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Alcohol and psychotropic substance use in female Spanish victims of intimate partner violence

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Abstract

Background: Studies show high use of alcohol among American women who are victims of intimate partner violence (IPV), but not in Spanish victims. This study examines hazardous drinking, use of psychotropic substances, and the relationship with psychopathological symptoms in Spanish women who are victims of IPV. **Method:** 50 battered women and 50 control women from general population were assessed. **Results:** Hazardous drinking in women victims of IPV (18.4% and 24.5%) was higher than in previous Spanish studies, and lower than in controls (no significant difference). Women victims of IPV showed a significantly higher use of psychotropic medication than controls (40% vs. 20%). For women victims of IPV, psychopathological symptoms were not related to use of alcohol, but use of psychotropic medication was related to post-traumatic arousal. **Conclusions:** Results suggest that Spanish women victims of IPV may resort to psychotropic medication rather than alcohol to cope with their symptoms.

Keywords: Alcohol use**,** psychotropic substance use, intimate partner violence.

Resumen

***Consumo de alcohol y sustancias psicotrópicas en mujeres españolas víctimas de violencia de género en la pareja*. Antecedentes:** los estudios muestran un alto consumo de alcohol en las mujeres maltratadas americanas, pero no en las españolas. Este estudio examina en mujeres maltratadas españolas: el consumo de riesgo de alcohol, el consumo de sustancias psicotrópicas y la relación con los síntomas psicopatológicos. **Método:** 50 mujeres maltratadas y 50 mujeres controles de la población general fueron evaluadas. **Resultados:** el consumo de riesgo de alcohol en mujeres maltratadas (18,4% y 24,5%) fue superior al encontrado en los estudios españoles previos, e inferior a los controles (sin diferencias significativas). Las mujeres maltratadas mostraban un consumo de psicofármacos significativamente mayor que las controles (40% vs. 20%). En las mujeres maltratadas, los síntomas psicopatológicos no estaban relacionados con el consumo de alcohol, sin embargo el consumo de psicofármacos se relacionaba con la activación postraumática. **Conclusiones:** los resultados sugieren que las mujeres maltratadas españolas pueden recurrir a los psicofármacos en lugar de al alcohol para hacer frente a sus síntomas.

Palabras clave: consumo de alcohol, consumo de sustancias psicotrópicas, violencia de género.

Studies performed in American samples have consistently shown an increased use of alcohol among women victims of intimate partner violence (IPV). Golding's meta-analysis (1999) showed a mean prevalence of 18.5% for alcohol abuse or dependence, which was higher than the lifetime prevalence in the American general population (8.2%; Kessler et al., 1994). A more recent study that assessed alcohol abuse or dependence disorders in women victims of IPV using diagnostic interviews and the criteria of Diagnostic and Statistical Manual of Mental Disorders –Text Revision– 4th edition (DSM-IV-TR, American Psychiatric Association [APA], 2000), found an alcohol dependence rate of 18.1%, and an alcohol abuse rate of 3.2% (Nathanson, Shorey, Tirone, & Rhatigan, 2012). These findings were also significantly higher than current estimates from the American general population for DSM-5 Alcohol Use Disorder, which combining abuse and dependence into a single diagnosis, showed a 12-month prevalence in females of 10.4% (Grant et al., 2015).

Khantzian (1997) claims that states of suffering could be important psychological determinants in the use, and potentially in the abuse, of addictive substances, which would be related with the increased drinking among victims of traumatic events (Jacobsen, Southwick, & Kosten, 2001; Logan, Walker, Cole, & Leukefeld, 2002; McFarlane, 1998; Stewart, 1996; Stewart, Pihl, Conrod, & Dongier, 1998). On that basis, Jacobsen et al. (2001) highlight the abuse or dependence of central nervous system depressants, such as alcohol, cannabis, opioids and benzodiazepines regarding the effect of these drugs on main Posttraumatic Stress Disorder (PTSD) symptoms. In abused women, Kaysen et al. (2007) examined the relation between trauma symptoms and alcohol and found that heavy episodic drinkers reported significantly more trauma symptoms when compared with moderate drinkers or abstainers. Specifically, the greatest differences among the drinking pattern groups were found in arousal symptoms, followed by intrusion symptoms.

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Nevertheless, evidence in Spanish women victims of IPV is very different; several studies in Spanish clinical samples have found low rates of problematic alcohol use, ranging from 4 to 10% (e.g., Crespo & Arinero, 2010; Labrador, Fernández-Velasco, & Rincón, 2010). Several issues could explain these discrepancies between the American and Spanish studies. First, the results may be related to the application in the Spanish studies of the CAGE (Mayfield, McLeod, & Hall, 1974), a short screening questionnaire to identify drinking problems. However, within the American studies reviewed, only three studies included in Golding's meta-analysis (1999) used the CAGE. Therefore, the lower rates in Spanish abused women samples could be due to the use of the CAGE, which has proven to have low sensitivity to hazardous drinking (e.g., McCusker, Basquille, Khwaja, Murray-Lyon, & Catalan, 2002); that is, it does not identify drinkers at an earlier stage and only detects the more severe end of the drinking-problem spectrum (i.e., harmful drinkers). Furthermore, previous findings in Spanish studies may also be biased by the use of the CAGE in interview format that could lead to social desirability when reporting sensitive information (Bowling, 2005). In this sense, Okamoto et al. (2002) compared answers to a health-related lifestyle questionnaire in self- and interviewer-administered forms, and found that respondents generally tended to answer questions on health behavior (including alcohol use) with more socially acceptable responses in the interview format.

Likewise, if low alcohol use rates in Spanish abused women were confirmed, it could suggest that other substances, namely central nervous system depressants, such as cannabis, opioids and benzodiazepines, could be used to provide short-term relief for PTSD symptoms. Golding's meta-analysis (1999) also showed a higher mean prevalence of drug abuse or dependence in women victims of IPV (8.9%) compared with American general population (5.9%), as well as, a strong and statistically significant association between this health problem and intimate partner violence. Furthermore, in Spain, psychotropic medication use is increasingly widespread. In fact, according to the National Health Survey, 20.97% of women had used tranquilizers, relaxants or sleeping medicines, and 10.01% had used antidepressants or stimulant drugs in the previous two weeks (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2013). Likewise, a recent study that analyzed the nonmedical prescription drugs use in five European Countries showed that Spain had the highest 12-months and lifetime prevalences of opioids and sedatives use without medical prescription (Novak et al., 2016).

This study further examines the presence of hazardous drinking in Spanish women victims of IPV. It aims to determine whether lower rates of alcohol use in previous studies in Spanish samples of abused women could be related to: (a) the measurement instrument (CAGE), (b) the measurement format (interview vs. self-report), and/or (c) the use of other types of psychoactive substances as a coping strategy. Additionally, this study also attempts to examine the relationship between psychopathological symptoms and substances use. Consequently, our specific objectives are: (a) to compare rates of hazardous drinking in women victims of IPV and in control women using the AUDIT-C (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998), which has shown sensitivity for this range of drinking-problems; (b) to compare rates of hazardous drinking in the self-report format and in the interview format; (c) to compare rates of other psychoactive substance use, mainly psychotropic medication, in the IPV group and in the control group; and (d) to analyze the relationship between posttraumatic symptoms and hazardous drinking and the use of other psychoactive substances among women victims of IPV.

Method

Participants

The sample comprised 50 women who had habitually experienced IPV and 50 non-trauma-exposed women (control group) matched by age. All participants were aged 18 or above. Women in the IPV group were recruited through clinics and centers for assistance to this type of population. All had suffered violence by their intimate partner for at least 1 month. Referring counselors judged traumatized participants to be sufficiently emotionally stable to withstand the interview. The control group was recruited through word of mouth. All participants received compensation of 15 €.

Instruments

Demographic variables. Background information (e.g., age, education, and socioeconomic level) was requested in a standardized interview. In this interview women in the IPV group were also asked about the features of violence by their intimate partner (e.g., type of injuries and duration of abuses).

Alcohol and drug use. The *Alcohol Use Disorders Identification Test Consumption Revised version (AUDIT-C;* Bush et al., 1998; Spanish adaptation by Gómez, Conde, Santana, & Jorrín, 2005) is a 3-item alcohol use screening questionnaire that helps to identify hazardous or problematic alcohol consumption. Items are rated on a 0-4 scale. In a Spanish study within a primary care context, AUDIT-C showed, with a cut-off point of 3, a specificity of 74.9% and a sensitivity of 100% (Gómez et al., 2005). Two versions of AUDIT-C (interview and self-report format) were used. Both versions showed good internal consistency in the sample (Cronbach's alphas were .72 and .69 for the interview and self-report format, respectively).

Additionally four questions regarding the use of psychotropic medication and illegal psychoactive drugs in the last year were included in the standardized interview. Specifically, items introduced inquired about the use and type of psychotropic medication (e.g. tranquilizers, sleeping pills, barbiturates, anxiolytics such as Valium, etc.) and drugs (e.g. cannabis, cocaine, synthetic drugs, etc.) and the frequency of consumption. To rate frequency, scores were adapted from AUDIT-C; therefore, a 0-4 scale was used.

Psychopathological symptoms. The *Global Assessment of Posttraumatic Stress Questionnaire 5 (Evaluación Global del Estrés Postraumático 5, EGEP-5*, in Spanish; Crespo, Gómez, & Soberón, 2017) was designed as a self-report measure in Spanish aimed to assess posttraumatic symptoms following DSM-5 criteria (American Psychiatric Association, 2013). According to DSM-5 PTSD structure, symptoms are grouped into four subscales (i.e., intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity). In this study, this measure showed an adequate consistency for symptom severity (alpha = .87).

The *Beck Depression Inventory-II (BDI-II*; Beck, Steer, & Brown, 1996) is probably the most widely used test of depressive symptoms. Its Cronbach's alpha in this study was .94.

Similarly, the *Beck Anxiety Inventory (BAI*; Beck & Steer, 1990) is broadly used to measure the presence and severity of anxiety symptoms. In this sample, it showed high internal consistency (alpha = .95).

Procedure

As part of a larger study, participants were assessed in a sole session in which they completed a semi-structured interview (including the AUDIT-C in the interview format, –AUDIT-C-I– and the questions regarding the use of drugs and psychotropic medication), and the self-administered instruments (i.e., AUDIT-C in the self-report format –AUDIT-C-S– EGEP-5, BDI-II and BAI). Further details regarding the procedure are reported in Fernández-Lansac and Crespo (2015, 2017).

The Ethics Committee of the University approved this study. All participants provided full informed consent.

Data analysis

The descriptive statistics (i.e., means, standard deviation, and percentages) were used to characterize the sample and study variables. The chi-squared tests for the categorical data and the *t* test or Mann-Whitney *U* tests for the continuous data were applied to compare the IPV group and control group features and use of substances. The data were tested for normality using the Shapiro-Wilk test.

Both AUDIT-C formats were compared using the Wilcoxon test for the continuous data, and the McNemmar for the percentages of hazardous drinkers. Additionally, the intra-class correlation coefficient between the two formats was computed.

Finally, after testing for normality using the Shapiro-Wilks test, the *t* tests or the Mann-Whitney *U* tests were used to compare psychopathological symptoms in women victims of IPV with and without hazardous drinking and use of psychotropic medication. Moreover, a multivariate analysis (binary logistic regression) was also performed with hazardous drinking or the use of psychotropic medication as the dependent variables and psychopathological symptoms that achieved statistical significance in bivariate analyses as the predictor variables, using the forward stepwise (Wald) method and the Hosmer and Lemeshow goodness-of-fit test for the adjustment of the model.

Results

Characteristics of participants

Participant women were an average age of 39.64 years (*SD* = 12.13); most were single (43%), whereas 29% were married or living with a partner. In addition, 27% were divorced or separated, and 1.0% were widows; most were active workers (56%) or students (16%). Many (45%) had studied at the university level (10% have elementary studies).

Both groups did not differ in terms of age, $t(83.37) = -.674$, $p = .502$; educational level, $\chi^2(1) = 1.17$, $p = .280$; or job situation, $\chi^2(1) = .162$, $p = .687$; however, the groups did differ slightly in terms of marital status, $\chi^2(1) = 3.93$, $p = .047$ (20.0% of the IPV women group and 38.0% of the controls were married or living with their partners).

Abused women suffered intimate partner violence in their most recent relation in which their partner abused them during a mean of 136.70 months (*SD* = 133.06), that is, over 11 years. Approximately 84.0% had suffered physical aggressions, and 66.0% had suffered sexual abuse; all had suffered psychological abuse (100.0%). Violence occurred daily for 72.0% of the women.

Alcohol and psychoactive substance use

As observed in Table 1, the percentage of hazardous drinkers was smaller in the IPV group than in the control-matched group, although differences did not reach statistical significance. Only the severity scores in the AUDIT-C-I were significantly smaller in the IPV group. Moreover, abused women showed a significantly higher use of psychotropic medication, mainly combining both

Table 1
Alcohol and drug use: comparison between groups

	Control group (n= 50)	IPV group (n= 50)	Statistic	*p*
AUDIT-C-I *M (SD)*	2.08 (1.87)	1.41 (2.23)	U Mann-Whitney	.009
AUDIT-C-S *M (SD)*	2.12 (1.89)	1.59 (1.94)	U Mann-Whitney	.074
Hazardous drinking AUDIT-C-I % *(n)*	34 (17)	18.4 (9)	$X^2_{(1)} = 3.12$	.077
Hazardous drinking AUDIT-C-S % *(n)*	32 (16)	24.5 (12)	$X^2_{(1)} = 3.12$	.407
Use of psychotropic medication % *(n)*	20 (10)	40 (20)	$X^2_{(1)} = 4.76$	.029
Type of psychotropic medication % *(n)*				
Anxiolytic	70 (7)	35 (7)	$X^2_{(3)} = 8.25$	.041
Antidepressant	20 (2)	20 (4)		
Anxiolytic + Antidepressant	–	45 (9)		
Other	10 (1)	–		
Use of other psychoactive substances % *(n)*	8 (4)	8 (4)	–	–
Type of other psychoactive substance % *(n)*				
Cannabis/marijuana	100 (4)	75 (3)	$X^2_{(1)} = 1.14$	.285
Other	–	25 (1)		

AUDIT-C-I=AUDIT-C interview format; AUDIT-C-S=AUDIT-C self-report format
Because of the missing values for one woman in the IPV group in the AUDIT data, the sample was composed of 49 abused women

anxiolytic and antidepressants. Nevertheless, there were no significant differences between the groups in the use of other psychoactive substances.

Hazardous drinking percentages and severity scores were higher when assessed in a self-report format than in an interview format (particularly among battered women), although differences did not achieve statistical significance either in the total sample or in the IPV group. Furthermore, the correlation between both formats was high and significant (refer to Table 2).

Relation between alcohol and psychotropic medication use and psychopathological symptoms in women victims of IPV

Of the participants in the IPV group, 74% fulfilled all DMS-5 criteria for PTSD diagnosis; the severity of PTSD symptoms was in the mild level (*M* = 35.06; *SD* = 16.2; range 0-80). Average depression scores showed mild severity (BDI-II: *M* = 25.61; *SD* = 12.55), whereas anxiety scores were at the mild-moderate level (BAI: *M* = 28.51; *SD* = 16.34).

As observed in Table 3, bivariate analyses showed no significant differences between abused women with and without hazardous drinking (both assessed in the interview and in the self-report format) in overall PTSD symptoms, in the four groups of PTSD symptoms (i.e., intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity), and in depression or anxiety. It is worth noting that, although not significantly, all symptoms were higher in women without hazardous drinking. Conversely, abused women who used psychotropic medication showed significantly higher scores in PTSD symptoms (overall and in all groups of symptoms but avoidance), depression and anxiety when compared to abused women who did not use psychotropic medication.

Consequently, the multivariate logistic regression model was computed only for use of psychotropic medication. In this analysis, the sole variable significantly associated with the use of these substances in abused women was the severity of alterations in arousal and reactivity. This variable allowed a correct classification for 72.3% of the women. The general goodness-of-fit for the model was good, with a Nagelkerke $R^2 = 0.34$ and $\chi^2(7) = 3.64$, $p = 0.821$ for the Hosmer and Lemershow's tests.

Table 2
Comparison between AUDIT-C-interview format (AUDIT-C-I) and self-report format (AUDIT-C-S) for the total sample and the IPV group

	AUDIT-C-I	AUDIT-C-S	ICC	*p*
Total sample (n= 99)				
Score (0-12) *M (SD)*	1.75 (2.08)	1.86 (1.93)	.88	<.001
Hazardous drinking *% (n)*	26.3 (26)	28.3 (28)	.80	<.001
IPV Group (n= 49)				
Score (0-12) *M (SD)*	1.41 (2.23)	1.59 (1.94)	.81	<.001
Hazardous drinking *% (n)*	18.4 (9)	24.5 (12)	.58	<.001

ICC = intra-class coefficient
Because of the missing values for one woman in the IPV group in the AUDIT data, the sample was composed of 49 abused women

Discussion

This study analyzes the use of alcohol and psychoactive substances among Spanish women who have suffered violence from their intimate partners, and compares it with a control group. In addition, this study establishes the relationship between the presence of hazardous drinking or the use of psychotropic substances, and psychopathological symptoms, including post-traumatic symptoms, depression and anxiety. Abused women in

Table 3
Comparisons of symptoms in function of the presence of hazardous drinking (AUDIT-C-I and AUDIT-C-S) and the use of psychotropic medication in the IPV group (n= 49)

	Hazardous drinking (AUDIT-C-I)			Hazardous drinking (AUDIT-C-S)			Use of psychotropic medication		
Variable (range)	**No (n= 40)** *M (SD)*	**Yes (n= 9)** *M (SD)*	***p***	**No (n= 37)** *M (SD)*	**Yes (n= 12)** *M (SD)*	***p***	**No (n= 30)** *M (SD)*	**Yes (n= 20)** *M (SD)*	***p***
I (0-20)	8.56 (4.90)	7.00 (5.45)	.401	8.53 (4.89)	7.50 (5.38)	.541	6.87 (4.96)	10.77 (4.31)	.006
A (0-8)	3.67 (2.66)	4.75 (2.91)	.319	3.46 (2.54)	5.18 (2.93)	.065	3.44 (2.71)	4.65 (2.70)	.145
NACM (0-28)	12.90 (5.94)	8.98 (5.88)	.095	12.55 (5.91)	11.21 (6.69)	.527	10.78 (6.36)	14.61 (4.96)	.030
AAR (0-24)	10.03 (5.18)	9.50 (5.78)	.795	10.23 (5.06)	8.97 (5.92)	.487	7.84 (4.58)	13.20 (4.43)	<.001
PTSD (0-80)	35.31 (15.59)	31.11 (17.78)	.500	34.92 (15.37)	33.54 (18.13)	.805	29.22 (15.27)	43.23 (13.52)	.002
D (0-63)	26.97 (12.65)	19.54 (10.63)	.109	27.21 (12.49)	20.65 (11.87)	.117	21.40 (12.66)	32.26 (9.23)	.002
An (0-63)	28.46 (16.26)	26.44 (17.00)	.751	29.71 (16.03)	23.08 (16.52)	.254	21.62 (15.11)	38.83 (12.35)	<.001

I= Intrusion; A= Avoidance; NACM= Negative alterations in cognitions and mood; AAR= Alterations in arousal and reactivity; PTSD = Posttraumatic Stress Disorder; D = Depression; An = Anxiety
Because of the missing values for one woman in the IPV group in the AUDIT data, the sample was composed of 49 abused women

the sample had suffered long-lasting and severe violence by their intimate male partners, with persistent psychological effects.

This study does not reply the particularly low percentages of alcohol use reported in previous studies that applied the CAGE to women victims of IPV in Spain (Crespo & Arinero, 2010; Labrador et al., 2010; ranging between 4% and 10%), and in Latin-America countries (Alonso, 2007; Cáceres, 2011; ranging between 0% and 2.5%). These data appear to support the relation of previous findings with the assessment instrument (i.e., CAGE). Actually, MacKenzie, Langa and Brown (1996), who compared the AUDIT and the CAGE to discriminate between safe and hazardous/harmful drinking in new medical inpatients, found that the AUDIT was more sensitive to the hazardous drinking range, whereas the CAGE was insensitive to this level of alcohol intake.

Nonetheless, and contrary to expectations, the results show high consistency for both formats of the AUDIT and do not support the role of the measurement format and consequent social desirability on the estimations of hazardous drinking percentages in abused women. However, it is worth noting that the percentages of hazardous drinkers detected in the self-report format were higher than those found with the interview format, although differences did not achieve statistical significance, maybe due to the small sample size. Consequently, this issue would require further research with larger samples.

More interestingly, the differences between IPV and the control group were not significant; furthermore, the percentages of hazardous drinkers among abused women were smaller than those in the control group. These results are at odds with findings by Lipsky, Caetano, Field and Larkin (2005) in American samples, as well as with the usually assumed statement regarding the association between exposure to traumatic events and increased substance use (Jacobsen et al., 2001; Logan et al., 2002; McFarlane, 1998; Stewart, 1996; Stewart et al., 1998).

Even more, hazardous drinking was not related to post-traumatic, depression or anxiety symptoms. These findings are in contrast with those by Kaysen et al. (2007). One possible explanation for the low use of alcohol in abused women, which is derived from their own suggestions, is that women feel the need of maintaining full awareness to address potential attacks by their intimate partner. Moreover, it is not unusual that women associate alcohol use (by the aggressor) with violence. Nonetheless, these hypotheses would need further research.

Conversely, data show the use of other central nervous system depressant substances to manage emotional symptoms in abused women, particularly hyperarousal. Specifically, women victims of IPV showed a high percentage of use of psychotropic drugs (mainly combination of anxiolytic and antidepressant), which is significantly higher than in the control group. Furthermore, abused women did not show an increased use of other psychoactive substances, which is most likely related with the easier access to psychotropic substances, and also with the interview format of the question that inquired about illegal substances, which is consequently subject to social desirability effects. Moreover, it cannot be discarded that the use of psychotropic substances is connected to the treatments that most participants were undertaking at the moment of evaluation; actually, this type of substances would be particularly indicated for individuals with high arousal levels. Consequently, the nature and features of psychotropic substance use in women victims of IPV would require further scrutiny.

Several limitations should be taken into account when interpreting these results. Thus, the use of a small convenience sample limits the generalizability of the results; larger probabilistic samples should be assessed in future studies. Moreover, other measures of alcohol use should be considered, including the AUDIT and self-reported use of alcohol in alcohol units to increase the validity of the results. Furthermore, abused women should be compared with women who have suffered other types of trauma (to know the specificity of the trauma), and with traumatized men (to assess gender effect). Moreover, the use of a cross-sectional design does not allow for causal links between the symptoms and the use of alcohol and other psychoactive substances.

Nevertheless, this study firstly compares alcohol and psychotropic substances use in women victims of IPV and matched controls in Spain. Moreover, it highlights several practical implications. According to results, the assumed relationship between trauma and alcohol use could be specific for men (but not for women) or for American or Anglo-Saxon individuals (but not for Latin individuals). Additionally, when assessing drug use in traumatized patients, other substances in addition to alcohol should be considered. Gender, socio-cultural factors, as well as accessibility to the substance could be determinant in the use of a specific substance. Besides, data would point the specificity of the substance used in function of the type of trauma (e.g., interpersonal long-lasting violence by an intimate partner). Finally, these data specifically warn professionals and policymakers regarding the high use of psychotropic medication in Spanish women victims of IPV.

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