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Gender differences in psychiatric comorbidity and treatment-seeking among gamblers in treatment

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Abstract

Objectives: To assess the effects of gender on comorbid problems and treatment-seeking among gamblers in treatment and the effects of comorbid problems on participants' gambling

Method: Participants completed a survey on comorbid problems and the effects of comorbid problems on their gambling

Sample: Seventy-eight adults (40 males, 38 females) enrolled in state-supported outpatient programs or Gamblers Anonymous

Results: The majority of participants (53%) had multiple comorbid problems and 38.5% said they had a comorbid problem related to their gambling. Eleven different types of comorbid problems were reported. Females had significantly more comorbid problems than males; females reported problem drinking and both genders reported that depression increased the severity of their gambling problems.

Conclusion: Patterns of comorbid problems and treatment-seeking are consistent with well-known gender

differences in health behaviors. Clinicians involved in gambling treatment may wish to assess for depressive syndromes and problem drinking and investigate their interaction with their patient's gambling.

Keywords: comorbidity, alcohol, gamblers, gender, treatment, career length, depression

Introduction

Gender has been a determinant of many health-related behaviors, such as treatment utilization, substance use, and psychiatric symptoms and diagnoses (Robins & Regier, 1991; Verbrugge, 1985). Males tend to have earlier and higher mortality rates(Verbrugge, 1985) and use substances (alcohol, tobacco and street drugs)more than females (Robins & Regier, 1991). Females tend to use physical and mental health services more (Verbrugge, 1985) and use more prescribed drugs than males (Verbrugge, 1985). Gender is also important in psychiatric disorders, where males tend to have higher rates of disordered substance use, with the exception of prescription drug use (Robins & Regier, 1991) and females tend to have more psychiatric disorders, especially in the anxiety and mood disorder cluster(Robins & Regier, 1991).

Historically, in studies of the prevalence of gambling disorders, males have significantly outnumbered females. Volberg (1994), in a paper summarizing prevalence studies from five states in the United States, estimated males to be 76% of pathological gamblers in the community. The most current diagnostic manual states that females comprise only 33% of pathological gamblers (American Psychiatric Association, 2000). However, the expansion of legalized gambling in the United States has changed this ratio. The most recent U.S. national survey of gambling behavior, completed in 1999, shows gambling disorders more equally distributed by gender. Although the National Opinion Research Center (1999) found higher prevalence rates of problem and pathological gambling among men than women — male lifetime rates: problem 1.6%, pathological 0.9%; female lifetime rates: problem 1.0%, pathological 0.7% — in their initial (RDD) survey, the differences were not statistically significant.

Studying the patterns of comorbid disorders can lead to better treatment and understanding of the causal factors in the disorder. Additional disorders of all types have implications for treatment. The presence of comorbid diagnoses makes it more likely that the patient will seek treatment (Andrews, Slade & Issakidis, 2002; Noyes, 2001). The presence of comorbid diagnoses also increases the likelihood of treatment failure in many psychiatric disorders: depression (Bagby, Ryder & Cristi, 2002), bipolar disorder (Frangou, 2002), obsessive-compulsive disorder (Ruppert, Zaudig, Hauke, Thora & Reinecker, 2001), generalized anxiety disorder (Noyes, 2001), post-traumatic stress disorder (Breslau, 1999) and panic disorder

(Mennin & Heimberg, 2000). The presence of comorbid diagnoses affects cognitive-behavioral therapies (Mennin & Heimberg, 2000), inpatient treatment (Haettenschwiler, Rueesch & Modestin, 2001) and pharmacotherapy (Bagby et al., 2002).

The National Comorbidity Survey (Kessler et al., 1994) was the first survey to administer a structured psychiatric interview to a national probability sample of non-institutionalized people in the United States. The study found that psychiatric morbidity was highly concentrated in one-sixth, or approximately 16% of the adult population with a lifetime history of three or more comorbid disorders.

The most well-studied comorbid relationships among psychiatric disorders are the (misnamed) dual disorders, or the association between substance use disorders and psychotic, anxiety and mood disorders. The interactions can be very complex. To generalize: 1) the two disorders may occur by chance, 2) substance use may cause or exacerbate the psychiatric disorder, 3) the psychiatric disorder may cause or increase the severity of the substance use, 4) both disorders may be caused by a third condition, and 5) substance use or withdrawal may mimic the psychiatric disorder.

Studies of dual disorders often attempt to determine the temporal relationship of the onset of the different disorders to clarify causation. However, the comorbidity pattern can differ by the substance used and the specific other psychiatric disorder or disorders as well as by the population studied. For example, the National Comorbidity Study found that alcohol use problems and dependence consistently occurred after the onset of the psychiatric disorder (Kessler et al., 1997). However, nationwide studies of psychiatric comorbidity and both alcohol and drug use disorders in six countries found that only anxiety disorders consistently preceded substance use disorders; mood disorders and substance use disorders had no consistent temporal pattern (Merikangas et al., 1998). Despite the theoretical complexity, the temporal relationship among comorbid disorders can be useful clinically, in deciding which of several disorders is primary, which have implications for treatment priorities and plans.

The study of other psychiatric diagnoses occurring with gambling disorders is early in its development. The Harvard Division of Addictions gambling disorder prevalence meta-analysis (Shaffer, Hall & VanderBilt, 1997) established psychiatric comorbidity as a risk factor for gambling disorders. Their analysis established significantly higher prevalence rates for gambling disorders among samples of adults with psychiatric or substance dependence disorders and those in prison than among community samples of adults. The relative risk varies from four to seven, depending on the population studied (Shaffer et al., 1997).

Comorbidity patterns change based on the population studied and site of assessment (Berkson, 1946). Clinical studies of patients in treatment with gambling disorders have found that other psychiatric disorders occur consistently. Ibañez et al. (2001) found comorbidity in 43% of

gamblers seeking treatment. There have been more studies of treatment populations than community populations in the study of comorbid disorders in gambling. However, the number of subjects studied is usually small, especially in studies of anxiety and personality disorders. Clinically useful information, such as the nature and relevance of the specific comorbidity associations, is limited. See Table 1 for a summary of the relevant studies.

Table 1

Summary table of research on comorbid diagnoses in community and treatment samples

Disorder	Total number of studies	Community studies		Treatment studies	
		Number	Total subjects	Number	Total subjects
Mood disorders	20	3	9,100	17	3,200
Anxiety disorders	5	1	7,200	4	250
Antisocial personality disorder	2	1	7,200	1	109
Substance use disorders	12	2	9,200	10	3,200

Substance dependency has been relatively well established as a significant comorbidity with pathological gambling (Crockford & el-Guebaly, 1998; Ibañez et al., 2001; National Research Council, 1999; Shaffer et al., 1997). Approximately 50% of pathological gamblers will have a substance use or dependency diagnosis. Affective symptoms have also been found to be associated with pathological gambling (Crockford & el-Guebaly, 1998; Maccallum & Blaszczynski, 2002; National Research Council, 1999; Shaffer et al., 1997); however, the results have been inconsistent. One analysis proposed that affective disorders were a significant comorbidity in only a subgroup of problem gamblers (Crockford & el-Guebaly, 1998). Personality disorder comorbidity has also been studied, with antisocial personality disorder being the strongest association (Crockford & el-Guebaly, 1998; Ibañez et al., 2001). However, the strong association between substance use disorders and antisocial personality disorder confounds the association between gambling disorders and antisocial personality disorder (National

Research Council, 1999).

There are many unanswered questions about the influence of comorbid psychiatric disorders in problem gamblers. Because of the historical predominance of males in populations with gambling disorders, the effect of gender on comorbidity patterns in gambling disorders is unstudied. In addition, since treatment populations for any psychiatric disorder are more likely to have other psychiatric disorders (Berkson, 1946), the clinical relevance of comorbid disorders in problem gambling has been minimally studied. Only one study has determined that comorbid disorders increase the severity of the gambling disorder (Ibañez et al., 2001). But do the comorbid disorders only add to disease burden and make it more likely for the patient to seek treatment or do they directly affect the gambling behavior and need to be considered in the formulation of treatment plans for problem gamblers?

The objectives of this study were to assess (1) the effect of gender on comorbid problems and (2) treatment-seeking behavior of gamblers in treatment and (3) the interactive effects of the comorbid problems on the participants' gambling.

Method

Participants

An anonymous, voluntary questionnaire was distributed to all state gambling disorder treatment sites and Gamblers Anonymous meeting sites in the state of Louisiana in January of 1999 as part of a study on the social cost of gambling (Ryan et al., 1999). Seventy-eight questionnaires were returned in time for statistical analysis.

Materials

Participants completed a survey that included a screen for gambling disorders, demographic questions, and questions about types and frequency of gaming activities, quantifiable consequences of gambling disorders, comorbid conditions, illicit substance use, gambling career and treatment-seeking history. Questions covered gambling behavior and work and legal and other consequences of disordered gambling based on Lesieur's model (Lesieur, 1998). Gender differences in these behaviors are under study. The questionnaire inquired about the types of other mental health and substance use problems that the participants had experienced. The questionnaire specifically asked, "Did any of these problems ever make your gambling problems worse?" Each participant's history of gambling, substance use disorder and psychiatric treatment was also reported.

Design and procedure

Chi-square analyses were performed on the types of comorbid problems, total number of comorbid problems, types of mental health or

substance use treatment sought and the response to whether or not gambling had been worsened by comorbid problems. A one-way ANOVA was performed on total number of comorbid problems by gender. The chi-square on each comorbid condition was analyzed separately by gender and by the dichotomous variable that reflected their worsening of the gambling problem.

Results

Previous treatment

Males reported larger treatment costs for gambling treatment and more substance abuse treatments. Females reported significantly more outpatient mental health treatment ($\chi^2(1, N = 78) = 5.198, p < .05$).

Comorbid problems

Sixty-one of the 78 respondents (78%) reported other substance use or mental health problems. A total of 168 comorbid problems in 11 categories were reported by the sample. Twice as many males (30.7% of the total sample) as females (16.7%) had one or no other comorbid problems. See Table 2 for the distribution of the number of comorbid problems by gender. More females (32%) than males (20.6%) had two or more comorbid problems. A one-way ANOVA on total number of comorbid problems by gender showed that females (mean 2.42) had more comorbid problems than did males (mean 1.6) ($F(1,76) = 3.948, p < .05$).

Table 2

Total number of comorbid problems by gender with percentages of total sample

Number of comorbid problems Count/per cent of total	Males		Females	
0	14	17.9%	7	9.0%
1	10	12.8%	6	7.7%
2	7	9.0%	10	12.8%
3	2	2.6%	3	3.8%
4	3	3.8%	6	7.7%
5	2	2.6%	3	3.8%
6	2	2.6%	3	3.8%

Table 3 presents the percentages of males and females reporting

specific problems. Males reported significantly more alcohol problems (χ^2 (1, N = 78) = 5.641, p < .05) and problem use of other drugs (χ^2 (1,N = 24) = 4.8, p < .05) than females and showed tendencies to greater marijuana use (χ^2 (1, N = 78) = 3.486, p = .062). Females reported significantly higher problems with overeating (χ^2 (1, N = 78) = 7.453, p < .01), eating disorders (χ^2 (1, N = 78) = 4.438, p < .05), compulsive shopping (χ^2 (1, N = 77) = 16.896, p < .001) and tranquilizer use (χ^2 (1, N = 24) = 10.667, p < .001).

Table 3

Per cent of sample reporting comorbid problems by gender

	Per cent of total sample	
Disorder	**Males**	**Females**
Alcohol use	20.5**	7.7
Overeating	12.8	26.9**
Eating disorder	0	5.1*
Compulsive shopping	1.3	19.5***
Depression	28.2	30.8
Any drug use	14.1	14.1
	Per cent of drug users	
Substance	**Males**	**Females**
Marijuana	39.1	17.4
Tranquilizers	8.3	41.7***
Stimulants, "uppers"	8.3	8.3
LSD	4.2	0
Narcotics	8.3*	4.2
Other drugs	16.7	0

Note: * p < .05; ** p < .01; *** p < .001

Effect of comorbid problem on gambling

Forty-nine per cent of those reporting comorbid problems (38.5% of the total sample) indicated that a comorbid problem had increased the severity of their gambling behavior. Eleven different types of comorbid problems were reported. Only two, depression and problem drinking, were identified as exacerbating gambling behavior. Females were significantly more likely than males to report that problem drinking (χ^2 (1, N = 34) = 5.13, p < .05) had increased the severity of their gambling.

About the same percentage of males and females reported depression had increased the severity of their gambling. Chi-square analyses on depression by gender and by the variable that measured a worsening of gambling problems found that depression exacerbated gambling problems independent of gender. Both males (χ^2 (1, N = 38) = 5.546, p < .01) and females (χ^2 (1, N = 34) = 5.903, p < .01) reported that depression significantly worsened their gambling problems.

Discussion

Many of the comorbid and treatment-seeking behaviors reported by this sample are consistent with well-known and studied gender differences in health behaviors. Males reported more alcohol and drug use problems and females reported more psychiatric problems, tranquilizer use and outpatient psychiatric treatment, which is consistent with previous reports (Kessler et al., 1994; Robins & Regier, 1991; Verbrugge, 1985).

The majority of the gamblers in this treatment sample from Louisiana had other psychiatric or substance use problems in addition to their gambling disorder. Comorbid problems were the rule rather than the exception in this population of gamblers in treatment. However, only a minority of patients with comorbid disorders answered positively to the question that the comorbid disorder had ever increased the severity of their gambling. This study partially supports the findings of Ibañez et al. (2001) that comorbid disorders increase the severity of gambling problems.

One finding of this study is that, from the participants' viewpoint, only two of the multiple comorbid problems reported had ever affected the severity of their gambling. Unfortunately, the effects were inconsistent: only about half of the patients with comorbid problems identified that depression or problem drinking had increased their gambling behavior. Most of the males with comorbid problem drinking and some of the participants with depression did not identify these problems as ever negatively affecting their gambling.

Although preliminary, this study provides more evidence of the need for careful attention to diagnosing and investigating the interactions of comorbid alcohol (Maccallum & Blaszczynski, 2002) and affective disorders. Clinicians should further investigate the interaction of the comorbid disorder with gambling behavior and the order of onset of the disorders. For example, a patient who developed depressive symptoms after the onset of pathological gambling in response to financial, legal or marital problems should be treated differently than a patient who developed depressive symptoms, and later, found that gambling temporarily relieved the symptoms of depression. In this example, the clinical approach should be different, even if both patients reported that their depressive symptoms increased their desire to gamble or their gambling behavior.

In addition, this study provides some perspective on the inconsistent results of pharmacological treatments for gambling disorders.

Inconsistent and possibly gender-related effects of comorbid disorders may be confounding the results of these trials. Several agents that affect mood and alcohol use behavior have shown inconsistent, mixed results in treatment trials. It may be necessary to sub-type gambling populations in treatment trials by both the presence and type of comorbid disorders as well as the effect of the comorbid disorder on the gambling behavior.

This study needs to be replicated with larger numbers and independent confirmation of comorbid diagnoses, rather than self-report alone. Family or other collateral information on the interaction of the comorbid disorders and the gambling would also be useful to supplement the patient's perceptions of the interactions. In addition, information on the onset of the comorbid disorders in relation to the gambling disorder would be crucial to determine causality. Further, more targeted studies are needed to clarify the clinical relevance of comorbid disorders for gamblers in treatment programs and to determine the role of these disorders in the development of gambling disorders.

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