Gender-related issues in the diagnosis and classification of alcohol use disorders among Mexican patients seeking specialized services

Questões relacionadas ao sexo no diagnóstico e classificação de transtornos por uso de álcool entre pacientes mexicanos que procuram os serviços especializados

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Abstract

Objective: *The objective of the study was to examine the role of gender in the endorsement of symptoms included in both the International Classification of Diseases-10th Edition and the Diagnostic and Statistical Manual of Mental Disorders-4th Edition.* ***Method:*** *Six hundred patients treated for alcohol-related problems in outpatient services in Mexico were evaluated with the Substance Abuse Module of the Composite International Diagnostic Interview.* ***Results:*** *Confirmatory factor analyses using the International Classification of Diseases-10th Edition and Diagnostic and Statistical Manual of Mental Disorders-4th Edition criteria produced two factors that included a combination of abuse/harmful alcohol use and dependence symptoms, which explained 40% and 49.2% of the total variance, respectively. In the abuse/harmful use groups of patients, symptoms and social consequences differed according to gender: withdrawal syndrome,* lack of control *and* legal problems *were more frequent in men, while women exhibited higher rates of attempts to* give up alcohol *and* difficulties to accomplish daily activities. *Specific gender-related factors differentiated abuse/harmful use from dependence, such as* loss of control *and* time spent to drink *in the case of men and desire to drink among women, according to the Diagnostic and Statistical Manual of Mental Disorders-4th Edition dependence criteria; and* presence of physical symptoms *in men and* family/social problems, craving, and futile effort to stop drinking *in women, according to the International Classification of Diseases-10th Edition dependence criteria.* ***Conclusion****: Future classification systems of substance abuse disorders should take into account differences between genders in order to help closing the treatment gap for women.*

Descriptors: *Gender identity; Alcoholism; Signs and symptoms; Substance-related disorders; International Classification of Diseases*

Resumo

Objetivo: O objetivo do estudo foi examinar o papel do gênero no endosso dos sintomas incluídos tanto na Classificação Internacional de Doenças-10ª Edição quanto no Manual Diagnóstico e Estatístico de Transtornos Mentais-4ª Edição. **Método:** Seiscentos pacientes tratados por problemas ligados ao álcool em serviços ambulatórios de saúde no México foram avaliados com o Módulo sobre Abuso de Substâncias da *Composite International Diagnostic Interview.* **Resultados:** A análise fatorial confirmatória com a Classificação Internacional de Doenças-10ª Edição e o Manual Diagnóstico e Estatístico de Transtornos Mentais-4ª Edição produziu dois fatores, que incluíram uma combinação de abuso/uso nocivo de álcool e sintomas de dependência, que explicaram 40% e 49,2% da variância total, respectivamente. No grupo de pacientes abuso/uso nocivo, os sintomas e as consequências sociais diferiram entre os gêneros: síndrome de abstinência, falta de controle e problemas jurídicos foram mais frequentes nos homens, enquanto as mulheres apresentaram maiores taxas de tentativas de abandonar o álcool e dificuldades para realizar diariamente atividades. Fatores específicos de gênero diferenciaram abuso/uso nocivo da dependência, como a perda de controle e o tempo gasto para beber, no caso dos homens, e do desejo de beber entre as mulheres, de acordo com os critérios de dependência do Manual Diagnóstico e Estatístico de Transtornos Mentais-4ª Edição, e presença de sintomas físicos em homens, problemas sociais/família, e desejo e esforço fútil de parar de beber em mulheres, segundo o critério de dependência da Classificação Internacional de Doenças-10ª Edição. **Conclusão:** Futuros sistemas de classificação da toxicomania devem levar em conta as diferenças entre os sexos, a fim de ajudar a suprimir a lacuna de tratamento para as mulheres.

Descritores: Identidade de gênero; Alcoolismo; Sinais e sintomas; Transtornos relacionados ao uso de substâncias; Classificação Internacional de Doenças

Introduction

Alcohol consumption and drinking patterns are major public health problems in the Americas.[1] In Mexico, according to the last National Addiction Survey,[2] episodic excessive consumption of alcohol (drinking more than five drinks on one occasion) is particularly high, present in 48.1% of the population aged between 15 and 65 years. Middle-aged men consume the highest amounts of alcohol, although the consumption in youth and women has increased substantially in the last decade. Evidence suggests that problematic alcohol consumption

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is mediated by gender-related factors.[3] Therefore, the diagnosis and classification of alcohol-related problems may be improved by taking cultural and gender differences into account, which in turn may help to better address this public health problem.

1. Culture, gender, and alcohol-related problems

Clinical expressions of alcohol abuse, harmful use, and dependence are quite heterogeneous in terms of culture and gender.[4] New concepts and behavior patterns are not adopted at the same rate by different cultures, leading to variable reporting of some symptoms (e.g., there is not a popular word to describe withdrawal in Mexico as different from "hangover"). Increased tolerance might not be viewed as problematic by heavy drinkers when they come to treatment, especially when the time elapsed between the onset of the disorder and treatment is long. Additionally, the social tolerance of heavy drinking and local policies might also affect the probability of having problems associated with substance use. A cross-cultural study comparing general population samples of Mexican Americans and Mexicans[5] showed that the rates of abstinence were higher among Mexicans than in Mexican Americans, and that drinking was more frequent among Mexican Americans than in Mexicans, but that the prevalence of alcohol-related problems was higher in Mexico than among Mexican Americans.

Gender, as one of the most important social variables in most cultures, can mediate the prevalence and type of alcohol-related problems and consequences, and also the willingness to endorse symptoms and seek specialized treatment. In Mexico, women have lower rates of alcohol dependence than men (1% vs. 11%).[6] Gender differences in the prevalence of alcohol-related problems have long been noted among Mexican citizens.[7] The consumption of alcohol by men has been associated with antisocial behavior, whereas female alcohol-related problems tend to be characterized by isolation, depression, and anxiety. Also, men were found to seek professional help more frequently than women.[8,9]

In spite of these important gender differences, research and policies on alcohol consumption have traditionally focused on male drinking habits and problems. Currently available measures for the study of alcohol-related problems — as well as prevention and treatment options — have been developed without sufficient consideration for the special conditions and needs of females.[10]

2. Classification of alcohol-related problems

The two major classification systems of mental disorders define alcohol dependence in similar ways, but take different directions in respect to the definition of problematic use. The ICD-10[11] uses the concept of harmful use and defines it as a pattern of alcohol use that causes damage to physical or mental health, while the DSM-IV[12] emphasizes the social consequences of the use of alcohol in defining alcohol abuse, such as: (1) repeated failure to fulfill major role obligations, (2) legal problems, (3) recurrent use despite problems, and (4) recurrent use of alcohol in situations in which it is physically hazardous.

Harmful use commonly - but not invariably - has adverse social consequences; however, social consequences in themselves are not sufficient to justify a diagnosis of harmful use. Thus, the definition of harmful use in the ICD is less likely to lead to under-reporting because it does not rely on social consequences which minimize the under-reporting of damage in the absence of dependence. This term was introduced in the ICD-10 and supplanted "non-dependent use" as a diagnostic term in previous classifications by the WHO.[13,14] The closest equivalent in the DSM-IV is substance abuse, which is based on social consequences.

Historically, the DSM has conceptualized substance use disorders in several ways: the first edition[15] described them in the section of personality disorders. In the DSM-III[16] a separate classification and the distinction between abuse and dependence emerged. Since then, abuse has been defined as a pattern of pathological use that affects social or occupational functioning; whereas dependence also implies the presence of tolerance and withdrawal symptoms.[17] Thus, for the DSM-III-R,[18] abuse was a residual category that could be applied to those not fulfilling the criteria for dependence. In the DSM-IV,[12] the term dependence was restricted with the purpose of incorporating physical dependence (withdrawal and tolerance) as a required criterion; and alcohol abuse remained as a less severe category than dependence, and both could not coexist. Recently, it has been suggested that DSM-V merge alcohol abuse and alcohol dependence into a single new entry,[19] named "alcohol-use disorder".[20]

Previous studies focused on the validity of the dependence syndrome concluded that the construct was valid across cultures.[21-25] Nevertheless, the dependence syndrome is difficult to apply to all substances (e.g., hallucinogens, marijuana, inhalants, and psychostimulants). Furthermore, a study involving Mexican American and Mexican men in treatment[26] that compared the correlates, presentation, and factor structure of DSM-IV alcohol dependence, demonstrated that the unidimensional model of alcohol dependence fit the Mexican American data, but not the Mexican data.

A critical evaluation of the ICD-10 alcohol dependence criteria in nine countries (Turkey, Greece, India, United States, Nigeria, Romania, Mexico, Spain, and Korea)[27] concluded that these criteria assume that individuals are aware of their feelings and alcohol-related behavior in a way that is unfamiliar to a number of cultures. Difficulties were found including the translation of some concepts (e.g., "feel emotionally") and the application of specific criteria across countries. Even when there was agreement concerning the meaning of a given term, the threshold used for its application by clinicians varied. Alcohol tolerance was not seen as a symptom of pathology in some countries; compulsion or craving was not differentiated in many sites from loss of control; and the withdrawal syndrome was not clearly differentiated from hangover in many sites.

In an effort to make a contribution to the classification of substance abuse disorders in the ICD-11, we analyzed data regarding specific clusters of patients in Mexico according to gender and severity of alcohol-related disorders. The main objective of the present study was to examine the role of gender in the endorsement of symptoms included in the ICD-10 and DSM-IV.

Method

1. Sample

The data presented here derive from a reanalysis of a case series of 200 female and 400 male subjects aged 18 and over in their first-time treatment for alcohol-related problems at two different outpatient services in Mexico City, the Clinic for the Treatment of Alcohol-Related Problems (CAPRA, in the Spanish acronym) of the General Hospital of Mexico, and the Help Center for Alcoholics and their Families (CAAF, in the Spanish acronym). The aim of the original project was to evaluate the relationship between alcohol dependence and medical and social problems, factors related to help-seeking behavior, attention pathways, and perceptions and attitudes toward treatment.[3,28]

2. Measures and procedures

All voluntary participants were evaluated with the official Spanish version of the Substance Abuse Module of the Composite International Diagnostic Interview (CIDI-SAM), which includes both the DSM-IV and ICD-10 criteria for alcohol-related diagnoses (for a revision of the questionnaire items used to operationalize the DSM-IV and ICD-10 criteria for different diagnoses, see Caetano et al.[26] and Mariño et al.[3,28]) and a measure of withdrawal symptomatology, covering the physical, social, and psychological consequences of alcohol use. The CIDI-SAM has been used in different international samples, including Mexican populations, and was shown to have adequate psychometric properties.[29,30] The data analyzed in this article refer to the 12 months prior to the beginning of treatment.

3. Data analysis

All analyses were carried out using version 15.0 of the Statistical Package for the Social Sciences (SPSS). The description of demographic and clinical characteristics was based on frequencies and percentages for categorical variables and on means and standard deviations for continuous variables.

Two confirmatory factor analyses were conducted using all the symptoms related to problematic alcohol consumption; the first one with the DSM-IV abuse and dependence criteria, and the second one with the ICD-10 harmful use and dependence criteria. Principal-axis factoring with varimax rotation was used in the two analyses. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were also used.

To examine differences in the prevalence of alcohol-related diagnoses; dependence symptoms by disorders and gender; number of symptoms by disorder, gender, and type of symptoms; and type of consequences by diagnosis, chi-square (x^2) analyses for contingency tables of categorical data were performed.

Finally, logistic regression models were used (total sample, men and women) to analyze the factors that differentiate (predict) the presence of DSM-IV alcohol dependence diagnosis as compared to a diagnosis of alcohol abuse, and also the factors that predict ICD-10 dependence diagnosis as compared to a diagnosis of harmful use. The individual variables included in the model were: gender, family history of consumption, family and social problems, and having received suggestions or referrals for treatment. The symptoms included were: desire or urge to drink (craving), loss of control, tolerance, devoting most time to get, take or lessen the effects of alcohol, presence of physical symptoms, and futile efforts to stop drinking. The significance level for all tests was established at $p \leq 0.05$ (two-tailed).

Results

The total sample included 600 participants, 400 (67.4%) men and 200 (32.6%) women, with a mean age of 40.95 ± 12.02 years. In respect to marital status, 49% had a partner, 21.5% were divorced or separated, and 22% were single. The sample had a mean of 7.32 ± 7.81 years of education.

The confirmatory factor analysis with DSM-IV symptoms of problematic alcohol consumption produced two factors that explained 49.2% of the total variance. One factor was integrated with two dependence criteria (desire or urge to drink and physical or psychological problems) and two abuse criteria (family problems and continuing to drink despite the consequences). The second factor included the other five dependence criteria (tolerance, withdrawal, lack of control, time spent to drink, and reduction of important activities) and the abuse criteria related with drinking in situations that are dangerous, difficulties to accomplish daily activities, and presence of legal problems.

Also, the confirmatory factor analysis with ICD-10 criteria for harmful use and dependence yielded two different factors that explained 40% of the total variance. The first factor included four dependence criteria (tolerance, withdrawal, lack of control, and reduction of important activities) and all harmful use criteria except for those related with family, social, and work problems, which were aggregated in the second factor, together with dependence criteria regarding the desire or urge to drink and psychological and physical problems.

In both factorial analyses, the magnitude of the partial correlation coefficients among the variables was sufficient and the factor model was adequate to explain the data, indicating the presence of significant relationships between the variables.

Table 1 - Prevalence of ICD and DSM alcohol-related disorders by gender

Criteria	DSM-IV		ICD-10	
Diagnosis	Abuse %	Dependence %	Harmful use %	Dependence %
Men	13.0	87.0*	15.5	84.5*
Women	33.0	67.0*	36.0	64.0*

** Differences by gender: p ≥ 0.001; ** p ≥ 0.005*

1. Prevalence of ICD and DSM alcohol-related disorders by gender

The prevalence of all alcohol-related diagnoses according to both the ICD-10 and the DSM-IV are presented in Table 1. Significant differences by gender were found for all diagnostic categories: women had lower frequencies of dependence than men. There were no differences in the total prevalence of diagnoses using the two diagnostic classification systems.

2. Number of dependence symptoms across alcohol-related diagnoses

Almost 70% of the patients classified in abuse/harmful categories presented 1-2 dependence symptoms (69.2% in both classifications), while approximately 40% of dependence patients had 3-5 symptoms, and close to 60% had 6-7 symptoms. When data were analyzed by gender, the same pattern was observed.

3. Dependence symptoms across different alcohol-related diagnoses

In the total sample, symptoms clearly related to the dependence syndrome in both the ICD and DSM classifications were often present in patients diagnosed with abuse or harmful use (withdrawal and abstinence frequencies in the abuse and harmful use groups were 17.5% and 17.6%, respectively). The frequency of lack of control differed significantly between patients classified in the abuse group (15.3%) and those in the harmful use category (27.3%), and psychological or health problems were more frequent in the harmful use group than in patients with abuse (60.4% vs. 43.3%).

Comparisons of dependence symptoms by gender yielded significant differences (Table 3). While both men and women with diagnoses of abuse had significant psychological and health problems, withdrawal and lack of control were much more frequent in men (29.3% and 26.8%, respectively). In contrast, women classified in this group had higher rates of attempts to give up alcohol (34.5%). This tendency was similar when genders were compared in respect to the ICD criteria for harmful use. This suggests that there are important differences in the way men and women abuse alcohol.

Finally, concerning the diagnosis of dependence, all symptoms were frequent; a notable reduction of differences between men and women was observed; and the application of each classification system produced very similar data.

4. Social consequences across alcohol-related diagnoses

Gender differences were observed among patients classified in the abuse and harmful use groups in regard to the type of social consequences of the use of alcohol. Women reported difficulties to

Table 2 – Alcohol-related diagnoses and dependence symptoms by gender

	Abuse		Harmful use		Dependence-DSM		Dependence-ICD	
	Men (n = 51) %	Women (n = 51) %	Men (n = 54) %	Women (n = 34) %	Men (n = 359) %	Women (n = 149) %	Men (n = 346) %	Women (n = 126) %
Tolerance	7.3*	7.4*	7.4*	8.8*	67.2*	64.9*	69.1	67.5*
Withdrawal	29.3*	3.4*	25.9*	5.4*	75.8*	73.9*	77.4*	75.8*
Lack of control	26.8*	14.8*	31.5*	20.6*	87.5*	83.2*	88.6*	84.9*
Attempts to give up alcohol	9.8*	34.5*	13.0*	35.1*	73.9*	78.6*	75.1*	81.6*
Time spent in activities to use alcohol or recover from its effects	12.2	-	27.8*	13.5*	71.7*	70.7*	70.9*	69.3*
Giving up or reduced activities	**12.2***	-	13.0*	2.7*	81.4*	69.2*	83.1*	71.7*
Psychological and health problems	58.5*	55.2*	61.1*	59.5*	93.9*	97.8*	94.3*	97.7*

** Differences by gender: p ≥ 0.001; ** p ≥ 0.005*

accomplish everyday life activities with more frequency than men. In contrast, legal problems were more frequent among men. The only social consequence differing substantially between genders in dependent patients was the occurrence of legal problems (Table 4). Another interesting finding was that only one-third of dependence patients were advised by their doctors to seek professional help due to problematic use of alcohol.

5. Factors that differentiate abuse from dependence

According to the regression analysis for DSM-IV criteria, symptoms that predicted or differentiated patients with alcohol abuse from those with a dependence syndrome were: time spent drinking (103.5), cessation or reduction of social and recreational activities or work to drink (40.6), loss of control (19.7), having to drink more to achieve the same effect (21.3), presence of physical symptoms (12.8), desire to drink (6.7), and family and social problems (1.6). Someone having suggested that the patient seek professional help was also a variable that discriminated between the two groups of alcohol users.

Predictors of dependence were different between men and women. For men, the symptoms to establish the difference between abuse and the dependence syndrome were: reduction of daily activities (49.5), time to drink alcohol or avoid the effects of consumption (34.3), lack of control (32.1), and tolerance (24.7). For women, the symptoms that best differentiated between abusers and dependents were: reduction of important activities (113.1), desire or urge to drink (19.8), failed efforts to stop drinking (11.8), and loss of control (9.3).

In the regression analysis with ICD-10 criteria, symptoms that predicted or differentiated patients with harmful use from those with the dependence syndrome were: reduction of activities (48.7), tolerance (20.3), time spent drinking (19.8), inability to stop or reduce consumption (5.4), continuing to drink despite health consequences (5.2), and uncontrollable desire to drink (3.0).

Once again, there were some differences regarding the predictors of dependence across genders. For men, symptoms differentiating harmful use from dependence were: reduction in daily activities (87.5), tolerance (30.3), time spent drinking (26.8), and continuing to drink despite health consequences (6.9). For women, the symptoms that predicted the differences between both groups were: time spent drinking (249.0); continuing to drink despite family, social, work, and legal consequences (166.4); reduction of daily activities such as work, study or childcare (63.6); tolerance (32.4); desire or urgency to consume alcohol (23.6); and having been unable to stop or reduce drinking (21.6).

Table 4 summarizes the data of the regression analyses performed for the DSM-IV and ICD-10 criteria.

Discussion

The present study compared the diagnostic definitions of alcohol-related disorders in the ICD-10 and DSM-IV in order to understand the role of culture and gender in the endorsement of symptoms included in the two classifications. We evaluated patients seeking specialized services due to problematic alcohol consumption, and our results may therefore not be generalizable to the general population. The sample favored the comparison of diagnostic definitions of alcohol-related disorders in current classification systems: alcohol abuse and dependence in the DSM-IV,[12] and harmful use and dependence in the ICD-10.[11]

1. Are abuse and dependence independent categories?

According to our data, all the symptoms of problematic alcohol consumption can be gathered in two factors combining abuse/harmful use and dependence symptoms and explaining a high proportion of the total variance. Similar variances have been reported in different cultures around the world. The factor analysis of three dependence-related items in samples from Australia, Bulgaria, Kenya, Mexico, Norway, and the United States showed that a principal component was responsible for over 50% of the variance in all these countries.[23]

Table 3 - Social consequences across alcohol-related diagnoses by gender

Criteria	Abuse		Harmful use		Dependence-DSM		Dependence-ICD	
Gender	Men %	Women %	Men %	Women %	Men %	Women %	Men %	Women %
Difficulties to accomplish everyday life activities	17.1*	41.4	16.7*	37.8*	59.7*	63.4*	60.9*	64.8*
Drinking when it was not adequate	7.4*	4.5*	9.3*	13.5*	34.7*	44*	35.4*	44.5*
Legal problems	19.5*	3.4*	20.4*	2.7*	32.2*	15.7*	32.3*	16.4*
Family problems	75.6	72.4	68.5*	70.3	90.5*	87.3*	88.3*	89.1*
Doctor suggested seeking help	17.1*	20.7	20.4*	29.7	34.4*	35.8	34.3*	35.9

** Differences by gender: p ≥ 0.001; ** p ≥ 0.005*

Table 4 - Factors that differentiate abuse/harmful use from dependence in the total sample and by gender: DSM-IV and ICD-10 diagnostic criteria

Variable	DSM-IV abuse vs. dependence			ICD-10 harmful use vs. dependence		
	Total OR (CI-95%)	Men OR (CI-95%)	Women OR (CI-95%)	Total OR (CI-95%)	Men OR (CI-95%)	Women OR (CI-95%)
Drinking causes family and social problems	**1.64**** (1.07-2.50)	0.2 (0.7-2.07)	0.9 (0.8-13.4)	1.27 (0.8-1.8)	1.4 (0.8-2.3)	**166.4*** (3.9-694.5)
Desire or urge to drink (craving)	**6.74*** (2.23-20.2)	4.04 (0.9-17.06)	**19.8**** (3.3-115.5)	**3.09**** (1.3-7.1)	1.8 (0.6-5.6)	**23.6*** (2.5-222.8)
Loss of control	**19.7*** (6.16-63.3)	**32.1**** (6.4-160.4)	**9.3**** (1.7-51.0)	**19.8**** (7.4-52.6)	**26.8**** (6.5-109.3)	**249.0*** (9.2-672.8)
Tolerance	**21.3*** (5.17-88.0)	**24.7**** (3.4-177.4)	**10.6*** (1.2-89.3)	**20.3**** (6.4-64.3)	**30.3**** (6.1-149.8)	**32.4*** (2.2-476.5)
Time spent to drink	**103.5*** (16.3-653.3)	**34.3**** (4.6-254.1)	6.1 (0.4-20.2)	1.07 (0.3-2.8)	1.5 (0.4-1.4)	0.6 (0.3-1.5)
Reduction of important activities	**40.6*** (8.19-202.0)	**49.5**** (6.5-376.7)	**113.1*** (2.5-501.8)	**48.7**** (14.0-169.7)	**87.5**** (15.5-494.2)	**63.6*** (2.1-189.3)
Presence of physical symptoms	**12.8**** (1.73-95.8)	7.3 (0.5-107.9)	26.7 (0.3-212.8)	**5.2**** (2.1-12.6)	**6.9*** (2.1-22.4)	2.5 (0.2-25.9)
Suggestion to seek professional help	**7.86*** (1.8-34.3)	**6.1*** (1.9-35.1)	13.9 (0.7-268)	1.6 (0.5-5.1)	1.3 (0.3-6.1)	29.9 (0.6-115.1)
Futile efforts to stop drinking	2.04 (0.4-8.4)	1.1 (0.12-11.2)	**11.8*** (1.8-109.2)	**5.4*** (1.6-18.7)	3.88 (0.6-24.")	**21.6*** (1.6-283.5)
Family antecedents of alcohol use	1.07 (0.3-3.1)	0.35 (0.7-1.6)	0.28 (0.19-4.2)	1.45 (0.5-3.6)	1.3 (0.4-4.3)	2.6 (0.2-22.7)
Gender	2.15 (0.5-7.7)			1.9 (5.7-1.2)		

** p ≤ 0.05; ** p ≤ 0.01*

2. Gender differences across alcohol-related diagnoses

Our findings suggest that Mexican men and women seeking specialized care for alcohol use differ in respect to the type of symptoms and social consequences experienced by those with diagnoses of abuse or harmful use. In women, abuse or harmful use of alcohol are predominantly expressed by futile and multiple efforts to stop drinking, while in men the most frequent symptoms are withdrawal and loss of control. Regarding the social consequences of alcohol consumption, women reported greater difficulties to perform daily life activities and men had a higher frequency of legal problems.

These differences could be explained in terms of cultural gender roles and risks. In most drinking cultures, females are expected to abstain or drink less than males and, as a consequence, they actually drink less. However, when women develop alcohol-related problems, they are often rejected, experience more problems, and hide their addiction more frequently, which in turn make early detection and treatment difficult.[10]

As expected, gender differences in the frequency of symptoms and social consequences of drinking decreased in the groups of patients who met the criteria for a diagnosis of dependence according to either system. Similarly, our regression analyses for the total sample did not find gender to be a predictor of dependence.

It seems that efforts to identify and treat women in the early stages of problematic alcohol consumption might be more effective if gender differences are taken into account. For example, it would be important to reconsider using legal problems as a criterion for the diagnosis of alcohol abuse among women. Classification systems could also be improved by the inclusion of symptoms or social consequences that are more frequently observed among women. Probably, the approach of the ICD-10 to harmful use is more sophisticated in this sense. A striking finding of the present study was the significant difference between the rates of identification of harmful use and of abuse by gender (see Table 2), especially in regard to the following symptoms: time spent to drink or to recovery from consumption effects, and reduction in important activities.

Another interesting finding related to the early identification and treatment of problematic alcohol consumption was that general practitioners referred a low proportion of dependence patients for treatment, and an even lower proportion of patients with abuse or harmful use. Again, it is here, in the abuse/harmful use groups that significant gender differences were identified. That is, ICD harmful use determined higher rates of referral than the DSM abuse category. Therefore, future efforts to improve the detection, referral rates, and treatment of problematic alcohol consumption should take into account gender differences, and classification systems must be carefully revised in order to support adequate intervention policies.

3. Risk factors for alcohol dependence

For both men and women, the most important risk factors for developing alcohol dependence in our study were reduction of

activities and lack of control. Nevertheless, once again gender-specific factors were observed. For men, time spent drinking and tolerance were important predictors, while in women the desire to drink and the efforts to stop drinking prevailed. These data may be useful to improve treatment effectiveness and prevention strategies by incorporating criteria and indicators that are more sensitive to gender differences in the assessment of the patterns of problematic alcohol consumption and dependence.

Conclusion

There is a need for sensitive cultural- and gender-specific indicators of alcohol-related disorders that might help closing the treatment gap for women.

Disclosures

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** Modest*
*** Significant*
**** Significant: Amounts given to the author's institution or to a colleague for research in which the author has participation, not directly to the author.*
Note: WHO = World Health Organization.
For more information, see Instructions for Authors.

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