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RELATIONSHIP BETWEEN DRUG USE AND SEXUAL ASSERTIVENESS IN A SPANISH MALE DRUG-DEPENDENT SAMPLE

RELACIÓN ENTRE CONSUMO DE DROGAS Y ASERTIVIDAD SEXUAL EN UNA MUESTRA DE VARONES DROGODEPENDIENTES

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Abstract

Current studies assessing sexual assertiveness in drug users are sparse, despite the fact that it would be logical to expect low sexual assertiveness in such patients. Present study had the objective to compare sexual assertiveness between consumers of alcohol, cocaine, cocaine+alcohol, heroin, cannabis, and speedball and a control group. This was assessed in a sample of 556 male drug users from 8 Spanish provinces and 356 non-user males. Results showed significantly lower Initiation assertiveness in the 35-49 year-old age group (particularly in the case of alcohol, heroin, cannabis, and speedball) and worse Sexually Transmitted Diseases and Pregnancy prevention assertiveness in drug users (in the case of alcohol, cocaine, cocaine+alcohol, cannabis, and speedball). Effect sizes ranged from low to moderate. The implications of these results are discussed.

Keywords: sexual assertiveness, drug users, SAS, sexuality, substance dependence.

Resumen

Hasta la fecha prácticamente no existen estudios que evalúen la asertividad sexual en consumidores de drogas, a pesar de que sería lógico esperar una baja asertividad sexual en estos pacientes. El presente estudio, tiene el objetivo de comparar la asertividad sexual entre consumidores de alcohol, cocaína, cocaína+alcohol, heroína, cannabis y speedball con un grupo control. Se evaluaron a 556 consumidores de droga de 8 provincias españolas y a 356 varones no consumidores. Los resultados muestran una asertividad sexual de Inicio significativamente menor en el grupo de 35-49 años (sobre todo para el alcohol, heroína, cannabis y speedball) y una peor asertividad sexual de Prevención de Embarazo-Enfermedades de Transmisión Sexual en los consumidores de droga (alcohol, cocaína, cocaína+alcohol, cannabis y speedball). Los tamaños de efecto oscilaron entre bajos y moderados. Las implicaciones de los resultados serán discutidas.

Palabras clave: asertividad Sexual, consumidores de droga, SAS, sexualidad, dependencia de sustancias.

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In drug users, three areas of sexuality may imply a serious sexual health problem if they are impaired: sexual functioning, consensual-desired sex, and risk sexual behaviors. As defined by Morokoff et al. (1997), sexual assertiveness refers to people's ability to initiate sexual activity, reject unwanted sexual activity, and use contraceptive methods, developing healthy sexual behaviors. These three areas (*Initiation, Refusal*, and *Sexual Transmitted Diseases and Pregnancy Prevention* {*STD-P*}) are very closely linked to sexual functioning, sexual victimization, and risk sexual behaviors, respectively (Santos-Iglesias & Sierra, 2010). Despite its importance, the role of sexual assertiveness has traditionally been underestimated in males (Morokoff et al., 2009). In fact, studies exploring sexual assertiveness in male drug users are practically nonexistent, even though there are teorical basis to to expect sexual assertiveness to be impaired in such patients.

Sexual assertiveness, sexual functioning, and substance use

Initiation sexual assertiveness is related to sexual functioning. Numerous studies have proven the existence of this relationship in the normal population (Haavio-Mannila & Kontula, 1997; MacNeil & Byers, 1997; Ménard & Offman, 2009; Sánchez-Fuentes, Santos-Iglesias, & Sierra, 2014; Santos-Iglesias, Sierra, & Vallejo-Medina, 2013). At least in the long term and/or in high doses, drug use has also been proven to decrease sexual functioning (Bang-Ping, 2009; Johnson, Phelps, & Cottler, 2004; Palha & Esteves, 2002; Vallejo-Medina & Sierra, 2013a, 2013b). To the best of our knowledge no studies have assessed sexual assertiveness from a clinical perspective. The first approximation was Vallejo-Medina and Sierra (in press) with a psychometric paper in this population, but they did not use a control group to compare scores.

Sexual assertiveness, sexual victimization, and substance use

Few studies have explored Refusal sexual assertiveness or sexual victimization, its counterpart, in males (Santos-Iglesias & Sierra, 2010b). Low sexual assertiveness can be both a consequence of victimization and a risk factor for experiencing it (Folgar, Fariña Rivera, Sierra, & Vallejo-Medina, in press; Livingston, Testa, & VanZile-Tamsen, 2007). Being under the influence of alcohol is also a contributing factor for experiencing sexual victimization (Brecklin & Ullman, 2005). In males, Shacham and Cottler (2010) reported that 8.60 % of the drug users surveyed admitted having had unwanted sexual contact, whereas 52.75 % of cocaine and methamphetamine users admitted having taken part in sexual practices that were uncommon to them because they were under the influence of the drug. Clinical practice reveals that they later regret participating in some of these practices. Although such behaviors may be exclusively due to the withdrawal syndrome or to acute use of the substance, Refusal sexual assertiveness may play a modulating role in them.

Sexual assertiveness, risk sexual behaviors, and substance use

The prevalence of STDs/VIH is increasing in heterosexual males who use non-injection drugs (Bellis et al., 2008; Booth, Kwiatkowski, & Chitwood, 2000; Raj, Saitz, Cheng, & Winter, 2007). These men are less likely to use a condom and have safe sex than men who have sex with other men (Ross & Williams, 2001). The most common risk behaviors in this population are trading sex for drugs or money, having intercourse without condoms or having sex with multiple partners (Booth et al., 2000; Calsyn et al., 2010; Celentano, Latimore, Mehta, 2008; Raj et al., 2007). STD-P sexual assertiveness may play an important protective role against these three risk behaviors. This variable may provide a better understanding of the relationship between high-risk behaviors and substance use, along with sexual arousal (George et al., 2009; Gerrard, Gibbons & Buishman, 1996), the context of drug use, the type of sex partner (Leigh, Ames & Stacy 2008; Maisto, Carey, Carey, Gordon, & Schum., 2004), and distress (Elkington, Bauermeister & Zimmerman, 2010; Morokoff et al., 2009). This issue is key both for prevention and treatment (Calsyn et al., 2010). In fact, sexual assertiveness has proven to be a strong predictor of risk sexual behaviors (Noar, Carlyle, & Cole, 2006, Schooler, Ward, Merriwether, & Caruthers, 2005; Zablotsky & Kennedy, 2003) and is related to actual condom use (Auslander, Perfect, Succop, & Rosenthal, 2007; Crowell, 2004; Morokoff et al., 2009; Vallejo-Medina & Sierra, In press). In addition, alcohol use reduces the skills required to negotiate safe sex (Maisto, Carey, Carey, & Gordon, 2002). Stoner et al. (2008) observed that sexual assertiveness can act as a modulator of the effect of alcohol on insistence to use a condom. In Thailand, a program with components of sexual assertiveness was applied to methamphetamine users. Participants

reduced their use of methamphetamines and moderately increased condom use up to 12 months after the program was over (Sherman et al., 2009).

Objectives

The present research objective is: to assess the existence of differences in sexual assertiveness between a drug user group and a control group, exploring possible differences depending on the main substance used and determining the possible influence of low sexual assertiveness on the sexual health of participants.

METHOD

Participants

The control group was composed of 356 non-drug user males. The drug user group was composed of 556 withdrawal male drug users (of which 109 consumed alcohol, 143 cocaine, 137 cocaine+alcohol, 53 heroin, 37 cannabis, and 70 speedball). No significant age differences were found between drug users (M = 35.27, SD = 8.61) and non-users (M = 35.20, SD= 11.55) (t (907) = -.01, p = .92). Significant differences were found between drug users and non-users regarding educational level (χ^2 (4) = 300.39, p = .00) and marital status (χ^2 (5) = 121.77, p = .00). In drug users, mean duration of use was 13.73 years (SD = 7.83) and mean time of abstinence was 1.05 years (SD = 2.01).

Requirements to be included in the drug user group were being over 18 years old, being abstinent for at least two weeks prior to the assessment, being able to read and write, and being treated for a substance dependence disorder (DSM IV-R). In the control group, the absence of substance use was confirmed, although a maximum of 45 g of alcohol a day was allowed (about 1 l of beer) as well as occasional cannabis use (1 joint a week).

Instruments

Sexual Assertiveness Scale (SAS; Morokoff et al., 1997; Sierra, Santos-Iglesias, & Vallejo-Medina, 2012). The adaptation for drug users developed by Vallejo-Medina and Sierra (in press) was used. On this occasion, as recommended by Vallejo-Medina and Sierra (In press), the scores of the non-user and the user group were compared using a 17-item version (1 item less than the original version, as item 1 in the Initiation subscale was highly biased between the drug user and the normal population). Items are responded on a 5-point Likert scale. They are clustered into three dimensions: *Initiation, Refusal,* and *Sexual Transmitted Diseases-Pregnancy Prevention* (*STD-P*). The English and Spanish versions of the scale have shown good reliability, ranging from .66 to .86 (Santos-Iglesias & Sierra, 2010b; Sierra, Vallejo-Medina, & Santos-Iglesias, 2011). The adaptation for drug users also obtained good reliability, a strictly equivalent factor structure to the normal version and, except for Item 1, which was excluded, no high Differential Item Functioning was found in any other items. In the present study, reliability coefficients were .73 and .63 in *Initiation* for the control and experimental groups, respectively; .82 and .73 in *Refusal* for the control and experimental groups, respectively; and .89 and .80 in *STD-P* for the control and experimental groups, respectively. Higher scores indicate higher sexual assertiveness.

Changes in Sexual Functioning Questionnaire-Drugs (CSFQ-D; Vallejo-Medina & Sierra, 2013a). This questionnaire is an adaptation for drug users of the CSFQ-14 (Keller, McGarvey, & Clayton, 2006), in its Spanish version (Bobes, González, Rico-Villademoros, Bascarán, Sarasa, & Clayton, 2000; García-Portilla et al., 2011; Vallejo-Medina, Guillén-Riquelme & Sierra, 2010). The CSFQ-D has shown an equivalent four factor-structure (*Pleasure, Desire, Arousal,* and *Orgasm*) in drug user and non-user populations. The scale has good reliability, with alpha values ranging from α = .83 in *Pleasure* to α = .61 in *Orgasm.* The questionnaire has also shown good external validity indicators. The following Cronbach alpha values were obtained in the present study: *Pleasure* = .80, *Desire* =.66, *Arousal* = .67, and *Orgasm* = .49 in the normal population and *Pleasure* = .82, *Desire* =.70, *Arousal* =.74, and *Orgasm* = .55 in the drug user population. Higher scores indicate better sexual functioning.

Cuestionario Consumo Sustancias (Questionnaire on Substance Use, CCS; Vallejo-Medina et al., 2011). This is a short, simple, and clear 16-item questionnaire containing the diagnostic criteria of the DSM-IV-R. It is useful to diagnose problems of substance dependence, abuse and intoxication. Items are responded on a dichotomous (yes/no) scale. Spearman's correlation with the diagnosis made by the various institutions (using EuropASI and

personal interviews) was .85, p = .00. Reliability was .88 in the original version and .89 in the present study.

Ratio of Protected Sex: Was created by dividing the number of sexual partners in the past year with whom condoms were used between the total numbers of sexual partners in the last year. Maximum risk would be 0 and 1 would be minimal risk.

Questionnaire on substance use and sociodemographic data. The variables assessed were preferred substance, amount of substance used, frequency of use, and length of use. This information was used to calculate severity of substance use. Time of abstinence was also obtained through self-reports or urine or blood tests, depending on the procedure used in each institution.

Procedure

The user group was recruited by cluster sampling from the following institutions: ACLAD in A Coruña, UMAD in Santiago de Compostela, Proxecto Home Galicia in Galicia, Proyecto Hombre Granada in Granada, Fundación Noray-Proyecto Hombre in Alicante, Institut de Neuropsiquiatria i Addiccions del Parc de Salut Mar-Hospital del Mar in Barcelona, CAD San Blas in Madrid, CAD de Arganzuela in Madrid, and the "Cortijo Buenos Aires" Resource of the Social Service Network of the Regional Government of Andalusia in Granada. The control group was recruited by convenience sampling from adult training centers, community centers, training courses for jobseekers, and universities. Anonymous responses, voluntary participation, and the scientific purpose of the study were guaranteed by written informed consent in drug users and verbal informed consent in control subjects. The assessment lasted approximately 30 minutes.

This research was reviewed and approved by the independent Ethics Board of our institution in accordance with the 1975 Declaration of Helsinki, as revised in the 1983 Ethics Committee for Clinical Research.

RESULTS

A *t*-test was used to calculate the differences of means between the user and non-user group in $SAS_{Initiation}$ (M_{user} = 10.91{SD = 4.10}; $M_{non\text{-}user}$ = 11.45{SD = 3.81}), $SAS_{Refusal}$ (M_{user} = 10.30{SD = 4.57}; $M_{non\text{-}user}$ = 10.89{SD = 5.25}), and $SAS_{STD\text{-}P}$ (M_{user} = 11.11{SD = 6.38}; $M_{non\text{-}user}$ = 13.51{SD = 6.86}). No significant differences were found in Refusal $t(897) = 7.77$, p = .76. Yet, significant differences were found in Initiation $t(867) = 1.96$, p = .05, d = 0.13 and STD-P $t(890) = 5.31$, $p < .01$, d = 0.36.

Age-related differences were found in sexual assertiveness (Santos-Iglesias, Vallejo-Medina & Sierra, 2014; Sierra et al., 2012). Therefore, the analyses were conducted again after dividing the sample into three age groups: youth (18-34 years), adults (35-49 years), and older participants (+ 50 years). This clarified the differences as follows: in Initiation, differences between the control group (M = 12.23, SD = 3.57) and the experimental group (M = 10.91, SD = 43.86) were only significant in the adult group (35-49 years) $t(330) = 3.04$, $p < .01$, d = 0.35. Similarly, differences in STD-P were only significant in youth $t(457) = 6.40$, $p < .01$, d = 0.61 (control group {M = 15.35, SD = 6.97} and experimental group {M = 11.20, SD = 6.56}).

Next, correlations were calculated between Initiation and sexual functioning and between STD-P and the safe sex ratio. Significant correlations were found in $SAS_{Initiation}$ (see Table 1), particularly in the adult and older age groups. Significant correlations were also observed (p < .01) between STD-P and the safe sex ratio r = .48, r = .42, r = .65, respectively for youth, adults, and older participants. The mean of the safe sex ratio for each group was .53 (SD = 0.43), .53 (SD = 0.45), and .50 (SD = 0.47), respectively.

Table 1. Pearson correlations between the dimensions of the CSFQ-D and $SAS_{Initiation}$ in the three age groups

		Pleasure	Desire	Arousal	Orgasm
Initiation	Youth	.15**	.20**	.13**	.07
	Adults	.18**	.22**	.18**	.27**
	Older	.30**	.18	.18	.25*

Note: ** = $p < .01$; * = $p < .05$.

Finally, an ANOVA was performed to determine whether there were differences depending on the main substance used. As expected from the data shown above, differences depending on the preferred substance were only found in Initiation in adults $F(6) = 4.00$, $p < .01$, ω^2 = .05 and in STD-P in youth $F(6) = 7.86$, $p < .01$, ω^2 = .08. To determine exactly which users of which substances showed differences compared to the control group, DMS

post-hoc tests were performed (since the aim was only to conduct comparisons with the control group). Results for Initiation-adults are shown in Figure 1 and results for STD-P-youth are shown in Figure 2. Statistical significance was complemented by ω^2, an indicator of effect size that is less biased than η^2 for this type of tests (Young, 1993). It was interpreted using the categorization made by Cohen (1988), that is, .01 to .05, small association, .06 to .13, medium association, and .14 or greater, large association (see Table 2).

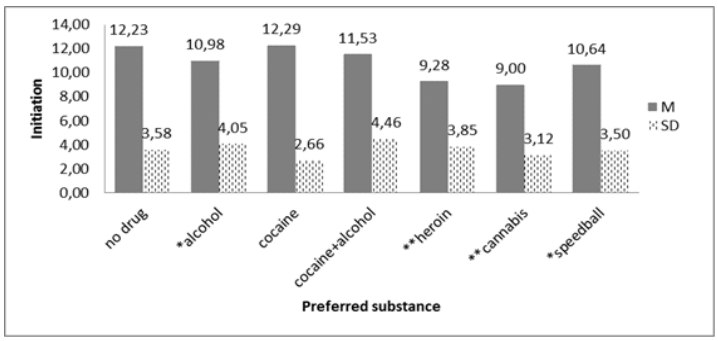

Figure 1. Initiation sexual assertiveness in the adult group. The Mean (*M*) and Standard Deviation (*SD*) are shown for each substance group. The statistical significance of the differences compared to the control group (non-drug) is marked with asterisks (** = $p < .01$ and * $p = < .05$)

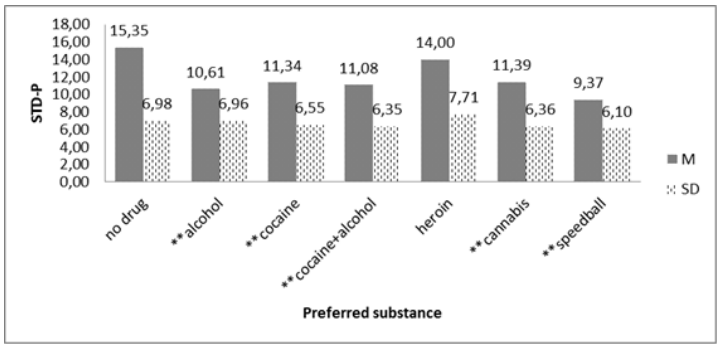

Figure 2. STD-P sexual assertiveness in the youth group. The Mean (*M*) and Standard Deviation (*SD*) are shown for each substance group. The statistical significance of the differences compared to the control group (non-drug) is marked with asterisks (** = $p < .01$).

Table 2. Effect size (ω^2) depending on the main substance used in Initiation-adults and STD-P-youth

	alcohol	cocaine	cocaine+ alcohol	heroin	cannabis	speedball	methamphetamines
Initiation	.02	ns	ns	.09	.04	.03	ns
STD-P	.04	.07	.08	ns	.03	.08	ns

DISCUSSION

Based on the results obtained and considering differences in age and type of substance consumed, Initiation and STD-P sexual assertiveness seemed to be lower in drug users than in non-users. In general terms, Initiation sexual assertiveness, which is related to sexual functioning, was found to be impaired in drug users, although with a small effect size. A study of age groups showed that Initiation was mainly impaired in the central age group (35-49 years). In this age range, differences were not only significant but also had a moderate effect size. This study showed that, as expected, Initiation sexual assertiveness was related to sexual functioning, with significant – although low – correlations observed only in the adult group in each area of sexual functioning assessed (*Pleasure, Desire, Arousal*, and *Orgasm*). This relationship had already been observed in the normal population (Ménard & Offman, 2009; Santos-Iglesias & Sierra, 2010b; Santos-Iglesias et al., 2013). Heroin was the substance with the greatest impact on Initiation, with a moderate effect size. In a recent comparative study, Vallejo-Medina and Sierra (2013b) observed that opioid users had the worst sexual functioning; Aguilar de Arcos et al. (2008) and Bang-Ping (2009) obtained similar results. Alcohol and cannabis users also seemed to have problems initiating sexual relations. Only exciting drugs did not seem to affect Initiation.

Refusal sexual assertiveness, related to undesired sex and sexual victimization, did not seem to be impaired in the sample studied.

Youth – the population at greatest risk for STDs (Centers for Disease Control and Prevention {CDC}, 2005) – were precisely the group with the worst sexual assertiveness. This was shown by significant differences with a moderate effect size. Having lower skills to negotiate condom use has consequences: in the sample studied, participants only used a condom with half of their sexual partners. Only users of heroin, the archetypal injection drug, did not show worse STD-P sexual assertiveness. As mentioned in the introduction, non-injection drugs seem to be a new breeding ground for risk sexual behaviors (Bellis et al., 2008; Booth et al., 2000; Raj et al., 2007), as shown by the present study. Cocaine, cocaine+alcohol, and speedball were the substances with the lowest STD-P assertiveness scores, which were significantly lower than those of non-users and had a moderate effect size. Alcohol and cannabis also obtained significantly lower scores (with a small effect size) than those of non-users. When extrapolating the scores of users of alcohol, cocaine, cocaine+alcohol, cannabis, and speedball to the percentile ranking scores obtained in Spain for males in the same age range (Sierra et al., 2012), the mean ranged between percentiles 35 and 25.

Limitations, conclusions, and future research directions

The main limitation of the present study is the sampling method used, which was not probabilistic and thus does not allow extrapolating the results to the general population. Its design was also cross-sectional and did not start from a baseline, so results must be interpreted with caution and no causal relationships should be inferred. In addition, it should be noted that classifying drug users into specific substance groups based on their preferred substance is just an approximation that disregards multiple use issues. However, this is an innovative study that used adapted and validated instruments for its target population. To date, studies on sexual assertiveness in drug users are practically nonexistent. This study raises new questions. For example, the potential relationship between low sexual assertiveness and relapses in drug use should be explored in the future. Finally, it seems that young non-injection drug users have low skills to negotiate condom use. The prevention work conducted on the AIDS/VIH infection for decades seems to be successful in injection drug users. Future work should explore in a similar way differences also in women and explore different intervention programs effectiveness in order to increase sexual assertiveness in this population.

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