Intimate partner violence among female drug users admitted to the general hospital: screening and prevalence

Violencia de género en mujeres con consumo de sustancias ingresadas en el hospital general: cribado y prevalencia

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Abstract

Intimate partner violence (IPV) is a public health problem worldwide. Several factors have been found to be associated with an increased prevalence of IPV, such as substance use. A cross-sectional study was conducted with the aim of determining the prevalence of IPV among women entering Hospital del Mar (Barcelona) for any medical/surgical reason, and who had a diagnosis of substance use disorder. Secondly, it was intended to psychometrically validate the Spanish version of the *Hurt, Insulted, Threatened with Harm, Screamed* (HITS) questionnaire. All patients were assessed by two IPV questionnaires, the *Composite Abuse Scale* (CAS) and HITS. Out of 52 patients interviewed, 46 answered both questionnaires. According to the CAS questionnaire, 23 patients (50%) experienced IPV at some point in their lives and 11 (23.9%) in the last year. Cannabis consumption was also associated with an increased severity of IPV (95% CI 3.5-28.9, $p = .013$).According to the HITS questionnaire, there was a IPV prevalence of 39.1% (18 patients) in the last 12 months. HITS had a specificity of 100% and a sensitivity of 78% relative to the CAS questionnaire. A cut-off score x∈ [6,7], derived through ROC analysis, correctly discriminated 91% of the victims and 100% of the non-victims. The results obtained showed that the prevalence of IPV was very high among women who suffered from more than one substance use disorder. Therefore, it is highly recommended to systematically screen for IPV victimization by putting the HITS questionnaire into practice.

Key Words: Liaison psychiatry; Intimate partner violence; Screening test; Substance use disorder; Validation.

Resumen

La violencia de género (VG) es un problema de salud pública a escala mundial. Existen determinados factores asociados a un aumento de la prevalencia, como el consumo de sustancias. Se realizó un estudio transversal con el objetivo de determinar la prevalencia de VG en las mujeres que ingresaron en el Hospital del Mar (Barcelona) por cualquier motivo médico/quirúrgico y con el diagnóstico de trastorno por consumo de sustancias. Secundariamente, se pretendió validar la versión en español del cuestionario *Hurt, Insulted, Threatened with Harm, Screamed* (HITS). Se evaluaron a todas las pacientes mediante dos cuestionarios de detección de VG, el *Composite Abuse Scale* (CAS) y el HITS. De las 52 pacientes entrevistadas durante el período de estudio, 46 respondieron ambos cuestionarios. Según el cuestionario CAS, 23 pacientes (50%) presentaron VG alguna vez en la vida y 11 (23,9%) en el último año. El consumo de cannabis se asoció a una mayor gravedad de la VG (IC95% 3,5-28,9, $p = .013$). La prevalencia de VG, según el HITS, fue de 39,1% (18 pacientes) en los últimos 12 meses. El HITS mostró en relación al CAS una especificidad del 100% y una sensibilidad del 78%. Un punto de corte x∈ [6,7], obtenido mediante el análisis ROC, fue el que mejor discriminó al 91% de las víctimas y al 100% de las no-víctimas. Los resultados obtenidos demostraron una elevada prevalencia de VG entre las mujeres consumidoras de más de una sustancia de abuso. Por ese motivo, se recomienda incorporar el cribado sistemático mediante el cuestionario HITS.

Palabras clave: Psiquiatría de enlace; Violencia de género; Cribado; Trastorno por consumo de sustancias; Validación.

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Intimate partner violence (IPV) is an important public health issue due to its negative effects and high prevalence. The concept of IPV includes actual or threatened physical, sexual or psychological violence by a current or former partner, who can be of the same or opposite sex (WHO, 2013). In this study, however, the term IPV will be used to refer to violence against women. Although some studies show similar levels of victimization and perpetration, violence against women has more serious consequences (e.g. death) (Desmarais, Reeves, Nicholls, Telford & Fiebert, 2012; Langhinrichsen-Rohling, McCullars & Misra, 2012). According to Devries et al. (2013), 30% of women worldwide have experienced physical and/or sexual violence by their partners at some point in their lives. In Spain, 12.5% of women over 16 report being the victim of physical or sexual violence by their current or former partners over the course of their lives (Ministerio de Sanidad y Políticas Sociales, 2015).

A systematic review of the research on risk factors associated with IPV has shown that a family history of violence or abuse in childhood, belonging to an ethnic minority, having low income or IQ are all linked to suffering IPV (Capaldi, Knoble, Shortt & Kim, 2012). IPV can have major consequences, resulting in injuries and serious mental health problems among the victims of IPV and the children who witness it. Victims of IPV are at greater risk of suffering gastrointestinal or gynaecological problems (including sexually transmitted diseases and pregnancy difficulties), severe or chronic pain and a greater risk of committing suicide than women who are not victims of IPV (Campbell, 2002; Hussain et al., 2015). Similarly, certain mental health problems such as depression, anxiety disorder, posttraumatic stress and substance use disorder have been associated with IPV (Gilchrist, Blázquez & Torrens, 2012; Reingle, Jennings, Connell, Businelle & Chartier, 2014). Furthermore, more than a third of murdered women are killed by their partners (Stöckl et al., 2013). Thus, apart from the legal and judicial issues, IPV is the cause of major health problems, and from this perspective healthcare personnel consequently play an important role in its prevention and detection.

While many studies point to a significant and greater prevalence (25-75%) of all types of violence and its severity among women who are dependent on alcohol or other substances (El-Bassel, Gilbert, Witte, Wu & Chang, 2011; Feingold, Washburn, Tiberio & Capaldi, 2015; Weaver, Gilbert, El-Bassel, Resnick & Noursi, 2015), none have been carried out in Spain on the prevalence of IPV among hospitalised women who consume drugs. The objective of the present study was therefore twofold: 1) to detect the prevalence of IPV among women with substance use disorder who were admitted to a general hospital for any health problems, whether related to their addiction or not, and 2) to validate the Spanish version of the *Hurt, Insulted, Threatened with Harm and Screamed* (HITS) questionnaire (Sherin, Sinacore, Li, Zitter & Shakil, 1998) among women substance users. HITS is a screening tool requiring very little administrative time which can be useful in everyday clinical practice.

Methods

Participants

The patients assessed in this study were all the women attended by the liaison addiction psychiatry team in the periods November 2013-February 2014 (n=18), May-June 2014 (n=3) and September 2014-February 2015 (n=25) in the Instituto de Neuropsiquiatría y Adicciones (INAD) of the Parc de Salut Mar de Barcelona, or hospitalised in the detoxification unit of the Hospital del Mar.

The inclusion criteria were 1) having had an intimate partner at some point in their lives, 2) being over 18 years of age, 3) being diagnosed with a SUD (DSM-5) with or without any associated medical-surgical pathology. Exclusion criteria were: 1) severe cognitive disorders, 2) severe intoxication or withdrawal symptoms, and 3) a language barrier when assessment was carried out. All women meeting the inclusion criteria were informed about the characteristics of the research and the confidentiality with their personal details would be treated. They were asked to sign a letter of informed consent in order to join the study. The study was approved by the Clinical Research Ethics Committee of the Parc de Salut Mar (CEIC-PSMAR).

During the course of the study, 52 patients were admitted to hospital, of which 4 (7.7%) declined to take part in the study (response rate: 92.3%) and 2 were excluded on the grounds of severe cognitive disorder. Of the 46 patients studied, 24 (52.2%) were treated in the detoxification unit, while 22 (47.8%) came through in-hospital consultation. No significant differences were found regarding sociodemographic or clinical characteristics of the sample across the three recruitment periods.

Assessment instruments

All participants were asked to complete an ad hoc questionnaire for sociodemographic and clinical data (age, sex, marital status, origin, employment situation, years of schooling, address, social environment of substance use, criminal record, family history of addiction or psychiatric disorders, as well as the characteristics of substance use, reason for hospitalisation or other diagnoses) by the INAD addiction unit's regular in-hospital consultation team.

IPV assessment was carried out with the Spanish-language version of the Composite Abuse Scale (CAS) (Tirado-Muñoz, Gilchrist, Lligoña & Torrens, 2015). Participants were asked to report the frequency with which abuse occurred over the last year, either with their current or last previous partner. The CAS questionnaire consists of a total of 30 items classified in 4 subscales: severe combined abuse (8 items, 0-40 points), physical abuse (7 items, 0-35 points), emotional abuse (11 items, 0-55 points) and harassment (4 items,

0-20 points). Questions were answered with the frequency of occurrence: never (0 points), once only (1 point), several times (2 points), monthly (3 points), weekly (4 points), daily (5 points). It takes approximately 15-20 minutes to carry out the questionnaire. A total score of ≥7 indicate IPV, with the highest scores reflecting the severity of violence. Within the subscales of the different types of abuse, the cut-off scores used were: severe combined abuse (1 point), physical abuse (1 point), emotional abuse (3 points) and harassment (2 points). The questionnaire showed good internal consistency (Cronbach's alpha >0.85) for the 4 subscales and corrected item-total correlations of >0.5 (Hegarty, Sheehan & Schonfeld, 1999).

The HITS questionnaire (Sherin et al., 1998) consists of 4 questions: (1) "How often does your partner physically hurt you?", (2) "How often does your partner insult you or talk down to you?", (3) "How often does your partner threaten you with harm?", (4) "How often does your partner scream or curse at you?" These questions are answered with the frequency of the respective abuse, from never (1 point) to frequently (5 points). The total score can range from 4 to 20 points, with 10 points or higher being considered an indicator of IPV. This questionnaire can be administered in 1 minute.

In contrast to CAS, HITS only assesses IPV in relation to the current partner. The questionnaire was rendered in Spanish by a process of translation and back translation. The

Table 1. *Sociodemographic and clinical characteristics of the sample*

	Participants	**IPV CAS N=46**		
	N=46	**YES (n=23)**	**NO (n=23)**	*p*
	n (%)	n (%)	n (%)	
Sociodemographic				
Age [mean±SD] (years)	46.6 ±10.6	43.70 ±10	49.48±10.6	0.06
Marital status				0.63*
Married	25 (54.3)	12 (52.2)	13 (56.5)	
Origin				1*
Foreigner	6 (13)	3 (13)	3 (13)	
Employment situation				0.59*
Unemployed or pension	22 (47.8)	12 (52.2)	10 (43.5)	
Years of schooling	10.6 ±4.4	11.14±4.7	10.17±4.1	0.47
Social user environment	22 (48.9)	12 (54.5)	10 (43.5)	0.46
Criminal record	11 (23.9)	6 (26.1)	5 (22.7)	0.56*
Fam. hist.* of addiction	26 (60)	14 (63.6)	12 (54.5)	0.54
Fam. hist.* of psychiatric treament	10 (22.7)	4 (18.2)	6 (27.3)	0.47
Place of admission				0.24
Detoxification unit	24 (52.2)	14 (60.9)	10 (43.5)	
In-hospital consultation	22 (47.8)	9 (39.1)	13 (56.5)	
Other diagnoses				
Depressive disorder	11 (24.4)	5 (22.7)	6 (26.1)	0.79
Personality disorder	12 (27.3)	8 (38.1)	4 (17.4)	0. 12
Infected with HIV	10 (22.2)	7 (31.8)	3 (13)	0.16*
Infected with HCV	10 (21.7)	8 (34.8)	2 (8.7)	0.09*
Chronic liver disease	16 (35.6)	6 (27.3)	10 (43.5)	0.13*
Primary substance				
Heroin	7 (15.2)	4 (17.4)	3 (13.0)	1.00*
Alcohol	24 (52.2)	9 (39.1)	15 (65.2)	0.07
Nicotine	1 (2.2)	1 (4.3)	0 (0)	1.00*
Hypnosedatives	3 (6.5)	2 (8.7)	1 (4.3)	1.00*
Cocaine	7 (15.2)	5 (21.7)	2 (8.7)	0.41*
Cannabis	2 (4.3)	1 (4.3)	1 (4.3)	1.00*

Note. IPV: intimate partner volence; CAS: Composite Abuse Scale; SD: standard deviation; Fam. Hist.: family history; HIV: Human immunodeficiency virus; HCV: hepatitis C virus. *Fisher's exact test.

Spanish version has not been validated with women substance users. The CAS and HITS questionnaires were administered by an independent researcher of the regular addiction consultation team.

Procedure

The addiction consultation team receives daily requests for evaluation and intervention from Hospital del Mar patients with a concomitant substance use disorders. As part of standard procedure, sociodemographic and clinical data are gathered, along with details of substance use with the above mentioned ad hoc questionnaire. If during the course of a consultation with a patient the inclusion criteria were met, the independent researchers were informed and they completed data collection for the study. If an IPV victim asked for help during the interview, the hospital's help system was explained to her and the corresponding social worker was informed of the situation so that the resources for helping the victims could be accessed.

Data analysis

A descriptive analysis of the sample was carried out. Chi square and Fisher's exact tests were used for the qualitative variables, while the Student T-test was applied to the quantitative variables. The sample was divided into those who had and those who had not been the victims of IPV according to the CAS. This was followed by a calculation of Cohen's kappa coefficient to determine the level of concordance between the two questionnaires, as well as the sensitivity, specificity, the positive predictive value (PPV) and negative predictive value (NPV) of the HITS questionnaire with respect to the CAS, which served as the gold standard. Finally, an analysis of the receiver operating curve (ROC) was carried out to establish the cut-off value for optimal sensitivity and specificity on the HITS scale, and also evaluate the discriminatory power of HITS compared to CAS. Results were evaluated using a significance level of $p<.05$. All the uni- and bivariant analyses were carried out with SSPS (version 20).

Results

Sociodemographic and clinical characteristics

Mean age was 46.6 (*SD*=10.6). Twenty-five patients (54.3%) were married or had a current partner (10 single, 9 separated, 2 widows). In terms of employment, 23.9% of these patients were unemployed, 23.9% were recipients of benefits other than invalidity, and only 17.4% were in work. Table 1 shows the sociodemographic and clinical details of the sample. The most frequent admission diagnoses were: alcohol use disorder (n=10, 21.7%) and cocaine use disorder (n=7, 15.2%). Chronic liver disease was a secondary diagnosis in 35.6% of participants, while personality disorder was diagnosed in 27.3% of cases (see Table 1).

Toxicological history

The majority of patients (n=36, 78.3%) consumed alcohol, and this was also the primary drug used in 24 (52.2%) cases. The other most frequently used substances, besides nicotine, were cocaine (43.5%) and cannabis (30.4%), with cocaine being the primary drug in 7 cases (15.2%) (see Table 1 and 2). The majority of participants were polydrug users, with a mean number of drugs used of 2.9 (*SD*=1.7). Table 2 also shows the substance use characteristics (onset age, longest period of abstinence, and consumption over the previous 30 days).

Prevalence of IPV measured by CAS

CAS results show that 23 patients (50%) had experienced IPV at some point in their lives, with 23.9% reporting it within the last year. Of these, 16 patients (34.8%) suffered severe combined abuse, 21 (45.7%) physical abuse, 22 (47.8%) emotional abuse and 16 women (34.8%) were

Table 2. *Prevalence of IPV and consumption patterns by substance*

	Participants	IPV CAS		Mean onset age			Longest period of abstinence (months)		Days of use in last month		Mean CAS*score
	N=46	YES (n=23)	NO (n=23)	P	Media	SD	Media	SD	Media	SD	
	n (%)	n (%)	n (%)								
Substances used											
Heroin	14 (30.4)	10(43.5)	4 (17.4)	0.06	22.8	8.3	76.5	99.3	9.5	13.7	24.93
Alcohol	36 (78.3)	17 (73.9)	19 (82.6)	0.47	17.44	5.2	9.33	18.9	19.5	12.7	14.75
Nicotine	34 (73.9)	19 (82.6)	15 (65.2)	0.18	15.32	3.5	14.16	58.1	19.8	14.2	17.68
Hypnosedatives	12 (26.1)	7 (30.4)	5 (21.7)	0.5	25.75	9.3	0.17	0.6	25.8	10	19.17
Cocaine	20 (43.5)	14 (60.9)	6 (26.1)	**0.02***	21.8	6.5	43.6	56.9	14.6	15.0	24.85
Cannabis	14 (30.4)	11 (47.8)	3 (13)	**0.01****	17.5	7.5	14	22.1	17.5	15.0	26.93

Note. IPV: intimate partner violence; CAS: Composite Abuse Scale; SD: standard deviation. *p<.05 **p<0.01

subjected to harassment. No significant differences were found in the sociodemographic or clinical characteristics on the basis of having suffered IPV or not in the past year, although a greater number of women victims of violence were HCV positive. There were no significant differences in IPV victimisation with regard to any particular drug (see Table 1).

The substances most clearly linked to the presence of IPV were cannabis (p = .01) and cocaine (p = .02), with women cannabis users scoring the most points on the CAS questionnaire (mean 26.93) (CI 95% 3.5-28.9, p = .013) (see Table 2).

HITS questionnaire validation

An analysis of the HITS questionnaire shows that the prevalence of IPV was 39.1% (18 patients) in the last 12 months. In our study, the HITS questionnaire yielded a specificity of 100% with regard to CAS and a sensitivity of 78% (5 cases reported as IPV victims by CAS were not detected by HITS). Furthermore, HITS displayed a PPV of 100% and an NPV of 82%. With a Cohen's kappa of 0.78 (p = .000), both questionnaires can be said to be concordant. The ROC analysis for HITS with regard to CAS yielded an area under the curve (AUC) of 0.97 (CI 95% [0.92-1], p = .000). The cut point of x∈[6.7] optimised sensitivity and specificity, correctly discriminating 91% of the victims and 100% of the non-victims (see Figure 1).

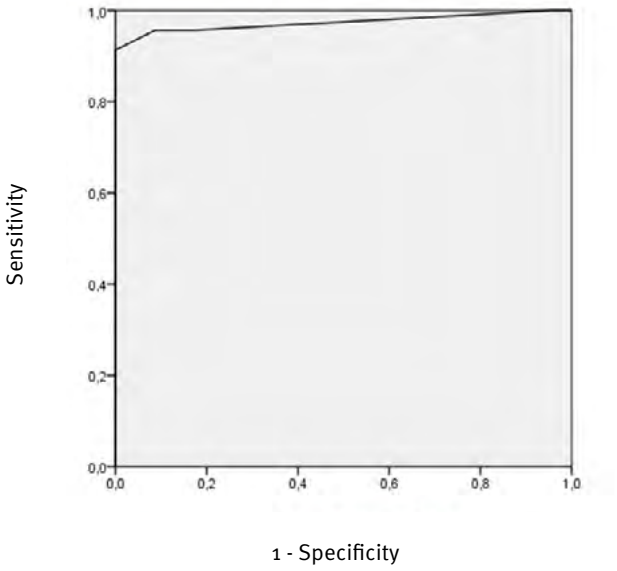

Figure 1. ROC curve for detecting IPV using the Hurt, Insulted, Threatened with harm, and Screamed at (HITS) questionnaire in comparison to the Composite Abuse Scale (CAS).

Discussion

A high level of IPV is found among women admitted to general hospital with substance use disorder and attended by the liaison addiction psychiatry unit. Of the patients interviewed as part of this study 50% had experienced IPV at some point during their lives, 23.9% in the past year. This percentage is similar to that of other studies, in which the prevalence of IPV among women substance users is estimated at 25-75% (El-Bassel et al., 2011; Gilchrist et al., 2012), which is clearly higher than in the general population, where it stands at 12.5% in the case of Spain (Ministerio de Sanidad & Políticas Sociales, 2015).

With regard to the substance use disorders most commonly associated with being abused, alcohol has been closely linked to IPV (Devries et al., 2014; Kraanen, Vedel, Scholing & Emmelkamp, 2014); nevertheless, alcohol and cocaine use disorders among women users are those considered most likely to lead to becoming a victim of IPV (Kraanen et al., 2014). In addition, according to the results of the *National Epidemiologic Survey on Alcohol and Related Conditions* (NESARC), opioid and cannabis use disorders are also linked to suffering IPV (Reingle et al., 2014; Smith, Homish, Leonard & Cornelius, 2012).

In a recent meta-analysis of longitudinal studies, the existence of a bidirectional relationship between alcohol consumption and IPV was revealed (OR: 1.80, CI 95% [1.58-2.06]) (Devries et al., 2014), an association which was also detected, although not to a significant degree, in the present study. The lack of longitudinal studies investigating this relationship prevents us from determining causality in the use of other substances or discriminating whether this link is always bidirectional.

Few studies control for the confounding factor in IPV of whether the victim was an alcohol user. A research carried out in the USA has shown that partners with the same consumption pattern ran a lower risk of suffering abuse. Habitual substance use is therefore a predictive factor in IPV, though it appears that the presence of conflicts within the relationship is a better predictor of IPV than alcohol use itself (Leadley, Clark & Caetano, 2000).

Different mechanisms have been proposed to explain the relationship between substance use disorders and falling victim to IPV. It has been posited by some that the problems associated with substance use lead to a stressful situation within the couple which then results in IPV; others in turn suggest that victims of partner violence use substances to counteract the stress, anxiety and pain caused by being abused (Kraanen et al., 2014). It is possible that substance use among women in methadone maintenance programmes may be a form of self-medication to be able to cope with the negative effects of experiencing IPV (El-Bassel, Gilbert, Wu, Go & Hill, 2005).

IPV among women substance users is associated with mental health problems (Cohen, Field, Campbell & Hien,

2013; Gilchrist et al., 2012) and can increase the risk of being infected with HIV or HCV via unsafe sexual behaviour and injection (Wagner et al., 2009). Given the devastating physical and psychological effects of IPV on women, the need to detect this abuse is considered vital, even among women not seeking treatment for substance use but attended by hospital services on other grounds.

A further important finding of this study, although not significant, is the link between being a victim of IPV and HCV positive. This confirms the results of previous studies which have assessed the prevalence of HCV among women substance users (Gilbert et al., 2000), finding a strong association between being HCV positive and being a victim of IPV. This should be taken into account when prescribing new treatment options for women substance users since the risk of HCV reinfection is high among women victims of IPV.

Given the lack of IPV screening tools in Spanish, the finding that the Spanish version of HITS is a useful screening tool for IPV in this population is highly relevant. Far less time is needed to administer HITS than CAS, which makes it a good alternative for detecting IPV in healthcare environments. A study of the validity and reliability of HITS in the Spanish population yielded similar results to ours. A cut point of 5.5 best discriminated women victims of IPV (Chen, Rovi, Vega, Jacobs & Johnson, 2005). HITS was also compared to a Spanish-language version of WAST, another questionnaire used for detecting IPV. Finally, it can be said that more studies are necessary to test for internal consistency and to assess cut point adjustments for improving the discriminatory power of HITS.

In conclusion, the results obtained in this study confirm that women substance users constitute a high-risk group for IPV in our environment. Systematic screening using the HITS questionnaire is therefore recommended for all women diagnosed with more than one substance use disorder admitted to general hospital for any reason. Detection of substance use as a modifiable risk factor should be a starting point for future IPV intervention and prevention strategies and a manualized cognitive-behavioural treatment which has proved efficacious in the reduction of IPV among women substance users is available (Tirado-Muñoz et al., 2015).

Finally, some limitations of the study need to be pointed out. The number of women attended by in-hospital consultation was limited. Nevertheless, the sample non-response percentage of 7.7% was lower in comparison to that of other studies carried out with women with substance use disorders and IPV (Kraanen et al., 2014). Given the limited sample size, the results of the study need to be interpreted with caution and should not be extrapolated to populations from other geographical areas.

Because the study was carried out over different time periods for reasons of research staff availability, a possible time-related bias cannot be ruled out.

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Conflict of interests

The authors declare that they have no conflict of interests.

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