Originales

Dual pathology in homeless people in the Health Area of Avilés

Patología dual en personas sin hogar en el Área de Salud de Avilés

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Abstract

The main objective of the present study is to estimate the prevalence of severe mental and substance use disorders in homeless people (HP). The work was carried out on the basis of data obtained from a representative sample of HP in Avilés (Asturias) (n = 100) using the International Neuropsychiatric Interview (M.I.N.I.). The results of our study reveal a close relationship between substance use and homelessness. More than half of the HP have substance use disorders compared to substance use problems in the general population. Psychosocial care and the organization of a support network for the HP are discussed.

Keywords

Homeless people; prevalence; substance abuse / dependence disorder; dual pathology; Mental Health System in Asturias; psychosocial rehabilitation.

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Resumen

El objetivo principal del presente estudio es estimar la prevalencia de trastornos mentales graves y de uso de sustancias en personas en la situación de estar sin hogar. El trabajo se realizó a partir de los datos obtenidos de una muestra representativa de personas sin hogar en Avilés (Asturias) (n=100) utilizando la Entrevista Neuropsiquiátrica Internacional (M.I.N.I.). Los resultados de nuestro estudio ponen de manifiesto una estrecha relación entre el uso de sustancias y el sinhogarismo. Más de la mitad de las personas sin hogar tiene trastornos relacionados con el uso de sustancias en comparación con el uso problemático de sustancias en la población general. Se discute la atención psicosocial y la organización de una red de apoyo a las personas sin hogar.

Palabras clave

Personas sin hogar; prevalencia; trastorno por abuso / dependencia de sustancias; patología dual; Sistema de Salud Mental en Asturias; rehabilitación psicosocial.

1. INTRODUCTION

Homelessness is an emerging health and social care problem. Over the last decade, the number of homeless people (hereinafter, HP) has increased at a worrying rate in almost all European countries. The 'Comprehensive National Strategy for Homelessness 2015-2020' of the Ministry of Health, Social Services and Equality (Ministerio de Sanidad, Servicios Sociales e Igualdad, 2016) estimates that more than 30,000 people are homeless in Spain.

Homelessness is a complex and multifactorial phenomenon whose analysis requires a multifaceted, polyhedral perspective. According to the scientific literature, different personal and social factors have been found to be involved in the etiology and maintenance of homelessness. In various studies conducted to date, the idea prevails that substance abuse and/or mental health problems in people who do not have an adequate family and/or social support network can lead to homelessness (Fajardo, 2011; Panadero et al., 2017). However, it should not be forgotten that the extreme exclusion experienced by people living on the street can trigger the onset of substance abuse and/or mental health problems (Goodman et al., 1991; Navarro-Lashayas, 2016).

Several studies have examined the bidirectional causal relationship whereby the experience of multiple stressful life events would be a relevant vulnerability factor in the origin and maintenance of homelessness, while homelessness itself would be a vulnerability factor for the experience of a greater number of stressful life events (Roca et al., 2019; Dworsky et al., 2013; Muñoz et al., 20015).

In addition to the relationship between homelessness and drug addictions, the study of HP with mental disorders has aroused the interest of the international scientific community (Lee et al., 2010; Fazel et al., 2008; Sullivan et al., 2000). Com-

pared with the general population, HP suffer from a higher prevalence of psychiatric disorders, including schizophrenia and other psychotic disorders. A recent meta-analysis, Ayano, Tesfaw and Shumet (2019) concluded that the prevalence of mental disorders among HP ranged from 25% to 50% across studies; and the presence of mental disorders among HP was associated with an increased risk of disability and mortality due to suicide and general medical problems, as well as from alcohol and drug-related causes.

In Spain, several studies have been conducted on the prevalence of addictions and mental health problems in HP. Regarding drug use, a high presence of polyaddiction has been found, with 45.8% of HP reporting at least three addictions - alcohol being the main substance involved- with prevalence rates between 43.8% (Fajardo, 2011) and 59% (Panadero et al., 2017). In Asturias, an important study was carried out to analyse psychiatric pathology in HP under the premise that the main cause of homelessness could be mental health problems (Vega, 1994). However, we are not aware of any relevant new approaches either in the region of Asturias or in the more specific geographical area of Avilés, which is where our present study was carried out, in which the relationship between the presence of mental disorders, substance use and homelessness was analysed.

A fundamental key to social and health care systems framed in the biopsychosocial theoretical model is, precisely, its contextual adjustment, in such a way that the general criteria of the theoretical model are adequately individualized according to the population to which the service is provided. However, studies on specific patterns of use of services and resources in HP are scarce. The present study aims to analyse some partial aspects of the social and health problem of homelessness in the city of Avilés, which may be useful in the planning of specific intervention programmes.

Our main objective is to estimate the prevalence of severe mental and substance use disorders in the homeless population of Avilés. We also set two secondary objectives: 1) to describe patterns of use of services and resources for the homeless population and 2) to analyze whether there are patterns that suggest any relationship with certain types of psychiatric pathology.

2. MATERIAL AND METHODS

A cross-sectional descriptive study was conducted on the population of regular or sporadic users of the Municipal Centre for HP Care of Avilés (municipal shelter). It is estimated that the results of the study may be applicable to Spanish populations similar to that of Avilés (an industrial population of 79,514 inhabitants in 2017).

Subjects

The study was conducted on an incidental sample of 100 HP obtained during 2017 and 2018 among the users of the municipal shelter. Participation in the study was proposed to all users who had a sufficient cognitive and language level to be interviewed and who verbally expressed their agreement with participation. After proposing participation to 115 HP, the intended sample size of 100 subjects was achieved; the other 15 declined to participate. The basic sociodemographic characteristics of the sample are described in Table 1.

Table 1. Características sociodemográficas de la muestra (n= 100)

	mean (SD); range; n (%)
Age (years)	47.04 (11.82); 9-77 years old
Sex	
Men	81 (81.0 %)
Women	19 (19.0 %)
Place of birth	
Avilés	26 (26.0 %)
Rest of Asturias	15 (15.0 %)
Rest of Spain	44 (44.0 %)
Rest of Europe	4 (4.0 %)
Outside Europe	11 (11.0 %)
Marital Status	
Single	58 (58.0 %)
Married	10 (10.0 %)
Separated, divorced, widowed	32 (32.0 %)
Academic level	
No primary education	12 (12.0 %)
Primary education	63 (63.0 %)
Vocational Training	16 (16.0 %)
Secondary education (ESO)	2 (2.0 %)
Bachelor	5 (5.0 %)
Higher education	2 (2.0 %)
Profession	
No profession	27 (27.0 %)
Unskilled worker	37 (37.0 %)
Skilled worker	29 (29.0 %)
Middle / senior management	7 (7.0 %)
Employment status	
Currently working	4 (4.0 %)
Unemployed in the last year	29 (29.0 %)
Unemployed in the last 5 years	26 (26.0 %)
Unemployed in the last 10 years	12 (12.0 %)
Unemployed for more than 10 years	23 (23.0 %)
Never worked	6 (6.0 %)
Financial income	
Payroll or sick leave	5 (5.0 %)
Non-contributory pension	21 (21.0 %)
Basic Social Wage	20 (20.0 %)
Other public aid	15 (15.0 %)
No income	39 (39.0 %)
Family and social support	
Has someone to trust	54 (54.0 %)
Has no one to trust	46 (46.0 %)

Data collection

Sociodemographic data, mental status assessment and substance use data were collected by a clinical psychologist. A semi-structured interview was used based on an abbreviated version of the sociodemographic questionnaire model originally constructed by Santiago Vega for the Spanish study ´Mental health in homeless population. Epidemiological study in homeless shelters in Gijón (Asturias): Prevalence of psychiatric disorders and use of medical and mental health services´ (1994) and were cross-checked with the 'personal basic data sheet' completed for each user by the professionals working in the shelter. Table 2 summarizes the sociobiographic variables related to homelessness.

Table 2. Sample characteristics related to homelessness (n= 100)

	n (%)
Homelessness pattern	
Never	2 (2.0 %)
Sporadic	22 (22.0 %)
Less than 1 year	21 (21.0 %)
From 1 to 5 years old	16 (16.0 %)
From 5 to 10 years old	15 (15.0 %)
More than 10 years	24 (24.0 %)
Reason for homelessness	
Economic/labor	26 (26.0 %)
Problems with alcohol/other drugs	26 (26.0 %)
Family/partner	30 (30.0 %)
Mistreatment/sexual abuse	7 (7.0 %)
Penal	5 (5.0 %)
Personal Choice	2 (2.0 %)
Unknown	4 (4.0 %)
Geographical mobility of homelessness	
Resident in Avilés	32 (32.0 %)
With planned route through hostels	40 (40.0 %)
No planned route through hostels	17 (17.0 %)
Other	11 (11.0 %)
Victim of assault while on the street	
Yes	32 (32.0 %)
No	55 (55.0 %)
Unknown	13 (13.0 %)
Assessment of homelessness	
Happy with it, by personal choice	21 (21.0 %)
Unhappy, but resigned	24 (24.0 %)
Unhappy, looking for solutions	43 (43.0 %)
Unknown	12 (12.0 %)
Priority need, perceived by the subject	
Housing	42 (42.0 %)
Job	23 (23.0 %)
Medical care	2 (2.0 %)
Mental Health Care	7 (7.0 %)
Alcohol Detoxification	9 (9.0 %)
Drug detoxification	7 (7.0 %)
Financial resources	7 (7.0 %)
None	2 (2.0 %)
No answer	1 (1.0 %)
Current reason for staying at the shelter	
Homeless Person	77 (77.0 %)
Pre-stay in a therapeutic community	33 (33.0 %)

The diagnosis of mental disorder and/or drug abuse was made using the *International Neuropsychiatric Interview* (MINI) in its 5.0 version translated into Spanish by Ferrando, Bobes and Gibert in 2000 (Ferrando et al., 2000). The MINI is an internationally validated diagnostic instrument that evaluates the main psychopathological disorders according to DSM-IV and ICD-10 in independent modules. A 'Severe mental disorder' was considered to be any of those present in the following modules, which were those applied in the study: Module A: Major Depressive Episode; Module C: Suicide Risk; Module D. Manic/Hypomanic Episode; Module J: Alcohol Dependence/Abuse; Module K: Substance Dependence/Abuse; Module L: Psychotic Disorders; Module P: Antisocial Personality Disorder.

Statistical Methodology

Descriptive statistics of the socio-demographic variables were performed by calculating means, standard deviations and confidence intervals for quantitative variables and estimating proportions for qualitative variables. For the main objective, prevalence rates of severe mental and substance use disorders were estimated, and 95% confidence intervals were calculated. For the secondary objectives of describing patterns of use of services and resources and searching for patterns related to certain types of psychiatric pathology, means were compared using Student's t-statistic and proportions were compared using the chi-squared (X^2) test. Calculations were performed using the SPSS v.17 statistical package. For the calculation of confidence intervals of proportions we used the Macro !CIP V2005.02.15 (c) JM.Domenech, A.Bonillo & R.Granero' of the Laboratory of Applied Statistics and Modelling of the Autonomous University of Barcelona.

Ethical Criteria

The study was approved by the Ethics and Research Committee of the San Agustín de Avilés University Hospital. SESPA. Health Area III.

3. RESULTS

Table 3 describes the prevalence of severe mental disorders in the sample. There were 35 subjects grouped as "dual diagnostic" for presenting substance abuse or dependence comorbid with another mental disorder: 21 (60%) had a mood disorder, 7 (20%) had a personality disorder and 4 (11%) had a psychotic disorder. Three subjects (9 %) had mixed conditions of dual diagnose. Regarding substance use, 41 people (41%) never had problems. The rest, 21 subjects (21%), currently have present or past problems with a single substance; and the majority, 38 people (38%), with polysubstance use. The preference among the 59 substance users was alcohol (19 subjects, 32.2%), cannabis (16, 27.1%), cocaine (14, 23.7%), and heroin (10, 16.9%).

Suicide risk was assessed using the MINI interview, showing high risk in 16 cases (16%), moderate risk in 6 cases (6%) and mild risk in 14 cases (14%). Overall, the prevalence of subjects at risk of suicide in the HP sample is 36% (95% CI, 26.64 - 46.21).

Different hypothesis tests were carried out to look for associations between some sociodemographic and clinical variables.

Table 3. Prevalence of severe mental disorders (n= 100)

	n (%)	95% CI
Substance abuse and dependence (K) + Other (dual pathology)	35 (35.0 %)	(25.73 - 45.18)
No psychiatric diagnosis	26 (26.0 %)	(17.74 - 35.80)
Substance Abuse and Dependence (K) (not comorbid)	24 (24.0 %)	(16.02 - 33.57)
Mood Disorder (A,B,D) (non-comorbid)	9 (9.0 %)	(4.20 - 16.31)
Antisocial Personality Disorder (P) (not comorbid)	5 (5.0 %)	(1.64 - 11.27)
Psychotic Disorder (L) (non-comorbid)	1 (1.0 %)	(0.02 - 5.45)

* The letter in brackets refers to the diagnostic category of the MINI interview.

The hypothesis that drugs abuse could be related to the place of origin was tested. This variable was recoded into three categories and it was observed that there was no association between substance use and the place of origin: Asturias (27 subjects, 45.8% of substance users), rest of Spain (25 subjects, 42.4% of substance users), outside Spain (7 subjects, 11.8% of substance users), (chi squared 1.83; 2 gl; p = 0.40).

Substance use was also not associated with age: substance users (n = 59; mean age = 46.44 years; SD = 10.13); non-substance users (n = 41; mean age = 47.90 years; SD = 13.98) (Student´s t = 0.607; 98 gl; p = 0.55). Similarly, substance use was not associated with sex: males (49 subjects; 60.5% of males), females (10 subjects; 52.6% of females) (bilateral Fisher's exact test, p = 0.608).

We studied a subsample of 26 participants with normal mental health (no mental disorder or substance use disorder) and found that there were no significant differences with respect to place of origin, age or sex.

An association was found between the pattern of route planned by the shelters and substance use, such that in route planners there was a predominance of non-substance users with a ratio = 1.22 (55 non-drug users versus 45 users). On the other hand, in non-route planners this ratio was 0.46 (19 non-drug users versus 41 users). The association between route planning and non-substance use is significant (bilateral Fisher's exact test, p = 0.024).

4. DISCUSSION

A sample of 100 HP who made use of the services of the municipal shelter of Avilés in 2017 and 2018 was studied. They were predominantly males between 40 and 50 years old, of Spanish origin, without a partner, with a low level of academic and professional qualifications, unemployed and without income. Only half of them had a support person in their living network. More than half of them were homeless for more than a year, mainly due to employment and financial problems, related to substance use and associated with family or relationship problems. Up to 40% of the subjects were happy with or resigned to their situation and planned to stay in various shelters. The main per-

ceived need was for a home or a job. One in three had been assaulted in the street; one in three was also at risk of suicide. Three out of four HP had severe mental disorders, mainly related to substance use and affective disorders. Alcohol and cannabis were the most common substances involved. The presence of psychotic disorders was exceptional. Drug users were less likely to plan their stay in shelters.

The results of our study show a close relationship between substance use and homelessness. More than half of HP have substance use disorders compared to problematic substance use in the general population, which in 2017 was 7% (SOCIAL MDSCYB, 2019). Age, gender, place of origin or psychotic disorders did not prove to be relevant factors in our study.

The data obtained on the high prevalence of substance abuse disorders –alcohol being the most commonly used substance– are relatively consistent with those obtained in similar Spanish national studies (Fajardo, 2011; Panadero et al., 2017) and in systematic reviews conducted in other countries, such as Germany (Schreiter et al., 2017), other Central European countries (Madianos, 2013), as well as in Eastern Europe and North America (Fazel et al., 2008). Likewise, the data found in our study on the low prevalence of psychotic disorders and the high prevalence of affective disorders is also in line with that reported in studies conducted in European countries (Madianos, 2013).

Homelessness in Aviles does not seem to be due to psychiatric deinstitutionalisation. As we know, in the 1980s, the Psychiatric Reform undertaken in Spain was blamed for the situation. The lessons of the USA experience play an important role in understanding the effects that deinstitutionalisation can have when there is no system of public coverage that guarantees access to social and health care resources and community mental health programmes. The discharge of many institutionalised patients from the former "mental asylums" in the USA led to many people with severe mental disorders being irretrievably condemned to live on the streets, with consequences that have been widely documented in the scientific literature (Lamb, 1984). This led to the association of psychiatric reform, with the deinstitutionalisation process at its core, as a causal factor of homelessness.

However, the counterpoint in terms of deinstitutionalisation strategies can be found in the Italian experience, with the transforming leadership of Franco Basaglia and his group in Trieste, which became an emblematic place in the birth and development of community mental health. In Aviles there has been an important tradition of Assertive Community Treatment since 1999 (Martínez y Peñuelas, 2007).

Experience with the *Avilés model* shows that with a good organisation of teamwork and continuity of care, good results can be obtained in the treatment of severe mental disorders, reducing the number of hospital admissions and the "revolving door" phenomenon in psychiatric hospitalisation units. This is consistent with the hypothesis that the Avilés model of Assertive Community Treatment is exerting a "dampening effect" on the causal relationship between psychopathology and homelessness, preventing many people with mental health problems, and who do not have an adequate family and/or social support network, from ending up in a situation of homelessness.

However, homelessness requires more attention in people with substance use disorders. In clinical or substance use disorder populations, numerous studies have shown high rates of refusal and/or dropout from treatment (Combaluzier et al., 2009; Villeneuve et al., 2010). In homeless situations, achieving adherence to treatment is even more complicated; HP often present special difficulties in accessing mental health services and resources, or they make occasional use (generally focused on basic needs: food, hygiene, etc.), remaining on the street, without treatment, on most occasions. And when they manage to start a psychosocial rehabilitation process (e.g., treatment for addiction), drop-out rates are high, which prevents the achievement of therapeutic objectives (Twenge et al., 2007). This implies the need to design and implement new specific intervention programmes in the community that are especially accessible to HP, in order to facilitate their social inclusion and reduce the dropout rate.

The main limitation of our study is that a sample of the general population has not been studied in parallel, so no clear conclusions of risk or causality can be drawn. However, the high prevalence of substance use disorders in the homeless population points to this factor as fundamental for specific studies with a control group in the general population.

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