

## **Age and gender differences in mental health and addictions of individuals experiencing homelessness in Spain: a 15-year retrospective cohort study**

Fran Calvo<sup>1</sup>, Rebeca Alfranca<sup>2</sup>, Xavier Carbonell<sup>3</sup>, Elda Molina<sup>4</sup>, Silvia Font-Mayolas<sup>5</sup>

<sup>1</sup>Serra Húnter Fellow, Pedagogy Department, Quality of Life Research Institute, Universitat de Girona

<sup>2</sup>Centre d'Atenció Primària Santa Clara, Institut Català de la Salut, Girona

<sup>3</sup>Blanquerna School of Psychology and Educational and Sports, Universitat Ramon Llull, Barcelona

<sup>4</sup>Department of Quality Assessment and Projects Promotion, Fundació Salut i Comunitat, Barcelona

<sup>5</sup>Psychology Department, Quality of Life Research Institute, Universitat de Girona

### **Corresponding author**

Fran Calvo

Address: Plaça de Sant Domènec 9, 17004, Girona

Telephone and fax: +34 972 418 320

email: fran.calvo@udg.edu.

### **Conflicts of interest**

The authors declare that they have no conflicts of interest.

### **Acknowledgments**

Data collection contributors: Mercè Salvans, Anna Julià, Carles Fàbregas, Sandra Castillejos, Anna Calvet, Cristina Giralt, Marissa Ramírez, Laura Masferrer.

Dr. Susan Frekko provided feedback and English-language support for this article.

**Abstract**

Studies in Europe and North America have shown that the mental health of individuals experiencing homelessness (IEHs) is worse than that of the general population. The objective of this study was to analyze the mental health of IEHs in Spain. A retrospective cohort study (observational study) of the health of 3,854 IEHs was conducted, according to age and gender, using diagnoses registered in the health service, over the 15 years between 2006 and 2020. Of this population, 31.6% were diagnosed with some sort of substance use disorder (SUD), mainly alcohol-related (18.1%), 20.1% had a mental disorder not related to drugs, and 11.5% had a dual disorder. Younger people had more mental health problems. This study—the first large study of IEHs in Spain—highlights significant differences in mental health and addictions according to gender and age. In general, Spanish IEHs have better mental health for all of the analyzed diagnostics than other populations internationally.

**Keywords:** homelessness; homeless people; mental health; addictions; gender; age

## **Age and gender differences in mental health and addictions of individuals experiencing homelessness in Spain: a 15-year retrospective cohort study**

Health indicators for individuals experiencing homelessness (IEHs) are worse than for the general population (Fazel et al., 2014), and they suffer a higher prevalence of infections (especially hepatitis C, human immunodeficiency virus and tuberculosis [Beijer et al., 2012] and chronic diseases (Lewer et al., 2019). IEHs also have a higher rate of mental disorders (Singh et al., 2019), due to structural factors, such as unemployment and economic crises (Calvo, Carbonell, & Badia, 2018; Calvo et al., 2021) and individual factors, such as loneliness (Rokach, 2004), and because they suffer from several forms of violence (Ellsworth, 2019; Murray, 2011). While in the general population the prevalence of mental disorders—including drug-related disorders—may be as high as 8.5% (Haro et al., 2006), it is as high as 60% among IEHs (Fazel et al., 2008).

The prevalence of mental disorders among individuals experiencing homelessness is difficult to establish (Frankish et al., 2005). Mental disorders—especially severe ones such as psychosis (schizophrenia), affective disorders (major depression, bipolar disorder) and dual pathology—seriously affect the person's functioning in all areas (Zima et al., 1993). The most common mental health disorder in IEHs is substance use disorders (SUDs), especially those related to alcohol, and their prevalence among IEHs is disproportionate to the rest of the population (Bramley et al., 2015). Contrary to historical and popular conceptions, psychotic disorders are uncommon among IEHs of high-income countries (about the 8% of IEHs) (Ayano et al., 2019).

There are differences related to gender and age in the health of IEHs. Scientific literature from the United States distinguishes homeless youth from homeless adults to determine the health needs of these groups (Altena et al., 2010). Young IEHs show greater prevalence of SUDs and other mental disorders in comparison with adult IEHs (Edidin et al., 2011). Differences between youth and adult IEH populations have been little studied in Europe, probably because of differences in protective systems for children and adolescents that are geared to managing and preventing residential exclusion (Philippot et al., 2007).

With respect to gender, there are important differences in the effect of homelessness on the mental health of men and women. In general, a greater proportion of male IEHs experience mental health disorders. (Henares et al., 2020). On the other

hand, a greater proportion of female IEHs experience serious, violent aggression (Calvo, Watts, et al., 2021). These stressors aggravate the situation of homelessness at the same time that they increase the likelihood of suffering from a more severe mental health disorder. (Duke & Searby, 2019). Drug addiction is the most prevalent of mental disorders among female IEHs, and women who meet criteria for drug abuse are more likely to be younger and have attempted suicide, in comparison with women who did not meet criteria for drug abuse (Guillén et al., 2020).

It has always been difficult to access large samples of people experiencing homelessness. This is especially the case with “literally homeless” people, those who live on the street, outdoors and in public spaces, or who occasionally spend the night in types of housing that are not fit for habitation or in specialized shelters. The living conditions, and, therefore, potentially, the health of these types of IEHs are worse. In Spain, there is a large gap in the epidemiological knowledge of the mental health of IEHs, even though homelessness in the country has increased substantially, especially in the last decade. Likewise, information is lacking about how the mental health of IEHs varies according to age and gender. The objective of this study, therefore, was to analyze the main diagnoses of mental health and addictions, as well as age and gender differences, in a population of literally IEHs in Spain.

## **Method**

### **Design**

A retrospective cohort study (observational study) of a 15-year period. This article emerged from a larger study that also examined physical health (see Authors, this volume).

### **Population**

The study included all the IEHs (literal homelessness) who were attended by any of the mental health, addiction, primary healthcare, or specialized homeless care services (day centers, overnight shelters, and street teams) from 2006 to 2020 in Girona (Catalonia, Spain). They were 3,854 different subjects, whom we tracked starting with the 2006 data, adding new subjects as we examined the data for each subsequent year.

Literal homelessness was defined as people who live in public spaces or whose overnight housing situation forces them to spend the day on the streets or in extremely substandard housing. The European Observatory on Homelessness categories of homelessness and housing exclusion 1, 2, 3d, 3e, 3f and 3h were used (Busch-

Geertsema et al., 2016). These categories refer to: i) people without accommodation, who sleep on the streets, in public spaces, in vehicles or under some type of improvised cover; ii) people living in any type of temporary or crisis accommodation, iii) people illegally occupying conventional dwellings; iv) people living in conventional dwellings unsuitable for human habitation; v) people living in trailers, tents or caravans; and vi) people living in unconventional buildings and temporary structures or settlements.

### **Procedure**

A list of the IEHs attended by mental health, addiction, primary health, and social services between 2006 and 2020 was compiled. Experiencing literal homelessness and seeking services at one of these centers were the only inclusion criteria. We were able to know service users' housing status because the centers ask new users about their housing status as part of standard intake procedures. Once we had completed the final list of service users who were IEHs during this period, we consulted and cross-checked the services' clinical databases. The diagnostic criteria were based on ICD-10 and ICD-11.

### **Ethics**

The research protocol was approved by the ethics committee of the *Institut d'Assistència Sanitària de Girona* (CEIC-IAS) (Girona Health Institute) with the code *Estudi\_homeless\_2008*.

### **Variables included**

- Sociodemographic variables: age, gender, country of origin (born in Spain or foreign-born), marital status.
- Legal situation: criminal record, prison sentences.
- Drug addiction and mental health variables: having a diagnosis, main diagnosis of SUD, polydrug use (two or more diagnoses of SUD, excluding tobacco), main diagnosis in other mental disorders, dual disorder.

### **Statistical analysis**

Measures of central tendency and dispersion were used for the description of quantitative variables; absolute and relative frequencies were described for categorical variables. The chi-square test for the analysis of categorical variables was used including an analysis of goodness of fit with the Kendall's tau-b. Furthermore, the odds ratio was calculated as an index of effect size. Three types of bivariate analysis were conducted. Firstly, results within the same gender were compared, that is, men and women separately, according to age group (18-30, 31-40, 41-50, 51-60, and >60).

Second, results of the differences between genders for each age category were compared. Finally, overall results for men and women were compared.

## **Results**

### **Descriptive results**

The sociodemographic, mental health and addiction data of the subjects are presented in Table 1.

#### ***Sociodemographic data***

The mean age of the 3,854 subjects was 47.4 years (SD = 10.4), and 60.4% were immigrants. Of the total population, 85.4% subjects were male, 54.9% were single, 24.0% were married, 19.6% were divorced, and 1.6% were widowed.

#### ***Legal situation***

In terms of legal situation, 83.8% of the subjects had a criminal record, and 19.9% had spent time in prison.

#### ***Mental health: drug addiction***

Of the total population, 39.5% had an open medical record in the mental health and addictions network and 31.6% had been diagnosed with an SUD (80.0% of the IEHs with any diagnosis had an SUD diagnosis). The most reported drug was alcohol (18.1%), followed by opiates (8.8%) and cocaine (2.3%). Of the total population, 1.9% were diagnosed with cannabis dependence and 0.4% with dependence on hypnotics and sedatives, mostly benzodiazepines, while 11.4% had two or more SUD diagnoses.

#### ***Mental health not related to substance use***

In terms of non-substance-abuse mental health issues, 24.3% of the subjects were diagnosed with some type of mental disorder not related to substance use: 7.0% were diagnosed with psychotic disorders; 4.4% with mood disorders; 3.9% with personality disorders; 2.4% with adjustment disorders; and 6.6% with other mental health problems, including eating, sleeping, attention deficit (with or without hyperactivity), and learning disorders, gender dysfunction (a DSM-IV-TR diagnosis), intellectual disability and dementia. Dual disorder was found in 11.5% of the subjects.

### **Bivariate analysis**

The bivariate analysis by age and gender (gender intra-group and gender inter-group) is presented in Table 2 and Table 3.

#### ***Diagnostic differences by age group in men (gender intra-group)***

##### **Mental health: Drug addiction**

Some diagnostic differences were found among the different age groups of homeless men. First, 48.4% of homeless men aged 51-60 had an open medical record with the mental health services, compared to 41.5% of homeless men >60 years old. For the other groups, the share was below 40%. The scenario in the case of specific drug addiction diagnoses was similar: 40.2% of the 51-60 age group were diagnosed with drug addiction, well above the rest.

When analyzing diagnoses by type of substance, we noted that older people had a higher percentage of alcohol addiction. IEHs >60 years old (30.4%) and 51-60 years old (28.3%) had a higher prevalence than the other groups. A greater proportion of IEHs aged 41-50 was diagnosed for dependence on opiates (11.4%), compared to the next highest group (9% in the group aged 51-60). For other substances, the percentages for IEHs in the youngest age group were significantly higher than for the other age groups: cocaine, 5.2% compared to the next highest, 3.2%, in the 31-40 age group; cannabis, 14.3% vs. the next highest, 3.9%, in the 31-40 age group; 1.3% for hypnotics and sedatives vs. 0.7% in the 31-40 age group. In the case of polydrug use, the >60 age group had the lowest prevalence (16.2%), compared to the next highest in the 51-60 age group, 33.9%.

#### **Mental health not related to substance use**

No differences by age were found in the diagnoses of psychotic, mood personality, adaptive or anxiety disorders. In contrast, a higher proportion of the oldest two age groups was diagnosed with other disorders (8.7% of the group aged 51-60 and >60 years, taken together, compared to the other groups).

#### ***Diagnostic differences by age group in women (gender intra-group)***

##### **Mental health: drug addiction**

There were differences among homeless women depending on whether they had a diagnosis at the mental health service. In this case, 25% of women aged 18-30 had a diagnosis, compared to a range of between 47.4% (41-50 age group) and 58.7% (51-60 age group). Although there were no differences in the dichotomous diagnosis of the presence of drugs, there were differences relating to substances. Thus, homeless women aged 51-60 had a higher prevalence of opioid-related SUDs (21.7%), followed by those aged 41-50 (20.5%) and those aged 31-40 (20.3%), far above those aged between 18-30 and those > 60 (6.3% and 2.4%, respectively). In contrast, diagnosis of cannabis dependence was more prevalent in younger women (6.3%), as was that of multiple substance dependence (66.7%).

### **Mental health not related to substance use**

Regarding mental health diagnoses not related to drugs, there was a higher prevalence of psychotic disorders among women in the oldest age group (14.6% compared to 10.9% in the 51-60 age group, 8.5% in the 31-40 age group, and 5.1% in the 41-50 age group), of mood disorders (14.6% compared to 8.7% in the next highest age group, 51-60) and of other disorders (19.5% compared to 14.1% in the next highest age group, 41-50).

### ***Diagnostic differences by age group between genders (gender inter-groups)***

Comparing the genders in each age bracket, a greater proportion of women in the 31-40 age group had a diagnosis (57.6% of women vs. 36.6% of men) and as did women in the 41-50 age group (47.4% women vs. 38.3% men).

### **Mental health not related to substance use**

A greater proportion of women than men had diagnoses related to drugs in the 31-40 age group (42.4% of women vs. 30.5% of men). However, in the >60 group, this relationship was reversed (32.9% of men vs. 14.6% of women). There were no differences in the other age brackets.

With respect to each substance, a greater proportion of men was addicted to alcohol in the 51-60 age group (28.3% of men vs. 15.2% of women) and in the >60 age group (30.4% of men vs. 12.2% of women). A greater proportion of women were addicted to opioids in the 31-40 age group (20.3% of women vs. 7.4% of men), the 41-50 age group (20.5% of women vs. 11.4% of men) and the 51-60 age group (21.7% of women vs. 9.0% of men). We observed no differences by age or gender for addiction to cocaine or cannabis. Women aged 51-60 had a greater tendency toward polydrug use than men of the same age (57.9% vs. 33.9%).

### **Mental health not related to substance use**

We found some differences between men and women across the age brackets. A greater proportion of women than men aged 31-40 had adaptative and anxiety disorders (6.8% vs. 1.4%). A greater proportion of women than men aged 41-50 had been diagnosed with a personality disorders (7.7% vs. 2.4%), adaptative and anxiety disorders (5.1% vs. 2.4%) and other disorders (14.1 vs. 6.1%). In the 51-60 age group, we found a greater proportion of women with personality disorders (8.7% of women vs. 4.1% of men). Finally, women aged >60 had a greater prevalence than men of psychotic disorders (14.6% vs. 7.2%), mood disorders (14.6% vs. 4.3%) and other disorders (19.5% vs. 8.7%).



## ***Diagnostic differences between genders***

### **Mental health: drug addiction**

A higher proportion of women had been diagnosed as having a drug addiction by the mental health service than men (43.8% vs. 38.8%). This difference was not observed in the diagnosis of drug addiction (32.1% of men vs. 28.8% of women). There were, however, differences in the prevalence of diagnoses according to type of substance. Thus, the prevalence of SUDs related to alcohol was higher in men than women (19.4% vs. 10.3%), as was the case of SUDs related to cannabis (2.1% vs. 0.7%). In contrast, opioid-related SUDs were more prevalent in women than men (14.2% versus 7.9%). There were no significant differences between the genders for other drugs.

### **Mental health not related to substance use**

As Table 4 shows, in all the cases in which differences between the genders were found for mental health disorders not related to drug use, diagnoses were more prevalent in women than men: mood disorders (6.1% vs. 4.1%), personality disorders (6.8% vs. 3.5%), adaptive disorders (4.3% vs. 2.1%), and other mental disorders (10.0% vs. 6.0%).

## **Discussion**

The aim of this study was to analyze the mental health of a population of IEHs and uncover any differences that might exist on the basis of age or gender. The main findings are that both younger men and women were more likely to be diagnosed for mental health and addiction disorders. Likewise, two out of every five subjects were users of the public mental health and addictions network. The main gender differences are that a greater proportion of women than men had a diagnosis of a mental health disorder, specifically opiate dependence, mood disorders, personality disorders, adaptive disorders, and other types of disorders. A greater proportion of men than women had disorders related to alcohol and cannabis use.

### **The mental health of individuals experiencing homelessness**

The prevalence of mental health disorders among IEHs was 2.5 times that of the general population of Catalonia. The rate was 3.7 times higher among men and 2.2 times higher among women (Henares et al., 2020). The most prevalent mental health diagnosis was drug addiction: practically one third of subjects had been diagnosed with addiction, well above the prevalence in the general population. Disorders from addiction

to any type of drug were 361 times more prevalent than in the general population, and disorders caused by the consumption of alcohol 28 times more prevalent (Haro et al., 2006).

The indicators of mental health and addiction were similar to those found in the study with IEHs in Girona (Calvo et al., 2021) and about eight percentage points lower than the 28.3% alcohol dependence rate of Madrid (Muñoz et al., 2002) and Barcelona (28.1%) (Uribe & Alonso, 2009) and much lower than the prevalence observed in the United States (72.7%) (Muñoz et al., 2002).

Mental disorders not related to drugs were 2.37 times more prevalent among IEHs than among the general population (8.48%) (Haro et al., 2006). This prevalence is lower than the prevalence in international samples of IEHs for all types of diagnoses. Diagnoses of psychotic disorders occurred at less than half the international rate of 18.8% (Ayano et al., 2019). Mood disorders were well below the mean rate of 27.6%, with a range of 12.2% to 41.3% (Hossain et al., 2020). The wide range of the prevalence of personality disorders and the methodological differences used to analyze them should be noted. Thus, the mean international prevalence is between 0.42% (Lombardi et al., 2020) and 23.1% (Fazel et al., 2008). The results of the study are therefore consistent with this, although our analysis shows a prevalence that is lower than that found in other Spanish studies (Rodríguez-Pellejero et al., 2017; Salavera et al., 2009).

Non-drug-related mental health disorders, although more prevalent in Barcelona, have a similar distribution among age groups in men, being higher in the 31-40, 41-50 and 51-60 age groups (Uribe & Alonso, 2009). In both Uribe and Alonso's study and in ours, mental pathologies among women are more prevalent in the oldest age groups: in the Barcelona study in the >60 age group (73.7% of cases), and in our Girona study in the 51-60 age group (the highest prevalence, psychotic and mood disorders, does not exceed 15%). The figure of 53.8% for the 18-30 age group stands out in Barcelona and is similar to the prevalence of personality disorders in our study, which are most prevalent in this age group, at 12.5%. The high prevalence of drug-related mental disorders (45%), the high prevalence of alcoholism compared to addiction to other drugs (26.8% vs. 18.2%, respectively), and the high prevalence of other mental disorders (49.1%) are similar to those observed in Barcelona. However, in Barcelona there is a higher prevalence of non-drug-related mental disorders than of SUDs (Uribe & Alonso, 2009). Likewise, the prevalence for dual disorder was lower both in samples of people with substance use disorders in the general population at 34% (Stenius-

Ayoade et al., 2017), as well as in samples of IEHs, at between 31.0% (Stenius-Ayoade et al., 2017) and 55% (Schütz et al., 2019).

In terms of age ranges, some age groups had worse mental health than others. Diagnoses of mental disorders, especially from drug use, were more prevalent in younger people. Internationally, younger IEHs suffer from a high prevalence of mental disorders and SUDs (Edidin et al., 2011), which in many cases begin in childhood (Bassuk et al., 2015). IEHs >60 have the higher rates of alcohol addiction (Uribe & Alonso, 2009).

The results show some differences between men and women. Women had worse health than men, which translated into a greater proportion of women having a diagnosis in the mental health network and a higher prevalence of all non-drug-related mental disorders, except psychotic disorders, where there were no differences according to gender. Additionally, comparing the different age brackets, women had proportionally more diagnoses than men for all diagnoses in which there was a gender difference. Women in the general population also have a greater prevalence of non-drug-related mental disorders, especially anxiety and depressive disorders, while alcoholism tends to be more prevalent in men (Haro et al., 2006). Compared to the general population, the women studied had a higher prevalence of mental disorders and from a younger age, which is related to experiencing stressful life events. This in turn leads to poorer health, in a vicious circle (Rodriguez-Moreno et al., 2020). Homeless women have higher stress than men, among other things because they suffer much more physical, psychological, sexual, economic and patrimonial aggression than men in the same situation (Calvo et al., 2021). This in turn leads to a higher prevalence of post-traumatic stress disorder, which causes or increases comorbidity (Tinland et al., 2018). This is consistent with the higher mortality rate among homeless women, especially from suicide (Calvo-García et al., 2016).

### **Limitations and strengths**

Some limitations and strengths of this study should be considered. First, we took the data from clinical records beginning in 2066, when records were only partially digitized. This made it impossible for us to discover the date of diagnosis for some subjects, meaning that we were unable to conduct a longitudinal analysis, which would have provided more information about changes in subjects' health over time. Second, subjects' gender was extracted from databases that historically have only considered two gender categories (male and female). This fact has forced us to use a binary

approach to gender and made it impossible for us to look for more complex gender-based associations in the data. Third, we set the youngest age group at age 18-30, because the services we studied do not attend minors (and in any case, there are almost no literally homeless minors in Spain, due to the vast welfare network for children and adolescents). There were 14 cases of IEHs aged 18-20, and we combined them with the 21-30 group, as a single group aged 18-30. Fourth, it was not possible to include details about the subjects' homelessness (time on the street, age at which they entered homelessness) because this information is not collected in intake interviews at the centers. This data would have shed light on the implications of literal homelessness for mental health. Fifth, there is no data available about whether diagnoses were prior to or after the person became homeless, a factor with major implications in studies about mental health and residential exclusion. Future studies should consider these variables. Sixth the data were obtained from the medical records of patients who had already been treated by the health services mentioned above and, therefore, these were patients diagnosed by specialized services. This fact could mean some underdiagnosis compared to studies that use tests and self-report to determine the disorders' prevalence. On the other hand, the size of the study's population, which is very high, should be taken into consideration. This fact makes our results an important clinical contribution. In fact, no study has ever been carried out in Spain with such a large sample of these categories of IEHs. Finally, more than 60% of subjects were foreign-born, so future studies should examine the relationship between migration status and mental health.

### **Conclusions and recommendations**

The population of IEHs that we examined have worse mental health than the general population, especially the younger population in terms of substance use disorders. However, their mental health is better than that of other international samples of IEHs. When it comes to drug addiction and the problems associated with drug consumption, it is necessary to implement comprehensive care through personalized itineraries according to the characteristics of each patient, specifying the special needs of patients with chronic illnesses, those with dual disorders, and IEHs (Ministerio de Sanidad, 2017; Oficina Nacional de Prospectiva y Estrategia de Gobierno de España, 2021).

Close coordination between social services, mental health services, and primary care services is also necessary to improve the access of IEHs to these services and to facilitate subsequent monitoring. To be able to treat IEHs in all their complexity, there

should be a greater investment in specific programs, in the number of spots available at social-health centers and shelters, and in the hiring of health professionals, especially psychologists and direct intervention professionals.

## References

- Altena, A. M., Brilleslijper-Kater, S. N., & Wolf, J. L. M. (2010). Effective Interventions for Homeless Youth: A Systematic Review. *American Journal of Preventive Medicine, 38*(6), 637–645.  
<https://doi.org/10.1016/J.AMEPRE.2010.02.017>
- Ayano, G., Tesfaw, G., & Shumet, S. (2019). The prevalence of schizophrenia and other psychotic disorders among homeless people: A systematic review and meta-analysis. In *BMC Psychiatry* (Vol. 19, Issue 1, pp. 1–14).  
<https://doi.org/10.1186/s12888-019-2361-7>
- Bassuk, E. L., Richard, M. K., & Tsertsvadze, A. (2015). The prevalence of mental illness in homeless children: A systematic review and meta-analysis. *Journal of the American Academy of Child and Adolescent Psychiatry, 54*(2), 86-96.e2.  
<https://doi.org/10.1016/j.jaac.2014.11.008>
- Beijer, U., Wolf, A., & Fazel, S. (2012). Prevalence of tuberculosis, hepatitis C virus, and HIV in homeless people: a systematic review and meta-analysis. *The Lancet Infectious Diseases, 12*(11), 859–870. [https://doi.org/10.1016/S1473-3099\(12\)70177-9](https://doi.org/10.1016/S1473-3099(12)70177-9)
- Bramley, G., Fitzpatrick, S., Edwards, J., Ford, D., Johnsen, S., Sosenko, F., & Watkins, D. (2015). *Hard Edges: mapping severe and multiple disadvantage in England*.
- Busch-Geertsema, V., Culhane, D., & Fitzpatrick, S. (2016). Developing a global framework for conceptualising and measuring homelessness. *Habitat International, 55*, 124–132. <https://doi.org/10.1016/J.HABITATINT.2016.03.004>
- Calvo-García, F., Giralt-Vázquez, C., Calvet-Roura, A., & Carbonell-Sánchez, X. (2016). Riesgo de suicidio en población sin hogar. *Clinica y Salud, 27*(2), 89–96.  
<https://doi.org/10.1016/j.clysa.2016.05.002>
- Calvo, F., Carbonell, X., & Badia, M. (2018). Homelessness and unemployment during the economic recession: The case of the city of Girona. *European Scientific Journal, 14*(13), 1857–7881. <https://doi.org/10.19044/esj.2018.v14n13p59>
- Calvo, F., Rived-Ocaña, M., Font-Mayolas, S., & Carbonell, X. (2021). Sinhogarismo y salud mental durante la Gran Recesión (2008-2017): el efecto de la inmigración.

*Revista Espanola de Salud Publica*, 95.

Calvo, F., Watts, B., Panadero, S., Giralt, C., Rived-Ocaña, M., & Carbonell, X. (2021).

The prevalence and nature of violence against women experiencing homelessness: A quantitative study. *Violence Against Women*, 1–19.

<https://doi.org/10.1177/10778012211022780>

Duke, A., & Searby, A. (2019). Mental ill health in homeless women: a review. *Issues in Mental Health Nursing*, 40(7), 605–612.

<https://doi.org/10.1080/01612840.2019.1565875>

Edidin, J. P., Ganim, Z., Hunter, S. J., & Karnik, N. S. (2011). The mental and physical health of homeless youth: a literature review. *Child Psychiatry & Human Development* 2011 43:3, 43(3), 354–375. <https://doi.org/10.1007/S10578-011-0270-1>

<https://doi.org/10.1007/S10578-011-0270-1>

Ellsworth, J. T. (2019). Street Crime Victimization Among Homeless Adults: A Review of the Literature. *Victims and Offenders*, 14(1), 96–118.

<https://doi.org/10.1080/15564886.2018.1547997>

Fazel, S., Geddes, J. R., & Kushel, M. (2014). The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet*, 384(9953), 1529–1540.

[https://doi.org/10.1016/S0140-6736\(14\)61132-6](https://doi.org/10.1016/S0140-6736(14)61132-6)

Fazel, S., Khosla, V., Doll, H., & Geddes, J. (2008). The prevalence of mental disorders among the homeless in western countries: Systematic review and meta-regression analysis. *PLoS Medicine*, 5(12), e225.

<https://doi.org/10.1371/journal.pmed.0050225>

Frankish, C. J., Hwang, S. W., & Quantz, D. (2005). Homelessness and health in Canada. *Canadian Journal of Public Health*, 96(April 2005), S23-9.

<https://doi.org/10.2307/41994457>

Guillén, A. I., Marín, C., Panadero, S., & Vázquez, J. J. (2020). Substance use, stressful life events and mental health: A longitudinal study among homeless women in Madrid (Spain). *Addictive Behaviors*, 103, 106246.

<https://doi.org/10.1016/J.ADDBEH.2019.106246>

Haro, J. M., Palacín, C., Vilagut, G., Martínez, M., Bernal, M., Luque, I., Codony, M., Dolz, M., & Alonso, J. (2006). Prevalencia de los trastornos mentales y factores asociados: resultados del estudio ESEMeD-España. *Medicina Clinica*, 126(12), 445–451. <https://doi.org/10.1157/13086324>

<https://doi.org/10.1157/13086324>

- Henares, J., Ruiz-Pérez, I., & Sordo, L. (2020). Salud mental en España y diferencias por sexo y por comunidades autónomas. *Gaceta Sanitaria*, *34*, 114–119.
- Hossain, M. M., Sultana, A., Tasnim, S., Fan, Q., Ma, P., McKyer, E. L. J., & Purohit, N. (2020). Prevalence of mental disorders among people who are homeless: An umbrella review. *International Journal of Social Psychiatry*, *66*(6), 528–541. <https://doi.org/10.1177/0020764020924689>
- Lewer, D., Aldridge, R. W., Menezes, D., Sawyer, C., Zaninotto, P., Dedicoat, M., Ahmed, I., Luchenski, S., Hayward, A., & Story, A. (2019). Health-related quality of life and prevalence of six chronic diseases in homeless and housed people: a cross-sectional study in London and Birmingham, England. *BMJ Open*, *9*(4), e025192. <https://doi.org/10.1136/BMJOPEN-2018-025192>
- Lombardi, K., Pines, J. M., Mazer-Amirshahi, M., & Pourmand, A. (2020). Findings of a national dataset analysis on the visits of homeless patients to US emergency departments during 2005-2015. *Public Health*, *178*, 82–89. <https://doi.org/10.1016/j.puhe.2019.09.003>
- Ministerio de Sanidad. (2017). *Estrategia nacional sobre adicciones 2017-2024*. [http://www.pnsd.mscbs.gob.es/pnsd/estrategiaNacional/docs/180209\\_ESTRATEGIA\\_N.ADICCIONES\\_2017-2024\\_\\_aprobada\\_CM.pdf](http://www.pnsd.mscbs.gob.es/pnsd/estrategiaNacional/docs/180209_ESTRATEGIA_N.ADICCIONES_2017-2024__aprobada_CM.pdf)
- Muñoz, M., Koegel, P., Vázquez, C., Sanz, J., & Burnam, A. (2002). An empirical comparison of substance and alcohol dependence patterns in the homeless in Madrid (Spain) and Los Angeles (CA, USA). *Social Psychiatry and Psychiatric Epidemiology*, *37*(6), 289–298. <https://doi.org/10.1007/s00127-002-0555-6>
- Murray, S. (2011). Violence Against Homeless Women: Safety and Social Policy. *Australian Social Work*, *64*(3), 346–360. <https://doi.org/10.1080/0312407X.2011.552983>
- Oficina Nacional de Prospectiva y Estrategia de Gobierno de España (coord.). (2021). *España 2050. Fundamentos y propuestas para una Estrategia Nacional de Largo Plazo*.
- Philippot, P., Lecocq, C., Sempoux, F., Nachtergaeel, H., & Galand, B. (2007). Psychological research on homelessness in Western Europe: a Review from 1970 to 2001. *Journal of Social Issues*, *63*(3), 483–504.
- Rodríguez-Moreno, S., Panadero, S., & Vázquez, J. J. (2020). Risk of mental ill-health among homeless women in Madrid (Spain). *Archives of Women's Mental Health* *2020 23:5*, *23*(5), 657–664. <https://doi.org/10.1007/S00737-020-01036-W>

- Rodríguez-Pellejero, J. M., Núñez, J. L., & Hernández, D. (2017). Perfiles de personalidad y síndromes clínicos en personas sin hogar. *Revista de Psicopatología y Psicología Clínica*, 22(3), 197–206.  
<https://doi.org/10.5944/rppc.vol.22.num.3.2017.18848>
- Rokach, A. (2004). The lonely and homeless: Causes and consequences. *Social Indicators Research*, 69(1), 37–50.  
<https://doi.org/10.1023/B:SOCI.0000032659.93625.91>
- Salavera, C., Puyuelo, M., & Orejudo, S. (2009). Trastornos de personalidad y edad: Estudio con personas sin hogar. *Annals of Psychology*, 25(2), 261–265.
- Schütz, C., Choi, F., Jae Song, M., Wesarg, C., Li, K., & Krausz, M. (2019). Living with dual diagnosis and homelessness: Marginalized within a marginalized group. *Journal of Dual Diagnosis*, 15(2), 88–94.  
<https://doi.org/10.1080/15504263.2019.1579948>
- Singh, A., Daniel, L., Baker, E., & Bentley, R. (2019). Housing disadvantage and poor mental health: A systematic review. *American Journal of Preventive Medicine*, 57(2), 262–272. <https://doi.org/10.1016/J.AMEPRE.2019.03.018>
- Stenius-Ayoade, A., Haaramo, P., Erkkilä, E., Marola, N., Nousiainen, K., Wahlbeck, K., & Eriksson, J. G. (2017). Mental disorders and the use of primary health care services among homeless shelter users in the Helsinki metropolitan area, Finland. *BMC Health Services Research*, 17(1), 1–11. <https://doi.org/10.1186/s12913-017-2372-3>
- Tinland, A., Boyer, L., Greacen, T., Girard, V., Boucekine, M., Fond, G., & Auquier, P. (2018). Victimization and posttraumatic stress disorder in homeless women with mental illness are associated with depression, suicide, and quality of life. *Neuropsychiatric Disease and Treatment*, 14, 2269–2279.  
<https://doi.org/10.2147/NDT.S161377>
- Uribe, J., & Alonso, S. (2009). *Personas en situación de sin hogar en Barcelona: Perfiles, estado de salud y atención sanitaria*.  
[https://storage.googleapis.com/labor\\_hospitalaria/historico/LaborHospitalaria\\_2010-1-2\\_295-296.pdf?\\_ga=2.173252011.963308141.1623399756-77529146.1618206045](https://storage.googleapis.com/labor_hospitalaria/historico/LaborHospitalaria_2010-1-2_295-296.pdf?_ga=2.173252011.963308141.1623399756-77529146.1618206045)
- Zima, B., Goodman, L., & Saxe, L. (1993). Mental health issues affecting homeless women: Implications for intervention. *American Journal of Orthopsychiatry*, 63(3).



