance abuse) were entered into a logistic regression model. The anxiety-trait was associated with female gamblers (OR = 1.079, $p < .05$), and sensation-seeking and substance abuse were associated with male gamblers (OR = 0.889, $p < .05$ and 0.159, $p < .01$, respectively).

In addition, the logistic regression model was extended to include hypothesized risk factors related to IPV. After performing bivariate correlations with all of them, only the statistically significant variables (age, educational level and employment status) were entered into a logistic regression model. Only being in a situation of retirement or prolonged low was associated with IPV (OR = 8,410, $p < .05$).

Motivation for treatment

As it can be seen in Table 4, the dropout rates during assessment in pathological gamblers has been as high as 20.2% of the total sample versus 3.3% in a clinical control group of non-addict treatment-seeker patients, matched for gender and age, drawn from several Mental Health Centers. However, there were no differences in male (20.4%) and female gamblers (20%) X^2 (1) = .003.

Discussion

This study aimed to analyze the gender-related differences in demographics, gambling measures, psychological functioning and motivation for treatment in an outpatient sample of pathological gamblers seeking treatment. The findings indicate that there are relevant differences which may be taken into account to plan an effective intervention.

There are many explanations for gender play patterns. Among the explanations put forth are: genetics (Winters and Rich 1998), social norms (Ladd and Petry 2002), motivations

(Trevorrow and Moore 1998), impulsivity (Langewisch and Frisch 1998), and finances (Hing and Breen 2001). It is important, however, not merely to explain gender differences about prejudices about the way men and women "are." Such gross generalizations are unlikely to maintain any predictive power over time as gender roles change (LaPlante et al. 2006).

Our first finding related to demographics was that, according to other studies (Desai et al. 2006; Granero et al. 2009), female gamblers were older than men and more likely to be divorced or widowed and to have a lower annual income. However, familiar support was stronger in women than in men. Although female gamblers may result in social isolation more often than men, one reason of this controversial finding might be that family in Spain is a powerful network and women have stronger bonds with relatives than men.

Gambling measures also reflect a wide range of gender-related differences. Even though slot machines were the most popular gambling method for all participants, specifically women became more dependent on bingo and men on slot machines. Besides some cultural factors (bingo being socially acceptable in Spain for women), the bingo atmosphere has been described as more suitable to women than other gambling options (comfortable social situation and optimal strategy for escaping from problems and isolation) (Crisp et al. 2004; Granero et al. 2009; Grant and Kim 2002; LaPlante et al. 2006; Potenza et al. 2006).

Motivation to gamble for both sexes was also different. Whereas male gamblers were motivated to easily make money through gambling and were influenced by peer pressure, women were more motivated to gamble in order to cope with loneliness and to escape from unpleasant emotions, such as negative mood. Even gambling might be used to regulate any kind of negative emotional estates associated with life events, dissatisfaction, and frustrations (Scannell et al. 2000). These results support those of other studies that have found gender-related differences in this area (Granero et al. 2009; Grant and Kim 2002; Ladd and Petry 2003; Raylu and Oei 2002). An alternative explanation is that problem gambling may exacerbate depressive symptoms more in women than men (Lesieur and Blume 1991). The findings of some studies highlight a stronger relationship between depressed mood and gambling pathology in women as compared to men (Desai and Potenza 2008). The nature of this relationship (problem gambling and depression) remains incompletely understood. More research is needed to identify gender-specific factors in this area.

All participants had abundant family antecedents in alcohol abuse/problem gambling and accumulated large debts, but there were no gender-related differences.

In terms of PG severity, all participants were dependent on gambling, but there were no gender differences in the SOGS scores. These results are consistent with other studies (Granero et al. 2009; Ibáñez et al. 2003). Women started gambling later in life, but became dependent on gambling more quickly (5.88 years) than men (9.66 years). This different illness course has also been found in other studies (Grant et al. 2009; Ibáñez et al. 2003; Ladd and Petry 2002; Tavares et al. 2003; Potenza et al. 2006). The explanation for this issue is controversial. Actually several studies have justified these findings from sociocultural aspects (Cunningham-Williams et al. 1998) to psychopathological (Lynch et al. 2004) or even neurobiological factors (Potenza et al. 2005).

There were gender differences in personality traits. Overall, female gamblers were more anxious and had a poorer self-esteem than male gamblers, and men were more impulsive and higher sensation seekers than women. These results are partially consistent with previous studies (Echeburúa and Fernández-Montalvo 2008; Fernández-Montalvo and Echeburúa 2004), but it is difficult compare them with other studies because the studied personality traits are not exactly the same (Granero et al. 2009). These results might be related to a higher premorbid depressive personality in women and to higher antisocial

traits in men. Our findings might be useful to implement a prevention strategy in young people, based on gender-related differences.

Regarding psychopathology, pre-existing problems and coping styles are likely to be key factors in developing harmful patterns of gambling. Female gamblers were found to have a more remarkable history of other psychiatric disorders than men and were specifically affected by depressive symptoms. Gambling may be a way to cope with primary depressive symptoms in female gamblers, as it has been found in other studies (Granero et al. 2009; Ledgerwood and Petry 2006), but depression may be also secondary to negative consequences of PG. In turn, men were more affected by alcohol/drug abuse than women. Our finding related to a more relevant alcohol/drug abuse in male gamblers is supported by some studies (Wilsnack et al. 2000), but not by others (Granero et al. 2009; Martins et al. 2004). The effect of male gender on rates of alcohol/drug abuse may interact with age (Gupta and Derevnesky 1998; Stinchfield 2000). These findings suggest the need of a more intensive treatment program in women and more focused on how to cope with depression.

Importantly, nearly 7 out of 10 female gamblers reported being victims of IPV (including dating and marital violence). This rate is ten times higher than that registered in Spain for women over 18 years (Instituto de la Mujer 2006). These results have been also found in other studies elsewhere with a nationally representative sample (Affi et al. 2010). According to our logistic regression model, female gamblers pensioners or in prolonged low were at higher risk of becoming victims of IPV. Gambling may be a way to escape from a violent relationship, but that IPV may be also related to domestic conflict caused or exacerbated by financial or other stressors directly associated with gambling activities. All these findings highlight the importance of routinely screening gambling patients for anger and IPV and disrupted behavior in children, and the need to develop public policy, prevention and treatment programs to address these problems (Picó-Alfonso et al. 2008).

As is well-known (Hodgins et al. 2001), many pathological gamblers do not seek treatment. Motivating pathological gamblers to enter and adhere to treatment is difficult. In our study, the dropout rates during assessment were six times higher than those of a clinical control of non-addict treatment-seeker patients, but there were no gender-related differences among dropouts. Even though pathological gamblers decide to seek treatment, they are not uniformly committed to change. Further research should focus on motivational enhancement for therapy of pathological gamblers (Wulfert et al. 2006).

Limitations of these data should be acknowledged. First, the relatively small sample size precludes a definitive conclusion regarding clinical gender-related differences. Additional research on this topic is needed, including larger prevalence studies in clinical settings. Second, longitudinal designs are required to address gender-related differences in the clinical course of PG. Third, the self-reported nature of the data can lead to recall bias. Future research should also be directed to identify whether treatments should be specially tailored for individuals according to the described gender-related differences.

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