

**The effects of traumatic events on mental health among women experiencing
homelessness: a longitudinal study**

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Author Acknowledgements

This research was supported by “Ministerio de Ciencia e Innovación” of Spain
(PID2019-104152GB-I00/AEI /10.13039/501100011033).

Disclosures

The authors report no conflict of interest.

Abstract

In this longitudinal study, we aim to evaluate the prevalence and impact of interpersonal and non-interpersonal traumatic events among women experiencing homelessness in Madrid (Spain) (N=136). The information was collected through a structured interview and standardized instruments at baseline and at a 12-month follow-up. The most prevalent events were physical assaults, intimate partner violence, and severe illnesses or accidents. Path analysis revealed that personal and non-interpersonal traumatic events had direct effects on mental health, but also differential indirect effects. Greater efforts are needed to address the effects of various types of potentially traumatic events and to design effective trauma-informed interventions for women experiencing homelessness.

Key words: homelessness, women, traumatic events, victimization, mental health

Extensive research has shown that that people experiencing homelessness experience a high number of adversities and potentially traumatic events (PTEs), both in childhood and adulthood (e.g., Herbers et al., 2014; Liu et al., 2021; Sundin & Baguley, 2015; Woodhall-Melnik et al., 2018). Edalati et al. (2015) found that 61.5% of the sample of adults experiencing homelessness reported histories of emotional abuse during childhood, 57% reported physical abuse and 45.3% reported sexual abuse. Radcliff et al. (2019) focused on adverse childhood exposure among adults who experienced homelessness in childhood. They found that 43.9% of participants reported physical abuse, 66.4% reported emotional abuse, and 32.7% reported sexual abuse. Some authors have studied homelessness itself as a PTE. The study of Tsai et al. (2020) among veterans with a history of homelessness found that 14.1% of participants reported that homelessness was their worst traumatic event.

In terms of the effects of PTEs, it is well established that they are an important risk factor for mental health problems (Chambers et al. 2014; Dawson-Rose et al., 2019; Lee et al., 2017; Lippert & Lee, 2015). Indeed, people experiencing homelessness have a high prevalence of mental disorders (Castellow et al., 2015; Duke, & Searby, 2019; Fazel et al., 2014; Lippert & Lee, 2015), which is notably higher than the prevalence of mental disorders in the general population (Lebrun-Harris et al., 2013; Sullivan et al., 2000). If we focus specifically on posttraumatic stress disorder (PTSD), the meta-analysis conducted by Ayano et al. (2020) found that the prevalence of PTSD among people experiencing homelessness was 27.4%. This percentage is notably higher when compared to the prevalence in the general population. For example, this is estimated to be 3.6% in the Spanish population (Navarro-Mateu et al. 2020).

Nilsson et al. (2019) have observed that mental health problems among people experiencing homelessness usually emerged prior to homelessness. Other authors (e.g.,

Castellow et al., 2015; Duke & Searby 2019) have highlighted that being homeless increases the likelihood of developing mental health problems. In this sense, Lippert and Lee (2015) noted that people who had recently become homeless were less likely to have psychiatric problems than those who had been homeless for a long time. A systematic review and meta-regression by Gutwinski et al. (2021) confirmed that being homeless and having mental disorders are closely interrelated. Additionally, these authors point to the lack of information on the prevalence of mental disorders in specific sub-populations, including women experiencing homelessness.

Among people experiencing homelessness, women seem a particularly vulnerable sub-group (Arangua et al., 2005; Broll & Huey, 2020; Milaney et al., 2020; Vázquez et al., 2019; Tsai et al., 2015). They are often exposed during their childhood and adulthood to frequent situations of household dysfunction, abuse, neglect, and violence (Mersky et al., 2018; Riley et al., 2014; Song et al., 2019; Young et al., 2017; Vázquez & Panadero, 2019; Whitbeck et al., 2015). In this sense, it has been pointed out that women experiencing homelessness report higher rates of PTEs in different periods of their lives than their male counterparts (de Vries et al., 2018; Liu et al., 2021; Rodríguez-Moreno et al., 2021). It has also been noted that women experiencing homelessness, compared to men, are more likely to be victims of crime while they are homeless, especially sexual, and physical violence (Rivas et al., 2021; Park et al., 2021).

Several categorizations have been proposed to define the types and effects of PTEs. For example, a distinction has been made between acute, chronic, or complex trauma. Another frequent categorization has been that of intentional trauma versus accidental trauma. Attention has also been given to the categorization of interpersonal versus non-interpersonal traumas, which are our focus of interest. Interpersonal traumatic experiences involve direct or vicarious harm, which is deliberately perpetrated

by another person (e.g., sexual/physical/emotional abuse, violence, war, etc.), while non-interpersonal are events that do not involve interpersonal victimization (e.g., accidents, natural disasters, life-threatening illnesses, unexpected loss, etc.) (Kessler et al., 2017; Widera-Wysoczańska, 2016). Systematic reviews and meta-analysis about traumatic experiences and PTSD among people experiencing homelessness (Ayano, 2020; Liu et al., 2021; Sundin, 2015) have shown that most studies in this field are cross-sectional and focused on distal traumatic stressors of an interpersonal nature; moreover, samples are predominantly composed of male participants. The mentioned constraints can obscure the features and evolution of PTEs among women experiencing homelessness.

This work aims to address this gap by longitudinally exploring different types of PTEs among women experiencing homelessness in Madrid (Spain). It is part of a larger, multi-year study examining the needs, situation, and processes of change among women experiencing homelessness (Guillén et al., 2020; Guillén et al., 2021). There are three primary goals for this paper: 1) To investigate the prevalence of interpersonal and non-interpersonal PTEs, both at baseline and at the 12-month follow-up; 2) To examine the relationship between PTEs and mental health, as well as demographics, homelessness, and psychological correlates of PTEs; 3) To test the longitudinal paths between interpersonal and non-interpersonal PTEs and mental health outcomes.

Method

Participants

Participants were adult women (18 years old or older) who belonged to one of the first three operational categories in the "European Typology of Homelessness and Housing Exclusion" (ETHOS): individuals living rough; individuals in emergency accommodation; or individuals in accommodation for the homeless.

As shown in Table 1, the sample was composed of 136 participants, who had a mean age of 45.5 years ($SD=11.37$). They were mainly single (60.3%) and Spanish-born (65.4%). Among the participants, 37 women (27.2%) had underage children at the time of the interview, although none of them lived with them. The average time in a homeless situation was six years ($SD=90.94$ months). Eighty-five of the women interviewed at baseline (62.5%) were successfully contacted and interviewed at the 12-month follow-up interview. The main reasons for attrition were inability to locate them ($N = 32$), refusal ($N = 13$), and death ($N = 4$). There weren't any significant differences in demographic or homelessness characteristics between women who participated in the follow-up interview and women who did not participate, except age ($t(134) = -3.127, p = .002$). Specifically, women who participated in the follow-up interview were significantly older ($M = 47.79, SD = 11.67$) than women who did not ($M = 41.69, SD = 9.82$). No significant differences were found in the number of interpersonal PTEs, the number of non-interpersonal PTEs between women who participated in the follow-up interview and women who did not participate, nor mental health, or problems related to substances at baseline.

Table 1 about here

Measures

We used a structured interview to collect information on sociodemographic variables and homelessness characteristics. The interview covered questions on the following areas: demographics, living conditions, housing status, homelessness history, social support, stressful and traumatic life events, stigmatization, physical and mental

health, substance use, and use of services. Additionally, we used the following standardized instruments:

The General Health Questionnaire (GHQ-28) (Goldberg, 1996) assesses mental health in community settings. It covers four main areas: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. The Likert score is calculated on a 4-point Likert scale (0, 1, 2, 3) and total score ranges from 0 to 84 (higher scores indicate worse mental health). The Spanish version of the instrument has shown adequate psychometric properties (Goldberg, 1996). The Cronbach's alpha for our sample was very good ($\alpha=.94$).

The List of Stressful Life Events for People in Social Exclusion (Panadero et al., 2018) assesses the occurrence of 59 stressful life events (29 events that could have occurred before age 18 and 30 events that could have occurred throughout life). Given the purpose of the study, we focused on data from ten potentially traumatic events included in this list: serious fights and conflicts between parents before age 18, mother's abuse by a partner before age 18, maltreatment before age 18, sexual abuse before age 18, parental abandonment before age 18, sexual assault after age 18, physical assault after age 18, intimate partner violence, death of a partner or a child, and serious illness, injury, or accident.

The Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1993) comprises ten items that examine the person's alcohol use, as well as the problems arising from it. The Spanish version of the instrument offers adequate psychometric properties (Rubio et al., 1998). The Cronbach's alpha for our sample was adequate ($\alpha=.83$).

The Drug Abuse Screening Test (DAST-10) (Skinner, 1982) detects people engaging in problematic drug use (use of prescribed or over-the-counter

medications/drugs and any non-medical use of drugs), not including alcohol or tobacco use. The Spanish version of the instrument offers adequate psychometric properties (Pérez et al., 2010). The Cronbach's alpha for our sample was adequate ($\alpha=.78$).

Procedure

Concerning the recruitment process, we established contacts with administrations and institutions involved in the attention to people experiencing homelessness in Madrid, to explain the study to the stakeholders and seek their collaboration. We contacted women on the streets and in sixteen different services for people experiencing homelessness, mainly shelters. After explaining the study, we asked for their informed consent to conduct the face-to-face interview and to communicate with them via mobile phone, social site networks, or third parties during the follow-up period. Since attrition is one of the main methodological problems in longitudinal studies, we tried to maintain regular contacts with the participants throughout the 12 months of follow-up. To this end, the collaboration of institutions and organizations working with people experiencing homelessness in Madrid was fundamental. It allowed for a successful follow-up of many of the participants, despite mobility and changes in their housing status. Participants were not paid for their participation in the study. After the 12-month follow-up interview, they received a gift card for a well-known store worth €20.

Trained interviewers with previous experience in this field conducted face-to-face interviews at baseline (Time 1) and at a 12-month follow-up (Time 2). The first interview lasted between 45 and 80 minutes while the follow-up interview lasted around 30-60 minutes, as it was focused on changes that had taken place over the 12-month period leading to the follow-up.

The study conforms to APA standards on ethical treatment of participants and the Helsinki declaration for outstanding ethical standards with human participants, and all

procedures were approved by the Complutense University of Madrid Ethics Committee (Ref. 2017/18-004).

Data analysis

We analyzed data using SPSS version 25.0 and Amos version 27.0. We first performed descriptive statistics to characterize the main sociodemographic and living characteristics of the sample, as well as the prevalence of potentially traumatic events at baseline and follow-up.

Second, we examined the correlates of potentially traumatic events. We used Pearson's product-moment correlation coefficient (with numerical variables) and punctual biserial correlation coefficient (with dichotomous variables). We calculated statistical power post hoc using G*Power 3.1 (Faul et al., 2009). With a medium effect size of .30, and an alpha of .05, it was determined that power with a sample of 136 participants would be .95, and power with a sample of 85 participants would be .81

Finally, we estimated a path model using a structural equation to study the links between PTEs and mental health at Time 2. The independent variables were the number of interpersonal PTEs at Time 1 (continuous variable), the number of non-interpersonal PTEs at Time 1 (continuous variable), length of homelessness at Time 1 (continuous variable), mental health score at Time 1 (continuous variable), the number of interpersonal PTEs between Time 1 and Time 2 (continuous variable), and the number of non-interpersonal PTEs between Time 1 and Time 2 (continuous variable). The outcome variable was mental health score at Time 2 (continuous variable). We examined several goodness-of-fit indicators to assess the estimated model: chi square, comparative fit index (CFI), and root mean square error of approximation (RMSEA). The model fit is considered satisfactory if CFI values are greater than or equal to 0.90, and RMSEA values are lower than or equal to 0.080 (McDonald & Ho, 2002).

Results

Prevalence of PTEs and correlations with mental health at baseline (Time 1).

The number of PTEs at baseline ranged between 0 and 9 ($M = 3.54$, $SD = 2.40$), and there was a significant correlation between the number of PTEs and the mental health score ($r = .45$, $p < .001$). Results reveal that 57.7% of participants ($N = 75$) exceeded the cut-off point for a probable case of mental health problem. At the baseline interview, 78.4% of participants reported at least one interpersonal PTE and 71.6% reported at least one non-interpersonal PTE.

Table 2 shows that PTEs had mainly occurred before homelessness. The most common interpersonal PTEs were physical assault in adulthood (57.5%) and intimate partner violence (57.5%), followed by maltreatment in childhood (41.8%). Concerning non-interpersonal PTEs, the most common event was the occurrence of serious illness, injury, or accident (52.2%). It was followed by miscarriage (24.6%), incarceration (24.6%), and death of a partner or a child (22.6%). All the PTEs included in the study, except death of a partner or a child, were significantly correlated with the mental health score at baseline, although these correlations were quite moderate: serious illness, injury, or accident ($r = .37$); sexual abuse in childhood ($r = .31$); parental abandonment in childhood ($r = .27$); maltreatment in childhood ($r = .26$); sexual assault in adulthood ($r = .25$); intimate partner violence ($r = .23$); physical assault in adulthood ($r = .22$); miscarriage ($r = .20$); and incarceration ($r = .20$).

Table 2 about here

Prevalence of PTEs and mental health at 12-month follow-up (Time 2)

The mean number of PTEs between the baseline interview and the 12-month follow-up interview ranged between 0 and 5 ($M = 1.06$, $DT = 1.01$). The number of PTEs reported at the follow-up was significantly related to the mental health score ($r = .60$, $p < .001$). Results indicate that 50% of participants ($N = 42$) exceeded the cut-off point for a probable case of mental health problem at Time 2. At the follow-up, 33.3% of participants reported at least one interpersonal PTE and 60.2% reported at least one non-interpersonal PTE having taken place in the 12-month period.

As shown in Table 3, the most common non-interpersonal PTE was serious illness, injury, or accident (56.3%), while the most common interpersonal PTE in the 12-month period leading to the follow-up was physical assault (25.0%). The mental health score at the follow-up showed significantly but moderate correlations with the occurrence of physical assault ($r = .53$); intimate partner violence ($r = .42$); death of a partner or a child ($r = .39$); and serious illness, injury, or accident ($r = .31$) in the 12-month period leading to the follow-up.

Table 3 about here

Variables related to the number of interpersonal and non-interpersonal PTEs at baseline (Time 1)

The total number of PTEs at baseline was significantly related to being Spanish ($r = -.20$, $p < .05$), becoming homeless for the first time at a younger age ($r = -.36$, $p < .001$), longer time experiencing homelessness ($r = .35$, $p < .001$), more problems related to hazardous drinking ($r = .21$, $p < .05$), more problems related to drug abuse ($r = .25$, $p < .01$), and having attempted suicide at some point in her life ($r = .50$, $p < .001$). Age was not significantly related to the total number of PTEs ($r = .01$, *n.s.*).

According to the type of PTE, the number of interpersonal PTEs at baseline was significantly related to the six variables mentioned above: being Spanish ($r = -.23$, $p < .01$), becoming homeless for the first time at a younger age ($r = -.44$, $p < .001$), longer time experiencing homelessness ($r = .33$, $p < .001$), more problems related to hazardous drinking ($r = .21$, $p < .01$), more problems related to drug abuse ($r = .35$, $p < .001$), and having attempted suicide at some point in her life ($r = .46$, $p < .001$). On the other hand, a higher number of non-interpersonal PTEs at baseline was significantly related to becoming homeless for the first time at a younger age ($r = -.26$, $p < .01$), longer time experiencing homelessness ($r = .36$, $p < .01$), more problems related to drug abuse ($r = .21$, $p < .05$), and having attempted suicide at some point in her life ($r = .39$, $p < .001$).

Variables related to the number of interpersonal and non-interpersonal PTEs

between Time 1 and Time 2

The total number of PTEs occurred throughout the 12-month period leading to follow-up was significantly associated with more problems related to drug abuse ($r = .24$, $p < .05$) and having attempted suicide between Time 1 and Time 2 ($r = .43$, $p < .001$).

Turning now to the correlates according to the type of PTE, a higher number of interpersonal PTEs occurred throughout the 12-month period was significantly related to younger age ($r = -.32$, $p < .01$), becoming homeless for the first time at a younger age ($r = -.37$, $p < .01$), more problems related to drug abuse ($r = .38$, $p < .01$), and having attempted suicide in the 12-month period leading to the follow-up ($r = .45$, $p < .001$). Finally, a higher number of non-interpersonal PTEs between Time 1 and Time 2 was only significantly related to having attempted suicide in the 12-month period leading to the follow-up ($r = .30$, $p < .001$).

Paths between PTEs and mental health

Figure 1 provides a visual depiction of the path model. Regarding the model fit, the associated chi-square value ($\chi^2 = 9.771$, $p = .202$) was not statistically significant, indicating that the model was a good fit for the sample data. The CFI indicated an excellent fit (.98) and the RMSEA was adequate (.054). Variables in the model explained 55% of the variance in mental health score at Time 2.

Figure 1 about here

Firstly, it can be seen in Figure 1 that the number of interpersonal and non-interpersonal PTEs at Time 1 were significantly correlated ($r = .49$, $p < .001$). Moreover, the number of interpersonal PTEs at Time 1 was significantly associated with length of homelessness ($\beta = .19$, $p = .047$), mental health at Time 1 ($\beta = .23$, $p = .011$), and the number of interpersonal PTEs between Time 1 and Time 2 ($\beta = .31$, $p = < .001$). Similarly, the number of non-interpersonal PTEs at Time 1 was significantly associated with length of homelessness ($\beta = .27$, $p = .004$), mental health at time 1 ($\beta = .31$, $p < .001$), and the number of non-interpersonal PTEs between time 1 and time 2 ($\beta = .25$, $p = .032$). Nevertheless, the number of interpersonal PTEs at Time 1 was not significantly linked to the number of non-interpersonal PTEs at Time 2 ($\beta = .07$, $p = .937$), and vice versa ($\beta = .01$, $p = .531$).

Secondly, worse mental health at Time 2 was significantly associated with mental health at baseline ($\beta = .31$, $p < .001$), experiencing a longer length of homelessness ($\beta = .26$, $p < .001$), experiencing a greater number of interpersonal PTEs between Time 1 and Time 2 ($\beta = .41$, $p < .001$), and experiencing a greater number of non-interpersonal PTEs between Time 1 and Time 2 ($\beta = .21$, $p = .012$).

Thirdly, in terms of the indirect effects, the number of interpersonal PTEs at Time 1 was significantly associated with worse mental health at Time 2, mediated through the number of interpersonal PTEs between Time 1 and 2 ($z = 2.32, p = .020$). Meanwhile, non-interpersonal PTEs at Time 1 were indirectly associated with worse mental health at Time 2, in this case mediated via longer length of homelessness ($z = 2.17, p = .030$). Finally, both the number of interpersonal PTEs at Time 1 ($z = 2.16, p = .03$) and the number of non-interpersonal PTEs at Time 1 ($z = 2.60, p = .009$) were indirectly associated with worse mental health at Time 2, via worse mental health at Time 1.

Discussion

We found that women experiencing homelessness in Madrid experience a high prevalence of PTEs, both at baseline and at follow-up. These include events of interpersonal violence, but also events of a non-interpersonal nature. At baseline, more than half the women reported having experienced adult physical assault, intimate partner violence, or severe illnesses, injuries, or accidents. Our results are consistent with research suggesting that people experiencing homelessness have a large amount of trauma exposure (e.g., Dawson-Rose et al., 2019; Sundin & Baguley, 2015; Taylor et al., 2008; Wong et al., 2016). Nevertheless, rates of childhood PTEs appear lower than in other studies among women experiencing homelessness. For example, Song et al. (2019) found that 50.4% of women experiencing homelessness in Los Angeles reported being physically abused during childhood and 43.3% reported being sexually abused. Rates in our study in Madrid were approximately 10% lower. It is likely that societal and cross-cultural aspects of interpersonal violence may help us understand these differences between the two studies.

The percentage of participants who were at risk of having a mental health problem at baseline was nearly three times higher than that reported (21.9%) among women in

the general Spanish population (National Statistics Institute, 2017). In consonance with previous studies (Liu, 2021; Song et al., 2019; Sundin et al., 2015; Young et al., 2017), exposure to PTEs was associated with worse mental health in our study. In terms of the strength of the relationship between PTEs and mental health, we found small to moderate effect sizes. At baseline, we can point out the association between mental health and the occurrence of serious diseases or accidents throughout life, as well as the occurrence of childhood sexual abuse. Regarding the 12-month follow-up, we may underline the relationship between mental health and physical assault. The longitudinal character of our study showed that one out of four women had suffered from physical assault within a relatively short time frame of 12 months. This rate is consistent with the review of literature by Ellsworth (2019), which has examined the occurrence of street-crime victimization occurring within people experiencing homelessness. However, in contrast to other studies (Chambers et al., 2013; Tyler & Wright, 2019), the occurrence of sexual assault throughout the 12-month period leading to the follow-up was not significantly related to mental health. This discrepancy might be related to a reduced statistical power derived from the modest sample size at follow-up.

In reviewing the literature, we have found no data on the comparison between interpersonal and non-interpersonal PTEs among people experiencing homelessness. Our study suggests that, overall, interpersonal PTEs among women experiencing homelessness seem more prevalent and are related to poorer mental health; but it also reveals that the occurrence and impact of non-interpersonal PTEs over time (especially events that are life-threatening or involve the loss of loved ones) should not be disregarded. Moreover, it is interesting to note that interpersonal and non-interpersonal PTEs appear to have some common associations, including significant correlations with a longer experience of homelessness and attempted suicide. However, they also have

some specific associations. For instance, a lower number of interpersonal PTEs appears specifically related to being non-Spanish. This result may be connected with the healthy immigrant effect or paradox, which suggests that foreign-born individuals have a health advantage when compared to native-born persons of the same socio-economic status (Moullan & Jusot, 2014). Millet's (2016) systematic review suggests that the immigrant effect found in the health literature may extend to physical abuse, but the results are not conclusive.

Path analysis revealed that interpersonal and non-interpersonal PTEs at baseline were directly linked to interpersonal and non-interpersonal PTEs at follow-up, respectively. It is well established that cumulative interpersonal victimization predicts increased risk for future re-victimization among people experiencing homelessness (e.g., Edalati et al., 2016; Wright et al., 2021; Young et al., 2018). But, to our knowledge, this is the first study to confirm that exposure to non-interpersonal PTEs also increases the risk of future occurrence of non-interpersonal PTEs among this population. These findings may have useful implications. For example, non-interpersonal PTEs might be expected to be less salient than interpersonal PTEs, causing untreated trauma among these women. Thus, it would be valuable to take a person-centered approach to a history of trauma and pay special attention to the assessment of less obvious PTEs in order to better characterize subtypes of traumatization and personalize interventions. In this sense, it would be very enriching to explore qualitatively the narratives of different types of traumatic events.

Other interesting findings are the different pathways of mediation between each type of PTE and mental health outcomes. For interpersonal PTEs at baseline, their indirect effects on mental health were mediated by an increase in the number of interpersonal PTEs at follow-up. This is consistent with the results obtained by Tyler

and Schmitz among homeless youth (2020). In contrast, for interpersonal PTEs at baseline, the pathway was different and their indirect effects on mental health were mediated by a longer length of homelessness. It is reasonable to think that potential trauma caused by severe accidents or illnesses may increase the risk of negative outcomes (e.g., bodily harm, worse physical health, etc.) and, subsequently, longer duration of homelessness, which in turn predicts poorer mental health. In this sense, it has been found that people experiencing homelessness with disabilities showed more chronic homelessness, greater difficulty accessing employment, and greater vulnerability to accidents and victimization (Panadero & Pérez-Lozao, 2014).

Several study limitations should be considered when interpreting these findings. Firstly, the sample size ($N = 136$) is one of the main limitations of the work. Nevertheless, it was similar to other published reports about women experiencing homelessness (e.g., Salem et al., 2020; Whitbeck, 2015; Williams & Hall, 2009) and covers almost half of the whole estimated population of women experiencing homelessness in Madrid (Muñoz et al., 2018). Secondly, the attrition bias is an important methodological problem in longitudinal studies. In fact, the women who participated in the 12-month follow-up were significantly older than those who did not. Thirdly, Type I error could be a weakness given the substantial number of correlation analyses. Finally, general self-reported measures were used to assess global mental health and PTEs. In future studies, it would be essential to use specific trauma instruments that would allow us to assess a stronger range of traumatic events as well as traumatic symptomatology according to diagnostic classifications.

Despite these limitations, the present study contributes to the existing literature in at least two major points: its longitudinal design and its focus on women experiencing homelessness. Although there may be similarities in the traumatic events

lived by men and women before and after experiencing homelessness, women can face certain experiences to a greater extent than their male counterparts (e.g., gender-based violence, physical assaults, unsafety in the streets, suicidal attempts, etc.).

Conclusion

Participants reported a high prevalence of interpersonal violence events (e.g., physical aggression, intimate partner violence) as well as non-interpersonal events (e.g., serious illness or accidents). Path analysis revealed that personal and non-interpersonal traumatic events had direct effects on mental health, but also indirect effects through separate pathways. The findings will be of interest in adopting a trauma-informed approach for women experiencing homelessness. Recognizing their unique needs is an important issue for future research and service delivery.

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Table 1*Demographic characteristics of the sample at baseline (N=136).*

Characteristics	n	%
Age <i>Mean (SD)</i>	136	<i>M = 45.50 years (11.37)</i>
Marital status		
Single	82	60.3
Married / Unmarried couple	8	5.9
Separated / Divorced	39	28.7
Widow	7	5.1
Number of children		
0	53	39.0
1	30	22.1
2	26	19.1
3 or more	27	19.9
Having underage children	37	27.2
Living with underage children	0	0
Nationality		
Spanish	89	65.4
Foreign	41	30.1
Both	6	4.4
Level of education completed		
No education	12	8.8
Incomplete primary education	17	12.5
Primary education (up to 14 years old)	45	33.1
Secondary education (up to 18 years old)	26	19.1
Non-university higher education	12	8.8
University higher education	24	17.6

Table 2

Prevalence of potentially traumatic events and correlation with mental health at baseline (N = 136).

	Participants reporting the event		Correlation with mental health at baseline (Time 1)	The event occurred before becoming homeless
	%	<i>n</i>	<i>r_{pb}</i>	<i>n</i>
<i>Interpersonal PTEs at Time 1</i>				
Maltreatment in childhood	41.8	56	.26**	46
Sexual abuse in childhood	30.6	41	.31***	34
Sexual assault in adulthood	34.1	45	.25**	31
Physical assault in adulthood	57.5	77	.22*	43
Intimate partner violence	57.5	77	.23*	56
<i>Non-interpersonal PTEs at Time 1</i>				
Parental abandonment in childhood	13.2	18	.27*	14
Death of a partner or a child	22.6	30	.08	24
Serious illness, injury, or accident	52.2	70	.37***	46
Miscarriage	24.6	33	.20*	24
Incarceration	24.6	33	.20*	19

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 3

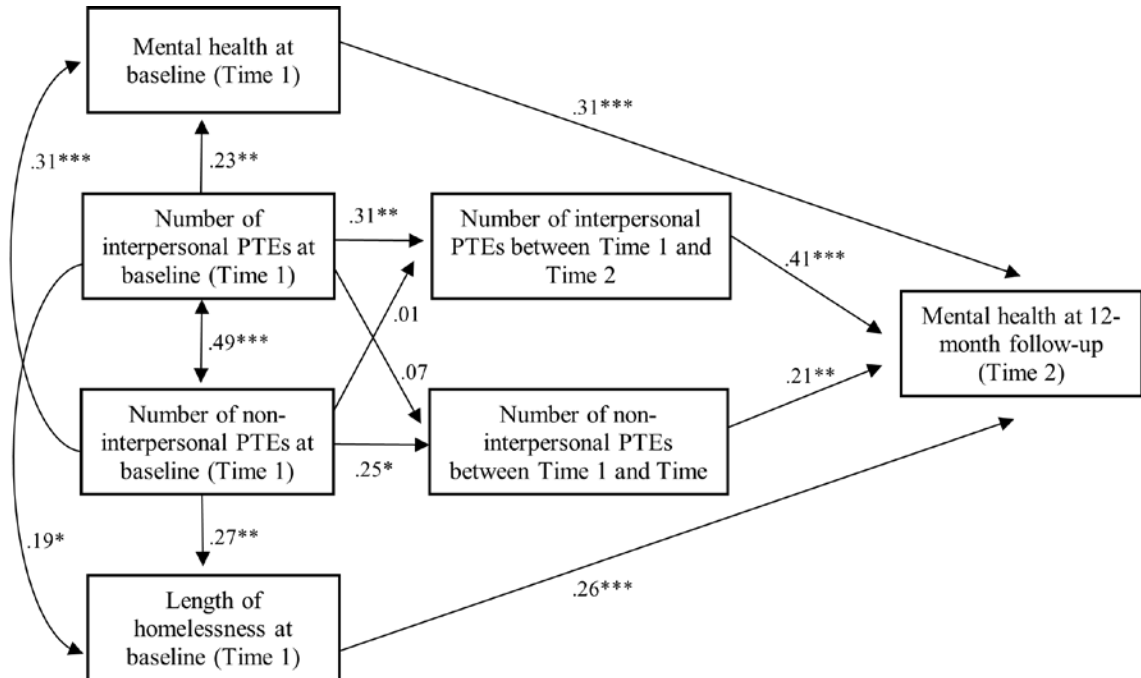
Prevalence of potentially traumatic events between Time 1 and Time 2 and correlation with mental health at Time 2 (N = 85).

	Participants reporting the event		Correlation with mental health at 12-month follow-up (Time 2)
	%	n	r_{pb}
<i>Interpersonal PTEs between Time 1 and Time 2</i>			
Intimate partner violence	13.6	11	.42***
Sexual assault	9.8	8	.15
Physical assault	25.0	21	.53***
<i>Non-interpersonal PTEs between Time 1 and Time 2</i>			
Death of a partner or a child	5.0	4	.39***
Serious illness, injury, or accident	56.3	49	.31**
Miscarriage	1	1.3	.18
Incarceration	0	0	-

* $p < .05$ ** $p < .01$ *** $p < .001$

Figure 1

Paths between potentially traumatic events (PTEs) and mental health outcomes.



* $p < .05$ ** $p < .01$ *** $p < .001$

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