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SUBSTANCE USE, STRESSFUL LIFE EVENTS AND MENTAL HEALTH: A LONGITUDINAL STUDY AMONG HOMELESS WOMEN IN MADRID (SPAIN)

Ana I. Guillén^a, Carolina Marín^a, Sonia Panadero^a, and José Juan Vázquez^b

^a Universidad Complutense of Madrid. Department of Personality, Evaluation and Clinical Psychology. Madrid, Spain.

^b Universidad of Alcalá. Department of Social Psychology. Alcalá de Henares, Spain.

Corresponding author: Ana I. Guillén. Departamento de Personalidad, Evaluación y Psicología Clínica. Facultad de Psicología. Universidad Complutense de Madrid, Campus de Somosaguas s/n, 28040 Madrid (Spain). E-mail: anaisabelguillen@ucm.es

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Abstract

The objectives of this study were: (1) to assess the prevalence of substance use among homeless women; (2) to examine the correlates for drug abuse; (3) to analyze linkages between early stressful life events, drug abuse and mental health. The methodology was a longitudinal study of women homeless in Madrid (Spain), who were followed for a 24 months period. There were 138 participants interviewed at baseline and 73 participants interviewed at follow-up. We ran bivariate and multivariate analysis to examine the correlates for drug abuse. We also performed path analysis to test the interconnections between stressful life events, drug abuse and mental health. The results showed that tobacco, sedatives and alcohol were the most widely used substances in the previous month (70.1%, 48.6% and 36.2%, respectively). Women who abused drugs were more likely to be younger, report adverse experiences during childhood, have engaged in prostitution, and ever-attempted suicide. Path analysis provided support for our hypothesis that early stressful life events increased the vulnerability for subsequent negative outcomes amongst homeless women. These findings have significant implications for the understanding of how orienting prevention and intervention programs for homeless women in Spain.

Keywords: homeless women; substance use; stressful life events; mental health.

1. Introduction

The relationship between the use of alcohol and drugs and homelessness has been the subject of a great deal of interest in the scientific literature in recent decades. Although there are major discrepancies between the data observed in different studies, all Spanish and international studies report a higher prevalence in the use of alcohol and drugs, as well as homeless people starting earlier compared to the general population (Fischer & Breakey, 1991; Lehman & Cordray, 1993; Muñoz, Koegel, Vázquez, Sanz, & Burnam, 2002; Vázquez, Suarez, Berrios, & Panadero, 2019). In specific terms, Fazel, Khosla, Doll and Geddes (2008) reviewed studies carried out in various countries, and reported that the most common mental disorders among homeless people were alcohol dependence (between 8.1% and 58.5%) and dependence on drugs (between 4.5% and 54.2%).

In addition to this significant number of descriptive and epidemiological studies, another focus of interest has been the study of the nature of the relationship between substance use and homelessness. While some authors have suggested that the problematic use of alcohol and drugs is a precursor to homelessness, others have argued that this use is a means of adapting to homelessness. The evidence points in both directions. Many studies have highlighted an important relationship between substance use and becoming homeless (Panadero et al., 2016; Thompson, Wall, Greenstein, Grant, & Hasin, 2013). However, others have found evidence that could support the hypothesis of substance use as a consequence of homelessness (Johnson & Chamberlain, 2008). Meanwhile, evidence on the relationship between substance use and the chronification of homelessness has consistently been reported (Johnson & Chamberlain, 2008; Chamberlain & Johnson, 2011; McQuiston, Gorroochurn, Hsu, & Caton, 2014; Panadero & Muñoz, 2014). In short, the literature suggests that there are important and complex two-way relationships between homelessness and alcohol and drug use.

Although women appear to be a particularly vulnerable subgroup among homeless people, studies of homelessness have had a highly androcentric perspective (Fernandez-Rasines & Gámez-Ramos, 2013), which has rendered women in this situation invisible (Barrow, 2004). There is limited research on homeless people carried out from a gender perspective (Martins, 2010). Nevertheless, the data available point to a significant level of deterioration and vulnerability among these women compared to men in the same situation (Hatch & Dohrenwend, 2007; Hwang, Wilkins, Tjepkema, O'Campo, & Dunn, 2009; Noell, Rohde, Seeley & Ochs, 2001; Stein & Gelber, 1995; Padgett, Smith, Henwood, & Tiderington, 2012; Zugazaga, 2004).

To date, there is a paucity of data about homeless women in Spain and hardly any research with a gender perspective focused specifically on homeless women has been carried out. Existing research shows that women living homeless in shelters or in the street account less than 20% of the population of homeless people in Madrid (Spain) (Muñoz, Vázquez, & Vázquez, 2004; Panadero & Vázquez, 2016). Specifically, 205 women were sleeping in shelters and 84 women were sleeping in the streets in the winter of 2018 (Muñoz, Sánchez y Cabrera, 2018).

As noted in a forthcoming article (Vázquez, Panadero y Pascual, in press), women and men living homeless in Madrid did not differ significantly in terms of their main socio-demographic characteristics. Nevertheless, women spent the night in shelters more often, slept in the street less often, and had become homeless on more occasions compared to men. Women also reported a significant greater use of sedatives

and a lower frequency of alcohol use than men. Finally, women had a more frequent contact with their family and more of them had a partner.

The international literature related to homeless women suggest that their rates of use of alcohol and drugs are very elevated, with a prevalence of disorders related to abuse between 30% and 55% (Tucker, Wenzel, Golinelli, Zhou, & Green, 2011; Upshur, Weinreb, & Bharel, 2014). This prevalence is much higher than the level among women in the general population (Bassuk et al., 1996; Tuten, Jones, & Svikis, 2003) and the level reported among domiciled women at risk of social exclusion (Wenzel et al., 2004). Meanwhile, although the rates of substances use –except for sedatives– are lower for homeless women than for men living homeless (Muñoz, Crespo, & Perez-Santos, 2005; Panadero, Vázquez, & Martín, 2017), these differences in terms of gender appear to have narrowed in recent decades (Smith, North, & Spitznagel, 1993; Upshur, Weinreb, Bharel, Reed, & Frisard, 2015).

Although the studies on the relationship between substances use and homelessness among women are very limited, the results suggest that there is a significant relationship between substances use and a history of victimisation (Logan, Walker, Cole, & Leukefeld, 2002) and between recent physical abuse and having parents with substance abuse issues (Stein, Leslie, & Nyamathi, 2002). Likewise, age and having attempted suicide at some point in the individual's life could play a predictive role in substance use among homeless people (Torchalla, Strehlau, Li, & Krausz, 2011; Vázquez & Panadero, 2019).

The risk-amplification model provides a noteworthy framework to understand substance use by people in a homeless situation (Tyler & Melander, 2015). According to this model, the occurrence of negative experiences during childhood sets in motion a chain of negative life events that are closely related to more time spent on the street. This increases the risk of experiencing various forms of victimisation and subsequently the risk of substance abuse. The early occurrence of early adverse experiences is therefore amplified over time, and this succession of negative events continues to exert an important influence on substance abuse throughout adult life.

The current longitudinal study provides an opportunity to advance the understanding of the situation and needs of homeless women. First, it aims to assess the prevalence of tobacco, alcohol and drug consumption in a sample of homeless women in Madrid (Spain). Second, to examine the correlates for drug abuse. Finally, to analyze linkages between stressful life events (SLE), substance abuse and mental health in homeless women. We hypothesized that stressful life events before the age of 18 amplified the vulnerability for adult negative outcomes.

2. Method

2.1 Participants

The study was carried out with a sample of adult homeless women in Madrid (N=138). They had spent the night before the interview in a shelter or other facility for homeless people, on the street or in other places not initially designed for sleeping (abandoned buildings, underground railway stations, etc.). The main characteristics of the sample are shown in Table 1. The vast majority of the participants were of Spanish origin, and their mean age was 45 years old. While 60% of them were single, 40.6% had been married at some point in their lives, although very few were still married at the time of the interview. Of the interviewees, 32.6% had completed primary education,

18.8% had completed secondary education, 8.7% had completed higher non-university studies and 17.4% had university higher education. The average time spent homeless among the women interviewed was six years.

Table 1. Characteristics of the sample of homeless women at baseline (N=138).

Characteristics	n	%
Age <i>Mean (SD)</i>	138	M= 45.52 years (11.38)
Marital status		
Single	82	59.4
Married / Unmarried couple	9	6.5
Separated / Divorced	40	29.0
Widow	7	5.1
Number of children		
0	54	39.1
1	30	21.7
2	27	19.6
3 or more	27	19.6
Nationality		
Spanish	90	65.2
Foreign	42	30.4
Both	6	4.3
Level of education completed		
No education	13	9.4
Incomplete primary education	18	13.0
Primary education (up to 14 years old)	45	32.6
Secondary education (up to 18 years old)	26	18.8
Non-university higher education	12	8.7
University higher education	24	17.4
Time in a homeless situation (adding up all the episodes) <i>Mean (SD)</i>	138	M= 75.26 months (90.54)

Seventy-three of the women interviewed at baseline were successfully contacted and interviewed 24-months after the initial assessment (retention rate=52%). Reasons for attrition included inability to locate the participant (n=45), refusal (n=10), death (n=6) and other reasons (n=4). No significant differences were found between participants in the follow-up interview and non-participants on the sociodemographic characteristics at baseline, with the exception of age ($t=-2,873$, $p=005$). Specifically, women who were lost to attrition were younger ($M=42.60$, $SD=9.843$) than women who participated in the follow-up interview ($M=48.00$, $SD=12.053$). No significant differences were found between participants in the follow-up interview and non-participants on prevalence of substances consumption, drug abuse, hazardous drinking, number of stressful life events nor mental health scores at baseline.

2.2 Procedure

The homeless women were contacted in the street, in shelters for homeless people, and in other services caring for this group. After the objectives of the research and the processing that the data would receive were explained to the participants, they were asked for their informed consent, and assured that their anonymity would be respected at all times. We conducted interviews at baseline (Time 1) and at 24-months

follow-up (Time 2). The study respected ethical standards for conducting research with human participants.

2.3 Instruments

Each assessment lasted between 45 and 80 minutes. We used a structured interview to gather information on the participants' sociodemographic characteristics and their history of homelessness. We also asked about current and lifetime consumption of tobacco, alcohol and drugs. In addition, we used the following standardized instruments:

The Heaviness of Smoking Index (HSI) (Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991). It has proven to be effective for classifying the dependence of smokers as low (score between 0-2), moderate (score between 3-4) or high (score between 5-6). We used the Spanish version of the instrument (Becoña, 1994).

The Alcohol Use Disorders Identification Test (AUDIT) (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) examines the person's alcohol use, as well as the problems arising from it. We used the Spanish version of the instrument, which presents adequate psychometric properties (Rubio, Bermejo, Cabellero, & Santo Domingo, 1998). Rubio et al. (1998) suggest establishing a score of 6 as a cut-off point for women. Scores between 0 and 5 would indicate the absence of problems related to alcohol use, while scores of 6 or more indicate a hazardous drinking.

The Drug Abuse Screening Test (DAST-10) (Skinner, 1982) is designed to identify people engaging in problematic drug use. Scores of 3 or more indicate probable substance abuse. We applied the Spanish validation of the instrument (Pérez, García, de Vicente, Oliveras, & Lahoz, 2010), which presents adequate psychometric properties.

The General Health Questionnaire (GHQ-28) (Goldberg y Hillier, 1979) is designed to assess mental health in community settings. We used the Spanish validation of the instrument (Goldberg, 1996), which presents adequate psychometric properties.

The List of Stressful Life Events for People in Social Exclusion (Panadero, Martín & Vázquez, 2018) compiles information on the occurrence of 59 stressful life events (29 SLE that could have occurred before age 18 and 30 SLE that could have occurred throughout the interviewee's life).

2.4 Data analysis

We used SPSS 22.0 for all statistical analysis. We ran descriptive statistics to characterize the main sociodemographic and life characteristics of the sample, as well as the prevalence of substances consumption (including alcohol, tobacco, legal or illegal drugs). We also calculated bivariate correlations to examine the associations between the prevalence substances consumption, and to analyze the association between prolonged homelessness and substances consumption.

We conducted a logistic regression analysis to identify correlates of drug abuse at baseline. The criterion variable was "Drug abuse", defined as a score ≥ 3 points in the Drug Abuse Screening Test-DAST (0=Non-drug abuse, 1=Drug abuse). As a step prior to the regression analysis, we performed univariate comparisons between the women with and without drug abuse. We used Pearson's chi-squared test for the nominal variables, and Student's T-test for the quantitative variables. The variables that were significant at $p < .05$ in the univariate analyses were included in the logistic regression.

We performed path analysis using multiple regression to examine hypothesized relationships between four variables: number of SLE before the age of 18; drug abuse at Time 1; number of SLE between Time 1 and Time 2; and mental health at Time 2. We evaluated the statistical significance of the indirect effects by the Goodman test (1982).

3. Results

3.1 Prevalence of substances consumption at baseline (Time 1)

Table 2 shows the prevalence of consumption of the various substances in the previous month. The most widely consumed substance in the previous month was tobacco (70.1%), followed by sedatives (48.6%) and alcohol (36.2%). A 95.7% of the women who had consumed sedatives in the previous month (including tranquilizers, barbiturates, benzodiazepines or anxiolytics), had a medical prescription. Methadone was the fourth most consumed substance in the previous month (13.7%), mostly with a medical prescription. The prevalence of illicit drug use was 7.2% for cocaine, 6.5% for cannabis and 5.1% for heroin. Of the interviewees, 18.8% had used two or more different substances in the previous month. The women who had used tobacco in the previous month were more likely to have used methadone ($\chi^2(1, N=137) = 9.421, p=.002$) and alcohol ($\chi^2(1, N=137) = 12.066, p=.001$). Likewise, the women who had used sedatives in the previous month were more likely to have used methadone ($\chi^2(1, N=138) = 11.217, p=.001$) and alcohol ($\chi^2(1, N=138) = 7.492, p=.003$). No statistically significant associations between the prevalence of use of other substances were found.

Table 2. Use of substances by the participants at baseline (N=138).

	n	%
Prevalence of use in the last month		
Tobacco	96	70.1
Sedatives	67	48.6
Alcohol	50	36.2
Methadone	19	13.7
Cocaine	10	7.2
Cannabis	9	6.5
Heroin	7	5.1
Other substances	1	0.7
Prevalence of illegal substance use at some time in her life		
Cocaine	57	41.3
Cannabis	55	39.9
Heroin	36	26.1
Other substances	22	15.9
Tobacco dependence among smokers		
Low tobacco dependence (HSI score ≤ 2)	42	43.3
Moderate tobacco dependence (HSI score=3-4)	36	37.1
High tobacco dependence (HSI score ≤ 5)	19	19.6
Hazardous drinking (AUDIT score ≥ 6)	24	17.4
Drug abuse (DAST score ≥ 3)	27	19.6

Note: HSI=Heaviness of Smoking Index; AUDIT=Alcohol Use Disorders Identification Test; DAST=Drug Abuse Screening Test

Table 2 shows the results according to the cut-off points of the standardised questionnaires applied to detect tobacco dependence, hazardous drinking and drug abuse. The results for tobacco show that dependence levels were low in 43.3% of women smokers, moderate in 37.1%, and high in 19.6%. As for the use of alcohol and other psychoactive substances, 17.4% of women exceeded the cut-off point for current hazardous drinking, and 19.6% exceeded the cut-off point for current drug abuse. Eight of the 24 women who presented current hazardous drinking also presented current drug abuse. No statistically significant relationship was found between hazardous drinking and other drug abuse ($\chi^2(1, N=138) = 3.499, p=.061$)

3.2 Treatments received for problems related to substances consumption at baseline (Time 1)

For treatments received for problems related to alcohol, only 12.3% of the women interviewed (n=17) referred that they had received some specific treatment during their life. The most common were self-help groups (n=11) and out-patient treatment (n=10), followed by residential treatment (n=5) and hospital treatment (n=4). Six women were undergoing treatment for their alcohol use when the interview took place.

As regards treatments received for the drugs, 24.6% of women (n=34) had received specific treatment at some point in their lives. Out-patient treatment was the most common (n=26), followed by residential treatment (n=19) and self-help groups (n=9). Fifteen of the women were in treatment at the time of the interview, mainly in out-patient treatment.

3.4 Relationship between time living homeless and substances consumption use at baseline (Time 1)

In order to determine whether a more "chronic" situation of homelessness was related to the substances consumption in the previous month, we compared the women who had been living homeless for more than 36 months and the women who had been living homeless for less than 36 months. The women whose homelessness was more prolonged had a higher prevalence of consumption of sedatives (59.7% vs. 37.9% respectively), and tobacco (85.5% vs. 53.8%). These differences were statistically significant ($\chi^2(1, N=128) = 6.082, p=.014$ for sedatives; and $\chi^2(1, N=127) = 14.927, p=.001$ for tobacco). No significant differences were found between the two groups of women for the current use of alcohol and other drugs.

3.5 Correlates of drug abuse at baseline (Time 1)

Table 3 presents the univariate comparison between women who presented drug abuse at time 1 (DAST score ≥ 3) and women without drug abuse (DAST score < 3). Eight of the variables were significantly related to drug abuse in the univariate analysis: a younger age, having children, parental problems with alcohol use during the women's childhood, having suffered from abuse (psychological, physical or sexual) before the age of 18, having engaged in prostitution, and having attempted suicide.

Table 3: Comparison between women who presented drug abuse at baseline, and women who did not present drug abuse (N=138).

	Drug abuse (n=27)		Non-drug abuse (n=111)		Statistical
	%	n	%	n	
Age Mean (SD)	M=40.89 (9.407)	27	M=46.65 (11.569)	110	t= -0.206**
Marital status					
Married	3.7	1	7.2	8	$\chi^2 = 0.437$
Not married	96.3	26	92.8	103	
Has children					
No	22.2	6	43.2	48	$\chi^2 = 4.029^*$
Yes	77.8	21	56.8	63	
Nationality					
Spanish	81.5	22	66.7	74	$\chi^2 = 2.251$
Foreign	18.5	5	33.3	37	
Level of education completed					
< Secondary	63.0	17	53.2	59	$\chi^2 = 0.845$
≥ Secondary	37.0	10	46.8	52	
Adverse experiences before the age of 18					
A parent had problems with alcohol	55.6	15	24.5	27	$\chi^2 = 9.806^{**}$
A parent had problems with drugs	14.8	4	8.2	9	$\chi^2 = 1.111$
Her mother was abused by her partner	44.4	12	32.1	35	$\chi^2 = 1.456$
Suffered from psychological abuse	59.3	16	33.3	36	$\chi^2 = 6.131^{**}$
Suffered from physical abuse	59.3	16	26.9	29	$\chi^2 = 10.208^{***}$
Suffered from sexual abuse	37.0	10	16.7	18	$\chi^2 = 5.452^{**}$
Has engaged in prostitution	40.7	11	13.6	15	$\chi^2 = 10.358^{***}$
Has attempted suicide	70.4	19	43.0	46	$\chi^2 = 6.471^{**}$
Duration of homelessness					
≤ 36 months	46.2	12	52.9	54	$\chi^2 = 0.382$
> 36 months	53.8	14	47.1	48	

* p ≤ .05; ** p ≤ .01; *** p ≤ .001

The logistic regression analysis performed was statistically significant for predicting drug abuse ($\chi^2(8, N=132) = 31.335, p < .001$). The Hosmer-Lemeshow test also supported the global model ($\chi^2(8, N=132) = 10.697, p = .219$). The model accounted for 33.2% of the variance (Nagelkerke's R squared) and classified 79.5% of the cases correctly. Three variables made a specific significant contribution: a younger age, parental problems with alcohol use during the women's childhood, and having engaged in prostitution (see table 4).

Table 4: Binary logistic regression analysis for drug abuse at baseline (N=138).

	B	OR	95% CI.
Age	-0.051*	0.950	[0.901-1.001]
Has children	1.074	2.928	[0.890-9.640]
One of her parents had problems with alcohol (before age 18)	1.283**	3.608	[1.253-10.386]
Suffered from psychological abuse (before 18 years old)	-0.812	0.444	[0.079 -2.494]
Suffered from physical abuse (before 18 years old)	1.309	3.701	[0.748-18.311]
Was sexually abused (before 18 years old)	0.247	1.280	[0.374-4.378]
Has engaged in prostitution	1.364**	3.910	[1.276 -11.985]
Has attempted suicide	0.217	1.242	[0.399-3.863]
Constant	-		
	1.113***	0.328	

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

3.6 Links between stressful life events, drug abuse and mental health

Path analysis results are shown in Figure 1. A higher number of SLE before the age of 18 was significantly associated with a higher substance abuse score at Time 1 ($\beta = .220$, $p < .05$), but it had not had a significant direct effect on mental health at time 2 ($\beta = .179$, $p = .161$). In addition, a higher substance abuse score at Time 1 was significantly associated with a higher number of SLE between Time 1 and Time 2 ($\beta = .283$, $p < .05$). Finally, a higher substance abuse score at Time 1 was significantly associated with a worse mental health at Time 2 ($\beta = .496$; $p < .001$). These variables in Figure 1 explained 35% of the variance in mental health score.

Concerning indirect effect, SLE before the age of 18 had a marginally significant indirect effect on SLE between Time 1 and Time 2 through substance abuse ($z = 1.82$, $p = 0.07$). The indirect effects of substance abuse to mental health as mediated by SLE between Time 1 and Time 2 were statistically significant ($z = 1.70$, $p = 0.08$). Women who presented drug abuse at Time 1 experienced a greater number of SLE during the 24 months follow-up period, which, in turn, was positively associated with a poor mental health at Time 2.

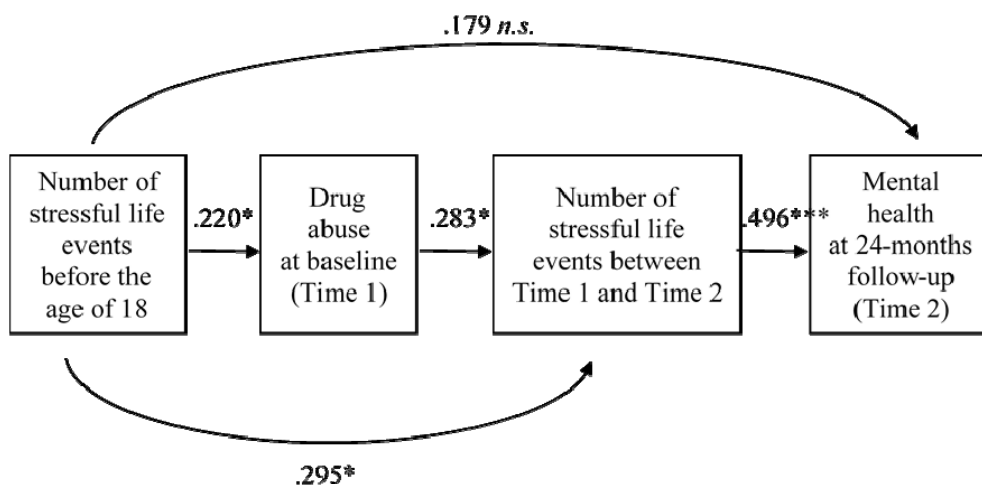


Figure 1. Standardized path coefficients.

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

4. Discussion

This article presents data on the prevalence and characteristics of the consumption of tobacco, alcohol and other drugs in a sample of homeless women in Madrid (Spain). The results show that tobacco, sedatives and alcohol were the substances for which consumption was most widespread among the women interviewed.

As regards tobacco consumption, 70% of the participants had smoked in the previous month, a percentage that is double the percentage for women in the Spanish general population (Ministry of Health, Consumption and Social Welfare, 2017a). The high prevalence of consumption and problems of tobacco dependence are consistent with the figures reported in other international studies of homeless women (e.g., Torchalla et al., 2011). Despite the high levels of tobacco consumption among homeless people and the physical and mental health risks associated with it (Fazel, Geddes, & Kushel, 2014; Fluharty, Taylor, Grabski, & Munafò, 2016; Garner & Ratschen, 2013; Moylan, Jacka, Pasco, & Berk, 2012), it is a problem that has often been ignored (Baggett, Tobey, & Rigotti, 2013).

The percentage of participants consuming sedatives in the previous month was 48.6% and mostly of them had a medical prescription. This figure is five times higher than the figure for women in the Spanish general population (Ministry of Health, Consumption and Social Welfare, 2017a). It is also exceptionally higher than the percentage of 16% found in homeless women in the USA (Upshur, Jenkins, Weinreb, Gelberg, & Orvek, 2017). It is also alarming that the percentage of homeless women using sedatives is twice as high as that reported fourteen years ago Madrid by Muñoz et al. (2005). It is important to bear in mind that the availability of sedatives and the normalisation of their consumption may encourage a diminished perception of their addictive potential and the risks involved in their consumption (Ministry of Health, Consumption and Social Welfare, 2017b). Several recent systematic reviews (Dodds, 2017; McCall et al., 2016) have found a positive relationship between the consumption of sedatives and the risk of suicide. Special consideration should be given to addressing this type of consumption among homeless women for all these reasons.

Alcohol was the third most widely consumed substance among the women participating in the study (36.2%). Our data are consistent with those obtained in other studies, in which between 31-41% of homeless women reported problems of alcohol abuse or dependence (Panadero, Vázquez, & Martín, 2016; Upshur et al., 2015). It is the only substance with a prevalence of consumption which is lower than that of women in the general population (54%). However, the data show that a larger proportion of the homeless women who were interviewed had a pattern of hazardous alcohol consumption: 17.4% obtained scores in the AUDIT that exceeded the cut-off point, in contrast to 2.6% reported for women in the general population (Ministry of Health, Consumption and Social Welfare, 2017a).

Cocaine was the most widely consumed illegal substance among the women interviewed (7.2%), followed by cannabis (6.5%). The prevalence of cocaine consumption is nine times higher than that recorded for women in the Spanish general population (Ministry of Health, Consumption and Social Welfare, 2017a). However, cocaine consumption in our study is considerably lower in comparison with other international studies with homeless women. For instance, in the study by Torchalla, Strehlau, & Krausz (2011), they found 58% of crack cocaine consumption in homeless

women in Canada and 20.2% of cocaine consumption. Riley, Shumway, Knight, Guzman, Cohen, & Weiser (2015) interviewed homeless and unstably housed adult women in the USA. They found that 47% of the women interviewed reported having consumed crack cocaine during the previous 6 months. The risk of consumption was higher among women who had recently experienced sexual violence, who slept in shelters or public places, and who consumed opioid analgesics without medical prescription. The study by Upshur, Jenkins, Weinreb, Gelberg, & Orvek in the USA (2017) found 15.6% of cocaine consumption in homeless women seeking primary care in the USA. It is therefore likely that a different pattern of consumption may exist in homeless women in Madrid with respect to North America, with lower consumption of cocaine and higher consumption of sedatives.

Strikingly, despite the problematic consumption of alcohol, tobacco and drugs among the women interviewed, only a small percentage of the women had accessed specific treatment programs. It would be very interesting to examine the barriers that prevent access to treatments for problems arising from consumption, as this figure is much lower than would be expected. Some studies show that the main barriers to accessing these treatments referred to by homeless women include feeling depressed/not up to going to treatment, access difficulties (specially waiting times and distance), a lack of knowledge about where to find treatment, and perceiving that help is not effective (Upshur, Jenkins, Weinreb, Gelberg, & Orvek, 2018).

The univariate analysis showed that women who presented drug abuse were younger and more likely to have children than the women who did not present drug abuse. They had experienced several adverse experiences and victimization before the age of 18, for instance psychological, physical and sexual abuses. Moreover, these women were more likely to have attempted suicide and have engaged in prostitution during their lifetime. The multivariate analysis showed that the significant predictors of drug abuse were a younger age, parental problems with alcohol consumption during the women's childhood, and prostitution. One of the more significant findings to emerge from this study is that early adverse experiences are connected to a trajectory of negative outcomes in homeless women, consistently with the risk-amplification model (Chen, Tyler, Whitbeck, & Hoyt, 2004) and a life stress framework (Tyler & Schmitz, 2018). Homeless women have been exposed to a high number of distal stressors (e.g., SLE during childhood and adolescence) and these events are linked to later drug abuse and mental health functioning.

5. Conclusions

This study contributes to understand the needs and characteristics of homeless women who consume substances in Madrid. Consumption of tobacco, alcohol, sedatives and illicit drugs is highly prevalent among homeless women in comparison to general population of Spain. Our findings suggest that a high number of early stressful life events may amplify the vulnerability for adult negative outcomes amongst homeless women in our study. Since they are also experiencing a high number of stressful life events while being homeless, a key policy priority should therefore be to plan for effective prevention and intervention programs targeted to this population.

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