EXTENDED SUMMARY

RELATIONSHIP BETWEEN SUBSTANCE USE AND SEXUAL DYSFUNCTION: A SISTEMATIC REVIEW

INTRODUCTION

The term drug is used for any chemical substance, administered by any route, that can cause changes in mood, perception, cognition and other brain functions and can lead to a substance use disorder (Bellis & Hughes, 2004). Substance use disorder is defined as a chronic multidimensional disorder that affects an individual's physical, psychological, social and sexual health (Peugh & Belenko, 2001). As a consequence of the increasing incidence of patients with addictions problems to one or more substances, drug dependence is in the spotlight of society.

In the population, specially among young people and adolescents, there is a widespread myth that drug use as an aphrodisiac improves sexual relationships and experiences (González et al., 2005). However, sexuality has been found to be one of the important parameters of quality of life that is negatively affected by substance use disorder (Calvo et al., 2021). Although some drugs may appear to increase sexual desire at lowe doses, they may cause irreversible brain damage that is deleterious to the individual and his or her sexual health.

The concept of sexual health refers to a state of physical, mental and social well-being in relation to sexuality, not merely the absence of disease, dysfunction or disability. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence (WHO, n.d.).

Psychosexual disorders, also referred to as sexual disorders, are dysfunctions related to one or more stages of the sexual responde cycle that cause an impairment of sexual performance, thereby affecting the marital relationship (Chang et al., 2013).

Moreover, epidemiological studies have reported rates of sexual dysfunction in both genders, with sexual dysfunction being more prevalent in women (Burri & Spector, 2011). The negative effects experienced from substance use are also more prominent among women, compared to their male counterparts, due to a lower proportion of body lipids and greater hormonal variability dependent on the phase of the menstrual cycle (Karsidag et al., 2005).

Alcohol use, smoking and illicit drug abuse/dependence have long been associated with sexual dysfunction (Bang-Ping, 2009). The acute effects of substance use increase levels of dopamine, norepinephrine and serotonin, neurotransmitters associated with sexual activity (Bellis & Hughes, 2004). However, continued use leads to decreased interest in sexuality (Peugh & Belenko, 2001).

Also, the most common sexual dysfunctions reported among men include erectile dysfunction, premature ejaculation, delayed ejaculation and decreased sexual desire (Zaazaa et al., 2013). Women, on the other hand, more frequently experience lack of or reduced sexual desire, difficulties in arousal, difficulties in reaching orgasm, dyspareunia and vaginismus (Charpentier, 2018).

In the interest of responding appropriately to new patterns of addictive use and their interference with sexuality, it is necessary to consolidate existing knowledge on the relationship between sexual dysfunction and substance use.

GENERAL PURPOSE

The aim of this study is to synthesise the existing knowledge on the relationship between sexual dysfunction and substance use through a review of the literature over the last 10 years.

METHODS

The PRISMA Standards (Urrútia & Bonfill, 2010) have been used in this work in order to improve the quality of the literature review.

Before starting this review, both inclusion and exclusion criteria had to be established. The inclusion criteria were as follows: the studies had to be published in English, the publication date had to be between 2012 and 2022, the studies had to be in a scientific format and deal with “substance use” and “sexual dysfunction”, and the studies had to be downloadable for analysis.

The exclusion criteria were that the articles were not freely accessible and that they were opinion articles or qualitative studies.

PsyNet and PubMed databases were searched between January and February 2022. The following terms were used in the search: “drugs” or “drug abuse” or “drug use” or “drug addiction” or “substance abuse” or “substance” or “substance use” or “substance use disorder” and “sexual dysfunction” or “sexual problems” or “sexual difficulty”.

Once the search was completed, a total of 199 records were obtained (108 in PsyNet and 91 in PubMed). Thirty duplicate citations were eliminated from the search, leaving 169 documents. Following the inclusion criteria, 9 articles were analyzed in depth to decide their eligibility and, finally, 7 articles were included in this systematic review.

RESULTS

As shown in Table 1, substance users are more vulnerable to sexual impairment. Although initially, substance use does not negatively affect sexuality, in the long term it leads to increased rates of sexual dysfunction. In addition, risk factors that contribute to the development of substance use and psychosexual disorders include sociodemographic characteristics such as age, gender, employment status, economic status and education.

Moreover, studies show that there is more literature reflecting the negative effects of substance use in the male population.

AUTHORS	PARTICIPANTS	MEASURE	RESULTS Prevalence of SD in subjects with SUD
Diehl et al. (2012)	105 participants (18-65 years) M=34.8; SD=12.1 **Gender**: ♀	Short Alcohol Dependence Data questionnaire (SADD) Drug Abuse Screening Test (DAST-20) Fagerström Test for Nicotine Dependence (FTND) Arizona Sexual Experience Scale (ASEX)	- Symptoms SD: 34.2% DAST-20: 47.6% problems SADD: 43.8% moderate/severe dependence FTND: 47.6% high/very high nicotine level > probability of DS symptoms by 2.72
Farnia et al. (2014)	93 participants ♂ (20-55 years) **Group 1**: 26 (1 month) M=25.86±9.10 **Group 2**: 30 (+ 1 month) M=28.96±8.10 **Group 3**: 37 (abst.) M=29.96±9.30	Structured Clinical Interview for DSM-IV disorders (SCID-IV) International Index of Erectile Function-5 (IIEF-5)	- Significant differences in mean scores IIEF-5 (ED) Group 1: 22.12±2.70 (7% mild-moderate) Group 2: 16.43±3.10 (13% mild-moderate) Group 3: 12.86±6.30 (16% moderated)
Rajkumar (2014)	105 participants ♂ **Group 1**: 25 (SUD) M=29.08 **Group 2**: 80 (SUD-) M=28.8	Semi-structured interview following ICD-10 clinical criteria	- Nicotine (20%), OH (9.5%) - Group 1: 19 depend., 17 nicotine depend. and 2 OH, 1 BDZ, family history of OH/nicotine - 23.8% patients SD+SUD
Kumsar et al. (2016)	18-65 years **Group 1**: 101 M=33.6±9.6 **Group 2**: 43 M=32.9±6.3 **Gender**: ♂	Self-report sociodemographic questionnaire International Index of Erectile Function (IIEF)	OH: 13.5% mild, 18.9% medium, 21,6% severe Opioids: 3.7% mild, 25.9% medium, 59.3% severe Cannabis: 30% mild, 5% medium, 35% severe MDMA: 23.5% mild, 64.7% severe
Diehl et al. (2016)	508 participants (18-75 years) M=34.3±10.7 **Gender**: ♂	Drug Abuse Screening Test (DAST-20) Short Alcohol Dependence Data (SADD) Fageström Test for Nicotine Dependence (FTND) Sexual Behaviors Information	- 37.2% SD + premature ejaculation DAST: 68.3% severe level SADD: 39.2% severe dependence oh FTND: 32.2% high nicotine dependence
Dissiz (2018)	**Heroin group**: 57 ♀ Age: ≥ 18 M=26.22; SD=6.64 **Control group**: 79 ♀ M=27.21; SD=2	Female Sexual Function Index (FSFI) Beck Depression Inventory (BDI)	- Lowest FSFI scores (91.2%) - arousal - 70.4% sexual problems - 87.7% depressive symptoms
Laélia et al. (2018)	514 participants, 20% ♀, 80% ♂ **Group 1**: 139; M=30 **Group 2**: 375; M=34	Questionnaire PrepubIV	Heroin, morphine sulfate or methadone use: > loss of libido (43%)

***Table 1**. Results*

DISCUSSION

All the articles included in this review confirm the relationship between sexual dysfunction and substance use, but this is not clearly defined due to the lack of literature. However, the following insights can be drawn from the studies: substance use disorder is a chronic disease that negatively affects the quality of sexual life and is perceived as a serious health problem. Although drugs initially enhance sexual desire, the prevalence of symptoms of

sexual dysfunction has been found to be more prominent in the substance-using population. There are also risk factors that may contribute to the development of substance use and psychosexual disorders, such as sociodemographic factors. These are strong predictors of symptoms of sexual dysfunction, with low-income populations being more vulnerable to increased sexual offending and abuse. Moreover, rates of risky sexuak behavior among drug users have been reported, such as not using condoms or having sex in exchange for drugs.

In short, it can be argued that substance use disorder can be comorbid with psychosexual disorders and that these are characterized by the presence of depressive symptoms.

LIMITATIONS

As a main limitation, we highlight the restriction of the search to 10 years, which may have limited the collection of more information. On the other hand, we mention the scarcity of literature on the subject of this final degree project. In addition, the use of two databases to carry out this review can also be considered a limitation, since if other sources had been used, more articles would have been obtained.

The most notorious limitation of most of the studies included in this systematic review is the use of cross-sectional designs, since this type of study does not allow causal relationships to be established, but rather to infer associations. Another aspect to highlight is the relatively small sample size. In addition, some of the included articles assess sexual dysfunction without standardised tools and do not investigate or control for variables that could cause symptoms of sexual dysfunction. Ultimately, the data used in this review may be subject to bias inherent in the limitations of the studies analyzed.

CONCLUSIONS

Given the impact of substance use on sexuality, there is a need for further research on the effects of drugs and sexual functions in order to provide treatment according to the needs of drug-dependent patients.

Although causal relationships cannot be established, the results of this study should be taken into account to inspire further research, as well as to show the need to expand the scientific evidence on substance abuse and sexual dysfunction.

RELACIÓN ENTRE DISFUNCIÓN SEXUAL Y CONSUMO DE SUSTANCIAS: UNA REVISIÓN SISTEMÁTICA

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INTRODUCCIÓN

Consumo inicial de sustancias: aumento niveles neurotransmisores actividad sexual (Bellis & Hughes, 2004).
Consumo continuado: disminución interés sexualidad (Peugh & Belenko, 2001).

Mito generalizado del uso de **drogas** como **elemento afrodisíaco** para mejorar las relaciones sexuales (González et al., 2005).

Sexualidad: parámetro afectado negativamente por el consumo de sustancias (Calvo et al., 2021).

Disfunción sexual
♂: disfunción eréctil, eyaculación precoz, retardada y disminución del deseo sexual (Zaazaa et al., 2013).
♀: ausencia o reducción deseo sexual, dificultad excitación y orgasmo, dispareunia y vaginismo (Charpentier, 2018).

Objetivo: consolidar el conocimiento sobre la relación entre la disfunción sexual y el consumo de sustancias a través de una revisión bibliográfica en los últimos 10 años.

MÉTODO

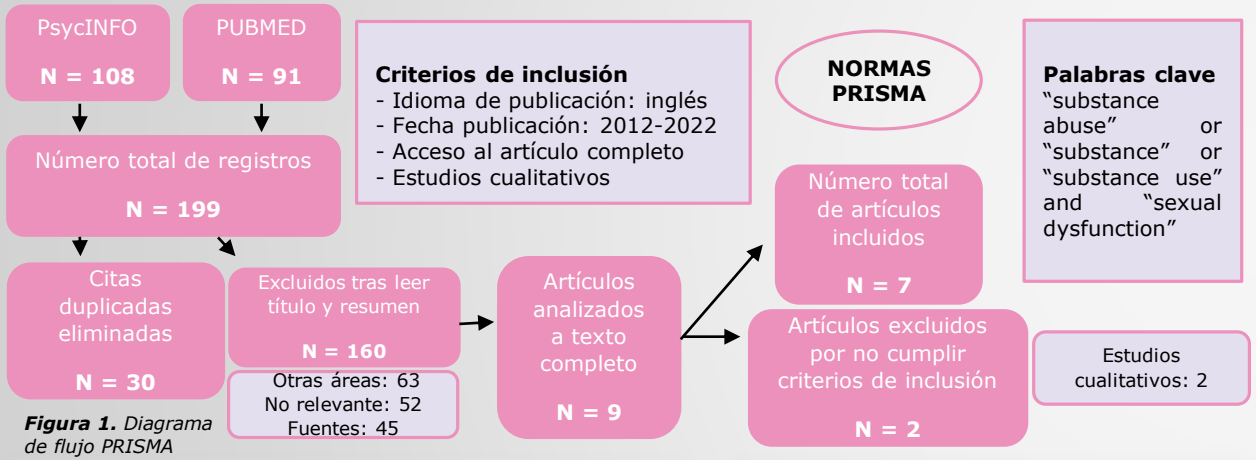

Figura 1. *Diagrama de flujo PRISMA*

DISCUSIÓN

- Relación existente entre la disfunción sexual y el consumo de sustancias. No está definida con claridad por la falta de literatura.
- El trastorno por consumo de sustancias es una enfermedad crónica que afecta negativamente a la calidad de la vida sexual, siendo percibido como un grave problema de salud.
- También hay factores de riesgo que pueden contribuir al desarrollo de trastornos por consumo de sustancias y psicosexuales, como los factores sociodemográficos. Estos son fuertes predictores de síntomas de disfunción sexual.

CONCLUSIONES

Dado el impacto que tiene el consumo de sustancias sobre la sexualidad se establece la necesidad de seguir investigando sobre los efectos de las drogas y las funciones sexuales para así poder ofrecer tratamientos acorde a las necesidades de los pacientes drogodependientes.

LIMITACIONES

- Restricción búsqueda
- No se pueden establecer relaciones causales.

PROPUESTA

Sensibilización mediante charlas preventivas, especialmente en la población adolescente.

AUTORES	PARTICIPANTES	INSTRUMENTOS DE EVALUACIÓN	RESULTADOS Prevalencia DS sujetos con TCS
Diehl et al. (2012)	105 sujetos (18-65) M=34,8; SD=12,1 **Género**: ♀	Cuestionario Dependencia Alcohol (SADD) Test Detección Abuso Drogas (DAST-20) Test de Fageström Nicotina (FTND) Escala Experiencia Sexual Arizona (ASEX)	- Síntomas DS: 34,2% DAST-20: 47,6% problemas SADD: 43,8% dep medio/grave FTND: 47,6% nivel alto/muy alto nicotina > probabilidad síntomas DS en 2,72
Farnia et al. (2014)	93 sujetos ♂ (20-55) **Grupo 1**: 26 (1 mes) M=25,86±9,10 **Grupo 2**: 30 (+1 mes) M=28,96±8,10 **Grupo 3**: 37 (abst.) M=29,96±9,30	Entrevista Clínica Estructurada para Trastornos DSM-IV (SCID-IV) Índice Internacional de Función Eréctil-5 (IIEF-5)	- Diferencias significativas en puntuaciones medias IIEF-5 (DE) G1: 22,12±2,70 (7% leve) G2: 16,43±3,10 (13% leve) G3: 12,86±6,30 (16% moderada)
Rajkumar (2014)	105 sujetos ♂ **Grupo 1**: 25 (TCS) M=29,08 **Grupo 2**: 80 (TCS-) M=28,8	Entrevista semiestructurada criterios clínicos CIE-10	- Nicotina (20%), OH (9,5%) - Grupo 1: 19 depend., 17 depend. nicotina y 2 OH, 1 BDZ; historia familiar de OH/nicotina - 23,8% pacientes DS+TCS
Kumsar et al. (2016)	18-65 años **Grupo 1**: 101 M=33,6±9,6 **Grupo 2**: 43 M=32,9±6,3 **Género**: ♂	Formulario de entrevista sociodemográfica Índice Internacional de Función Eréctil (IIEF)	OH: 13,5% leve, 18,9% medio, 21,6% grave Opioides: 3,7% leve, 25,9% medio, 59,3% grave Cannabis: 30% leve, 5% medio, 35% grave MDMA: 23,5% leve, 64,7% grave
Diehl et al. (2016)	508 sujetos (18-75 años) M=34,3±10,7 **Género**: ♂	Test Detección Abuso Drogas (DAST-20) Cuestionario Dependencia Alcohol (SADD) Test de Fageström Nicotina (FTND) Información conductas sexuales	- 37,2% DS + eyaculación precoz DAST: 68,3% nivel grave SADD: 39,2% dependencia severa OH FTND: 32,3% alta dependencia nicotina
Dissiz (2018)	**Grupo heroína**: 57 ♀ Edad: ≥ 18 M=26,22; SD=6,64 **Grupo control**: 79 ♀ M=27,21; SD=2	Índice de Función Sexual Femenina (FSFI) Inventario de Depresión de Beck (BDI)	- Puntuaciones más bajas en FSFI (91,2%) - excitación - 70,4% problemas sexuales - 87,7% síntomas depresivos
Laélia et al. (2018)	514 sujetos, 20% ♀, 80% ♂ **Grupo 1**: 139; M=30 **Grupo 2**: 375; M=34	Cuestionario PrebupIV	Consumo de heroína, sulfato de morfina o metadona: > pérdida libido (43%)

Tabla 1. *Resultados*

DS: disfunción sexual; DE: disfunción eréctil; TCS: trastorno por consumo de sustancias; OH: alcohol

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