The intersection of housing and mental well-being: Examining the needs of formerly homeless young adults transitioning to stable housing

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ABSTRACT

We examine the challenges formerly homeless young adults (FHYAs) face after they transition out of homelessness. Considering the adversities FHYAs face, it is unclear how transitioning to stable housing may affect their mental well-being or what types of stressors they may experience once housed. This study investigates the social environment young adults encounter in their transition to stable housing and examines trauma and social coping predictors of mental health symptoms in a sample of FHYAs to generate new knowledge for better intervening to meet their needs. Data were obtained from REALYST, a national research collaborative comprised of interdisciplinary researchers investigating young adults' (ages 18–26) experiences with homelessness. Cross-sectional data for 1426 young adults experiencing homelessness were collected from 2016 to 2017 across seven cities in the United States (i.e., Los Angeles, Phoenix, Denver, Houston, San Jose, St. Louis, and New York City). The analytical sub-sample for this study consisted of 173 FHYAs who were housed in their own apartment (via voucher from Housing and Urban Development or another source) or in transitional living programs during their participation in the study. Ordinary Least Squares regression was used to examine the influence of trauma and social coping strategies on indicators of mental well-being. Findings indicated that higher adversity scores and higher mental health help-seeking intentions were positively associated with higher levels of stress, psychological distress, and depression severity. Higher level of social coping was associated with lower levels of depression severity. Logistic regression results showed that young adults with higher adversity scores had higher odds of reporting clinical levels of post-traumatic symptoms. The study implications suggest that FHYAs who transition to stable housing continue to need support navigating and coping with stressful life events; and interventions that help FHYAs develop strong networks of social supports are needed to promote positive mental well-being.

Introduction

Research is limited on the challenges formerly homeless young adults (FHYAs) face after they secure housing (Desjarlais-de Klerk, 2016; Gadermann et al., 2020; Kidd et al., 2019; Kozloff et al., 2016; van der Laan et al., 2020). The existing evidence indicates that FHYAs are a

particularly vulnerable population based on their high rates of early childhood traumas and their experiences of living on the streets or being precariously housed (Bender, Begun, Durbahn, Ferguson, & Schau, 2018; Crosby, Hsu, Jones, & Rice, 2018; Morton et al., 2018; Perlman, Willard, Herbers, Cutuli, & EyrichGarg, 2014; Rew, Powell, & Thompson, 2016). From the literature, the experience of homelessness is associated with higher victimization rates (Bender, Brown, Thompson, Ferguson, & Langenderfer, 2015; Rattelade, Farrell, Aubry, & Klodawsky, 2014), elevated rates of behavioral health problems (Hodgson, Shelton, & Bree, 2014; Pedersen, Tucker, Klein, & Parast, 2018), and increased engagement in risky behaviors such as substance use (Ferguson, Bender, & Thompson, 2015). Given these vulnerabilities, it remains unclear how transitioning to a stable housing situation affects FHYAs' mental well-being, or the type of stressors they may experience (Desjarlais-de Klerk, 2016; van der Laan et al., 2020).

The predictors of stress and mental well-being are extensive in the literature pertaining to the lived experiences of formerly homeless adults, yet research gaps exist about FHYAs' experiences after securing stable housing. In a qualitative study of young adults in supportive housing (Henwood et al., 2018), thematic analyses revealed promising outcomes related to positive identity construction, improved social relations, and improved mental well-being. However, young adults also had contradictory experiences pertaining to their struggles with mental health and social isolation. These findings are similar to the adult literature which shows that compared to the general population, formerly homeless adults encounter disproportionately greater stressors and mental health needs once housed despite their improved housing status (Padgett, Smith, Henwood, & Tiderington, 2012). In a longitudinal study of young adults exiting homelessness, participants made modest gains in education, employment and connecting to behavioral health supports. But the majority also reported facing adversities (e.g., post-traumatic stress, social isolation, substance use relapse, hospitalization) and mental health struggles (Kidd et al., 2019).

Evidence suggests that structural disadvantages such as financial instability, food insecurity, and social isolation affect young adults more so than lack of access to vital services like mental health (Martin & Howe, 2016). Specifically, youth and young adults in stable housing ranked transportation, medical and dental care, educational services, job training, and access to free meals higher than their need for mental health or substance use services (Martin & Howe, 2016). Environmental factors also appear to affect the trajectory of housing stability among young adults; in Kozloff et al. (2016), the mean percentage of days over the course of 24 months young adults were stably housed fell from 73% to 64% compared to adults which was relatively stable (78%–76%). Over the course of their transition to independent living, FHYAs reported sources of stress about maintaining employment, personal relationships, and housing stability (Kidd et al., 2016, 2019; Kozloff et al., 2016). Similarly, these socio-environmental stressors were commonly described challenges adults faced in their transition out of homelessness (Kozloff et al., 2016; Poremski et al., 2016; Stergiopoulos et al., 2014).

The transition to stable housing for FHYAs is further complicated by their mental health needs. The literature on homelessness posits that adults' profound histories of early childhood trauma and victimization, mental illness, and substance use are known explanatory reasons affecting mental health recovery well after transitioning into stable housing (Zhang et al., 2018). Although not specifically focusing on young adults, formerly homeless adults in stable housing reported similar mental health issues as adults experiencing homelessness (Desjarlais-de Klerk, 2016). Similarly, FHYAs report struggling with mental health issues (Kidd et al., 2019; Kozloff et al., 2016). In a 24-month randomized study, Kozloff et al. (2016) demonstrated a similar trend in the mental well-being of young adults who were either randomized to receive "Housing First" or treatment as usual. Young adults who received "Housing First" reported minimal improvements in their perceived psychiatric symptomatology, mental health status, and overall quality of life compared to the control group (Kozloff et al., 2016). In

Kidd et al. (2019), one-quarter of young adults who transitioned out of homelessness experienced subsequent mental health crises that resulted in a hospitalization or substance use relapse. This evidence calls attention to recognizing young adults' behavioral health histories and responding to their ongoing behavioral health needs in their transition to stable housing and long-term well-being (Pedersen et al., 2018).

In the current literature, it is unclear whether housing, despite its link to health, leads to clinically meaningful improvements in FHYAs' levels of stress or their mental well-being (Desjarlais-de Klerk, 2016). However, research conducted with adults who access independent housing suggests consistent improvements in their mental health, physical health, and other outcomes (Gaetz, 2014). These findings are based on empirical studies of a model called "Housing First" (Aubry et al., 2019; Kozloff et al., 2016; Poremski et al., 2016; Stergiopoulos et al., 2014). The concept of Housing First is defined as a human right to housing that is not conditional on a person's readiness or compliance with program requirements, but rather a necessity for recovery (Kirst, Zerger, Harris, Plenert, & Stergiopoulos, 2014). Housing First is an evidence-based model (Holtschneider, 2016; Poremski et al., 2016; Watson, Shuman, Kowalsky, Golembiewski, & Brown, 2017), yet its efficacy as a model for young adults remains inadequate (Gaetz, 2014). Despite this, Gaetz (2014) explains that the core principles of Housing First (e.g., no preconditions for housing, client-centered, strengths-based, recovery-oriented, self-determination, client-driven, and social integration) are appropriate for young adults but a developmental orientation and healthy development approach are important to support young adults in their transition to adulthood, especially in the context of housing stability. In addition, a distinguishing feature of the Housing First for young adults framework is the types of supports young adults need, which are as follows: 1) housing support for finding, maintaining, or paying for housing; 2) clinical services for physical and mental health, and well-being; 3) educational or employment supports for independent living; 4) quality of life supports for learning life skills and achieving self-sufficiency; and 5) relational supports for meaningful engagement in the community (Gaetz, 2014). Underscoring the types of supports FHYAs may need in their transition to stable housing is the fact that they may not necessarily have adequate social supports or access to social connections. In fact, Gaetz (2014) insists interventions that provide supports that young adults need can "foster a safe and nurturing transition into the responsibilities of adulthood" (p. 13). Therefore, according to Gaetz (2014), the Housing First framework or any intervention that focuses on young adults' social environments and their adaptative functioning skills (e.g., coping skills, life skills) may facilitate improvements in quality of life, mental well-being, and housing stability (Gaetz, 2014). Based on the empirical evidence surrounding the experiences of adults exiting homelessness and the supports outlined by Gaetz (2014) for a "Housing First" model for young adults, this study examines social coping, socio-environmental factors and the mental well-being of FHYAs who transition to stable housing.

Theoretical framework

For this study, the social ecological framework and empirical precedents on adverse childhood experiences (ACEs) were used to select appropriate predictors hypothesized to be associated with mental well-being in FHYAs.

Social ecology theory

The social ecological theory helps conceptualize the effect the environment has on adaptive functioning and an individual's well-being (Bronfenbrenner, 1977; Kloos & Shah, 2009; Moos, 2002). In the context of housing, young adults in independent living situations need to adjust to new circumstances (e.g., financial responsibilities, barriers to transportation, new neighborhood) which affects their mental-wellbeing (Kloos & Shah, 2009). One aspect of this model posits that social

environmental factors affect individuals' adaptation, adjustment, and coping (Folkman & Lazarus, 1980; Kloos & Shah, 2009; Moos, 2002; Unger et al., 1998). Moreover, social ecology considers a broader perspective of the environment to encompass mechanisms that constraint and foster adaptive or maladaptive coping strategies which affect health. For young adults exiting homelessness, socio-environmental mechanisms that promote adjustment to a new environment or facilitate coping are positive social relations (Kloos & Shah, 2009) and close interpersonal relationships (Moos, 2002). In contrast, socio-environmental factors like neighborhood disorder (e.g., crime activity) or victimization prompt maladaptive coping strategies among young adults who have developed a "survivalist approach" when dealing with distress (Bender et al., 2018). For this study, the social-ecological framework helps examine the broader context of housing stability, and assess the relationship between coping strategies and mental well-being.

Adverse childhood experiences

In this study, adverse childhood experiences (ACEs) were used to explain the effects of traumatic life experiences on health outcomes (Mersky, Topitzes, & Reynolds, 2013). Several studies suggest that a strong relationship exists between ACEs and health and well-being, including mental health problems and substance use (Anda, Butchart, Felitti, & Brown, 2010; Felitti et al., 1998). Moreover, there is evidence that there is a dose dependent response to ACEs, in which additional exposure to abuse (i.e., psychological, physical, sexual), and family dysfunction (i.e., behavioral health problems including mental illness or substance use, violence) increases the impact on a person's likelihood of experiencing negative health outcomes, and short- and long-term social problems such as poverty, unemployment, and homelessness (Felitti et al., 1998; Oral et al., 2016; Stein et al., 2018).

Informed by the social ecological theory and the role of ACEs on well-being, we aim to contribute to the research by examining the influence of trauma and social coping strategies on mental well-being in a sample of young adults in transitional living programs or independent housing to generate new knowledge for better intervening to meet their needs.

Research questions

This study aims to investigate the association of trauma and social coping strategies on mental well-being in a sample of 173 FHYAs. The proposed research questions are: 1) what are the types and frequencies of stressors reported by FHYAs, and 2) are trauma and social coping strategies associated with FHYAs mental well-being (i.e., stress on the streets, perceived stress, psychological distress, depression, and post-traumatic stress disorder)?

Methods

Design and sampling

Cross-sectional data from the Homeless Youth Risk and Resilience Study conducted by the REALYST team was used for this study. REAL-YST is a national research collaborative comprised of interdisciplinary researchers investigating young adults' (ages 18–26) experiences with homelessness. This study included participants from seven cities: Denver, Houston, Los Angeles, New York City, Phoenix, San Jose, and St. Louis. Site selection in each city was based on collaborations between lead research investigators at universities and host non-profit organizations. These organizations were community-based and provided services to young adults either at risk of or experiencing homelessness including shelter, transitional housing, street outreach, and drop-in services. Each investigator secured human subjects' approval from their respective university, and independently funded their site's data collection efforts which included providing participant incentives and funding for research assistants.

Standardized study protocols for recruitment and screening, and assessment tools were used at all the study sites. The principal investigators along with trained research assistants used purposive sampling to recruit participants at the host agencies. That is, researchers intentionally identified host agencies in each city that provided a diverse set of services (i.e., drop-in services, short-term/emergency shelter, and long-term transitional housing) to young adults experiencing homelessness so as to include in the sample an array of demographics and characteristics of this population. All English-speaking young adults accessing services during the data-gathering period were invited to participate in the screening process, which was used to determine their eligibility for this study. Inclusion criteria for this study was age (18 years or older), and housing status (i.e., currently homeless or in unstable housing spending prior night on the streets, location not meant for human habitation, shelter, apartment through housing voucher, transitional living program, or staying with others temporarily where they could not stay for more than 30 days). Following this determination, eligible participants were invited to learn about the study and asked to provide verbal or written consent to participate in the study. Participants who consented completed a self-administered survey via tablets.

For this study, housing status was used to determine the analytical sample which consisted of 173 FHYAs who were housed in their own apartments via voucher (from Housing and Urban Development or another source) or in transitional living programs during their participation in the study. Human subjects' approval for this current study was obtained from the lead author's university.

Data collection and measures

Data were collected from 2016 to 2017 across seven cities via self-administered electronic surveys using tablets. Surveys took roughly 45 min to complete, and participants were given a $20-$25 gift card (depending on city) to a local vendor.

Demographic variables

Participants' self-reported data were collapsed into categories for analytic purposes. Data collected were age (range 18–26), race/ethnicity (0 = white; 1 = non-white), sexual orientation (0 = heterosexual; 1 = lesbian, gay, bisexual, queer/questioning [LGBQ]), educational level (0 = no high school diploma; 1 = high school or General Education Development [GED] or higher), and gender identity (0 = cisgender male; 1 = cisgender female, 2 = gender minority). Gender minority included participants who identified as transgender male or female, genderqueer, or other gender identity.

Independent variables

Adverse childhood experiences (ACEs; range 0–10; Felitti et al., 1998) were self-reported by participants. Table 1 presents the study measures and psychometric properties used to examine the social coping strategies participants used. The General Help-Seeking Questionnaire measured mental-health seeking intentions (Wilson & Deane, 2005), which assessed how likely a participant would be to seek help for mental health problems from eight different sources (i.e., intimate partner, friend, parent, other relative, professional, phone helpline, doctor, or religious leader) with responses ranging from 1 (extremely unlikely) to 4 (extremely likely). These resources were summed and scored ranging from 8 to 32 points with higher scores indicating greater intentions to seek help by participants.

Social coping was measured by Kidd et al.'s (2007) social coping domain of the Coping Scale; specifically one-item, which measured how likely participants were to "go to someone you trust for support to deal with problems." Social coping responses ranged from 1 (never) to 4 (often) with higher scores indicating greater frequency of dealing with problems by going to someone for support.

Table 1
Study measures and psychometric properties.

Measure	Example question	Description[a]
Adverse Childhood experiences (ACEs)	Did a parent … often swear at you, insult you, …or act in a way that made you afraid that you might be physically hurt?	10 items; (0 = No, 1 = Yes); Summed with range 0–10; higher = more traumatic experiences; Cronbach's α = .83
Mental health help-seeking intentions (Wilson & Deane, 2005)	If you were having a problem with your mental health, how likely would you be to seek help from … Intimate partner (e.g. girlfriend, boyfriend husband, wife)?	8 items; 4-pt. Likert scale (1 = Extremely unlikely, 2 = Unlikely, 3 = Likely, or 4 = Extremely likely); Range 8–32; higher = more likely to seek help; Cronbach's α = .88
Social coping (Kidd & Carroll, 2007)	Please rate how often you use each of the following ways to deal with problems: Go to someone I trust for support.	1 item; 4-pt. Likert Scale (0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often); Range 0–4; higher = greater frequency of dealing with problems
Stress on the Streets Scale (Rew et al., 2016)	How much stress did you feel about the following in the last month? Finding enough food to eat?	15 items; 4-pt. Likert scale (0 = None at all, 1 = little, 2 = More than a little, 3 = A lot); Range 0–45; higher = greater stress in the past month; Cronbach's α = .93
Perceived Stress Scale 4 (PSS-4; Cohen et al., 1983)	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	4 items; 5-pt. Likert scale (0 = Never, 1 = Almost never, 2 = Sometimes, 3 = Fairly often, 4 = Very often); Range 2–18; higher = greater perceived stress; Cronbach's α = .69
Kessler Screening Scale for Psychological Distress (Kessler et al., 2003)	Think of 1 month in the past 12 months when you were the most depressed, anxious, or emotionally stressed. During that same month when you were at your worst emotionally, how often did you feel … Nervous?	6 items; 5-pt. Likert (0 = None of the time, 1 = A little of the time, 2 = Some of the time, 3 = Most of the time, 4 = All of the time); Range 0–24; higher = increased frequency of experiencing psychological distress; Cronbach's α = .94
Patient Health Questionnaire-9 (PHQ-9; Kroenke & Spitzer, 2002)	Over the past two weeks, how often have you been bothered by any of the following problems: Little interest or pleasure in doing things?	9-items; 4-pt. Likert scale (0 = Not at all, 1 = Several days, 2 = More than half the days, 3 = Nearly every day); Range 0–27; higher = greater depression severity; Cronbach's α = .94
Post-traumatic stress symptoms (PC-PTSD; Cameron & Gusman, 2003)	In your life, have you ever had any experience that … you: Had nightmares about it or thought about it when you did not want to?	4 items (0 = No, 1 = Yes); Dichotomous PC-PTSD scores 0–2 or 3–4 points; higher = more post-traumatic stress symptoms; Cronbach's α = .86

[a] Cronbach's alpha for the current study.

Dependent variables

Five dependent variables were used as indicators of FHYAs' mental well-being. For the Stress on the Streets Scale (Rew et al., 2016), a scale score was created from the prompt "how much stress did you feel about the following in the last month?" The scale consisted of 15 different circumstances (e.g., food insecurity, social relationships, employment, safety) which used a 4-point Likert scale from 0 (none at all) to 3 (a lot). The scores were summed and ranged from 0 to 45 points with higher scores indicating feeling more stressed.

The Perceived Stress Scale 4 (PSS-4; Cohen, Kamarck, & Mermelstein, 1983) index was generated from participants' responses to four items (e.g., In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?) and used a 5-point Likert scale from 1 (never) to 5 (very often). Index scores ranged from 4

to 18 points with higher values indicating more stress perceived by participants in the past month.

The Kessler Screening Scale for Psychological Distress assessed how frequently participants experienced symptoms of psychological distress in the worst month of the past year using 6-items (e.g., nervous, hopeless, restless, sad; Kessler et al., 2003) with responses on a 5-point Likert scale from 0 (never) to 4 (very often). Scores ranged between 0 and 24 points; and, for this study, the cut-point defined by Kessler et al. (2003) was 13 or more points with higher scores indicating higher levels of psychological distress.

The Patient Health Questionnaire-9 (PHQ-9; Kroenke & Spitzer, 2002), a 9-item measure, was used to screen for depression in participants (e.g., Over the past two weeks, how often have you been bothered by any of the following problems?). The PHQ-9 had responses on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day), which ranged from 0 to 27 points. These scores were classified into four categories, which were no depression or mild depression (0–9), 10 to 14 points (moderate depression), 15 to 19 points (moderately severe depression), and 20 to 27 points (severe depression).

A 4-item measure was used to screen for post-traumatic stress symptoms (PC-PTSD; Cameron & Gusman, 2003). PC-PTSD responses were "yes" or "no" to four PTSD symptoms representing re-experiencing, avoidance, hyperarousal and numbing (Davis & Whitworth, 2009). The PC-PTSD scores ranged from 0 to 4 points with 3 or more points indicative of a positive screen for posttraumatic stress disorder (Cameron & Gusman, 2003; Crosby et al., 2018). This variable was recoded for analytic purposes 0 (PC-PTSD scores from 0 to 2 points) or 1 (PC-PTSD scores from 3 to 4 points).

Data analysis

For this study, Stata 16 was used for all analyses. All variables had fewer than 3.5% missing data. Univariates analyses were conducted to examine the sociodemographic characteristics (i.e., gender, age, race/ethnicity, ACEs, sexual orientation, educational level) of the sample, and the types and frequencies of stressors FHYAs' experienced. Using Ordinary Least Squares (OLS) regression models, four dependent variables (Stress on the Streets Scale, PSS-4, Kessler Screening Scale for Psychological Distress, and PHQ-9) measuring different aspects of mental well-being, were each regressed on the two social coping predictors (mental health help-seeking intentions and social coping). Logistic regression was conducted to analyze social coping strategies in relation to the dichotomously coded post-traumatic symptoms (PC-PTSD). Statistical significance was set at the p < .05 level.

Results

Participants were predominantly people of color: Black (35%), Hispanic or Latino (15%), and other races and/or ethnicities (i.e., American Indian, Asian or Pacific Islander, multi-racial, other; 27%). Participants' sexual orientations were heterosexual (66%), bisexual (15%), gay or lesbian (10%), or other sexual orientation (9%). FHYAs averaged 21 years (SD = 1.72; range = 18–26 years). Participants completed high school (38%), obtained their GED (20%), attended college (20%), or obtained an Associates or Bachelor's degree (2%). Participants' identified as cisgender male (49%), cisgender female (40%), and gender minority (12%). Bivariate analyses were conducted to determine differences between cisgender male, cisgender female, and gender minority participants which were found to be nonsignificant. Gender identity was dichotomized (0 = cisgender male/female, 1 = gender minority) for subsequent analyses. Sample characteristics used for analyses are presented in Table 2.

One-fifth of participants (21%) experienced 1 to 2 ACEs, 43% experienced 3 to 6 ACEs, and 36% reported 7 to 10 ACEs. The average number of ACEs reported by participants was 4.65 (SD = 3.05; range = 0 to 10 ACEs).

On the General Help-Seeking Questionnaire, which asked

Table 2
Participants' sociodemographic characteristics (n = 173).

Characteristics	N (%)	Min-Max	Mean (SD)
Gender[1]			
Cisgender male	84 (49%)		
Cisgender female	69 (40%)		
Gender minority	20 (12%)		
Race/Ethnicity			
Non-White[a]	133 (77%)		
White	40 (23%)		
Sexual Orientation			
Heterosexual[a]	113 (66%)		
LGBQ	59 (34%)		
Educational Level			
Less than high school diploma[a]	35 (20%)		
High school diploma or higher	137 (80%)		
Age		18–26	21.25 (1.72)
Adverse Childhood experiences (ACEs)		0–10	4.65 (3.05)
Mental health help-seeking intentions		8–32	18.18 (6.65)
Social coping		1–4	
Never	35 (21%)		
Rarely	31 (19%)		
Sometimes	35 (21%)		
Often	65 (39%)		
Dependent Variables	**N (%)**	**Min-Max**	**Mean (SD)**
Stress on the Streets Scale		0–45	14.67 (16.69)
Perceived Stress Scale 4 (PSS-4)		4–18	10.82 (2.65)
Kessler Screening Scale for Psychological Distress		0–24	9.76 (8.05)
Depression severity (PHQ-9)		0–27	8.99 (8.13)
Post-traumatic stress symptoms (PC-PTSD)			
PC-PTSD scores from 0 to 2 points[a]	108 (65%)		
PC-PTSD scores from 3 to 4 points	57 (35%)		

[a] Reference group = 0.

participants how likely they would be to seek help if they were having a problem with their mental health, 68% of participants were likely or extremely likely to seek help from at least one of the eight sources. Ninety-seven (59%) participants indicated they were likely or extremely likely to seek help from a friend followed by a professional (e.g., psychologist, social worker, counselor, case worker; 54%), intimate partner (48%), or doctor (41%). The average score on the index was 18.18 (SD = 6.65; range = 8 to 32 points) with higher scores indicating greater intentions to seek help if the participant was having a problem with their mental health.

Social coping was measured using one-item to understand how often participants "go to someone they trust for support" to deal with problems. Thirty-five (21%) participants responded never, 31 (19%) participants responded rarely, 35 (21%) participants responded sometimes, and 65 (39%) participants responded that they often go to someone they trust to deal with problems. Participants' average score on social coping was 2.78 points (SD = 1.18; range = 1 to 4 points) with higher scores indicating higher frequency of going to someone they trust to deal with problems.

Descriptive analyses were conducted to address the first research questions: What are the types and frequencies of stressors reported by FHYAs? Each item on the Stress on the Streets Scale was examined independently to determine the number of participants who felt stressed by responding either "none at all" or "a little, more than a little or a lot" to social environmental factors. Results indicated that 120 (71%) participants felt stressed about getting an education, 107 (63%) participants felt stressed about earning money, 105 (63%) participants felt stressed about being unable to find work, and 104 (62%) participants felt

stressed about having a purpose in life. Participants also felt stressed about social determinants of health. One hundred and ten (65%) participants felt stressed about finding enough food to eat, 109 (65%) participants felt stressed about getting along with friends, 89 (53%) participants felt stressed about being treated badly by the rest of society, 84 (50%) participants felt stressed about getting professional help for a health problem, and 81 (48%) participants felt stressed about finding people to hang out with. Only 10% of participants reported no stress (i. e., "none at all) on all the items. Among participants who felt stressed on at least one item in the past month, the number of stressors ranged as follows: 1 to 4 stressors (28%), 5 to 8 stressors (26%), 9 to 11 stressors (20%), and 12 to 15 stressors (26%). The average scale score was 14.67 points (SD = 11.95; range = 0 to 45 points) with higher scores indicating feeling more stress in the past month.

Descriptive analyses were conducted to understand the remaining four conditions of participants' mental well-being. The average index score on the PSS-4 was 10.82 points (SD = 2.65; range = 4 to 18 points) with greater scores indicating greater perceived stress.

The average score on the Kessler Screening Scale for Psychological Distress was 9.76 points (SD = 8.05; range = 0 to 24 points) with higher scores indicting greater distress. A score of 13 or more points signified that 34% of participants were experiencing serious psychological distress (Kessler et al., 2003).

Based on participants' scores on the PHQ-9, 94 (57%) participants had no depression or mild depression, 32 (19%) participants had moderate depression, 21 (13%) participants had moderately severe depression, and 19 (11%) participants had severe depression. The average score on the PHQ-9 was 8.99 points (SD = 8.13; range = 0 to 27 points) with higher scores indicating greater depressive symptoms.

Participants' responses to the PC-PTSD 4-item composite score showed that 36% of participants scored 3 or more points, which is indicative of a positive screen for posttraumatic stress disorder. Moreover, 23% of participants responded "yes" to all of the 4 items.

Table 3 presents the results for the OLS regression models conducted to examine the association between trauma and social coping predictors on mental well-being in FHYAs.

The first regression model (F (8,146) = 5.95, p < .001) indicated that participants' characteristics, specifically race (b = −5.03, p < .01) was negatively associated with stress (i.e., Stress on the Streets Scale), with White young adults reporting lower rates of stress than young adults of color. In addition, higher ACEs scores (b = 1.16, p < .001) and higher mental health help-seeking intention scores (b = 0.66, p < .001) were associated with greater stress. Social coping was not significant in this first model.

In the second model, none of the variables significantly predicted perceived stress (F (8,148) = 0.96, p < .47). The third model (F (8,148) = 8.82, p < .001) indicated that White young adults (b = 3.48, p < .01), higher ACE scores (b = 0.87, p < .001), and heterosexual orientation (b = 2.96, p < .05) were positively associated with psychological distress. Moreover, higher mental health help-seeking intention scores (b = 0.30, p < .001) were positively related to psychological distress. Social coping results were nonsignificant.

In the fourth model, higher ACE scores (b = 0.89, p < .001), and higher mental health help-seeking intentions scores (b = 0.34, p < .001) were positively associated with depression severity (F (8,147) = 5.43, p < .001). Social coping results were nonsignificant.

For the last model, logistic regression analysis was utilized for the dichotomous post-traumatic stress outcome, adjusting for participant demographic characteristics. Shown in Table 4, results indicate that young adults with higher ACEs scores had higher odds of reporting clinical levels of PTSD (i.e., PC-PTSD scores ≥ 3; OR = 1.37; 95% CI = 1.19, 1.58). In this model, mental health help-seeking intentions and social coping were not statistically significant.

Table 3

Multivariate regression analysis results. Sociodemographic and social coping predictors on Stress on the Streets Scale, Perceived Stress Scale 4 (PSS-4), Kessler Screening Scale for Psychological Distress, and the Patient Health Questionnaire-9 (PHQ-9) as dependent variables.

	Stress on the Streets Scale[a]	Perceived Stress Scale (PSS-4)[b]	Psychological distress[c]	Depression severity (PHQ9)[d]
	B (SE)	B (SE)	B (SE)	B (SE)
Gender[e] (Gender minority = 1)	3.01 (2.79)	0.82 (0.69)	2.66 (1.78)	3.54 (1.92)
Age	−0.65 (0.50)	−0.06 (0.12)	−0.36 (0.32)	−0.06 (0.34)
Race/ethnicity (White = 1)	−5.03 (2.00)*	0.55 (0.50)	3.48 (1.28)*	1.12 (1.38)
ACEs	1.16 (0.29)**	0.09 (0.07)	0.87 (0.18)**	0.89 (0.20)**
Sexual orientation (LBGQ = 1)	−1.28 (1.94)	0.07 (0.47)	2.96 (1.21)*	0.96 (1.31)
Educational level (High school diploma or higher = 1)	−1.79 (2.14)	−0.20 (0.53)	−1.16 (1.36)	0.35 (1.48)
Mental health help- seeking intentions	0.66 (0.14)**	−0.02 (0.03)	0.30 (0.09)**	0.34 (0.09)**
Social coping	−0.52 (0.77)	−0.29 (0.19)	0.19 (0.49)	−0.90 (0.53)
Constant	15.36 (11.00)	12.75 (2.73)	6.34 (7.03)	1.43 (7.57)

[a] N = 155, R^2_{adj} = 0.20.
[b] N = 157, R^2_{adj} = 0.002.
[c] N = 157, R^2_{adj} = 0.29.
[d] N = 156, R^2_{adj} = 0.19.
[e] Gender (0 = cisgender male/female, 1 = gender minority); *B* =Unstandardized regression coefficient; SE = Standard error; *p* < .05; **p* < .001.

Table 4

Sociodemographic and social coping predictors on post-traumatic stress symptoms (PC-PTSD).

Multivariate logistic regression			95% CI for OR	
Variables	B (SE)	OR	Lower	Upper
Gender[a] (Gender minority = 1)	−0.77 (0.39)	0.62	0.18	2.11
Age	−0.25 (0.11)	0.97	0.78	1.21
Race/ethnicity (White = 1)	1.72 (0.87)	2.07	0.90	4.73
ACEs	4.34 (0.10)	1.37**	1.19	1.58
Sexual orientation (LBGQ = 1	1.78 (0.85)	2.07	0.93	4.64
Educational level (High school diploma or higher = 1)	0.39 (0.57)	1.20	0.47	3.07
Mental health help- seeking intentions	1.33 (0.03)	1.04	0.98	1.11
Social coping	0.56 (0.19)	1.10	0.78	1.55
Constant	−1.29 (0.10)	0.04	0.00	5.24

[a] Gender (0 = cisgender male/female, 1 = gender minority); N = 157; CI = confidence interval; SE = standard error; OR = odds ratio. *p < .05; **p < .001.

Discussion and implications

The young adults living in transitional housing settings in this study reported symptoms related to stress, psychological distress, depression, and post-traumatic stress. These results lend support to previous findings in which formerly homeless adults in stable housing or who were independently housed experienced psychological distress despite their housing status (Kidd et al., 2019; van der Laan et al., 2020). This study does not suggest housing stability causes more mental health problems or greater psychological distress, but highlights the need to assess services provided to young adults at critical timepoints which may also affect their mental well-being. For instance, it is likely that some young people were eligible for housing due to their mental health issues, as many transitional housing programs are reserved for young people with a disability, such as a significant mental or substance use need. Evidence suggests young adults underestimate their need for services, in particular mental health treatment; or, they report a need for services but do not get them (Narendorf & Palmer, 2016). Examined in relation to the mental well-being of young adults ages 18 to 25 in the general population, participants in this study experienced higher rates of psychological distress, 34% compared to 11%–14%, respectively (Twenge, Cooper, Joiner, Duffy, & Binau, 2019). These higher rates of psychological distress suggest a need to evaluate services that address the needs of this population. As Gaetz (2014) asserts, the assistance provided to young adults in transition must be inclusive of their developmental and social needs.

With regards to young adults' social needs, the majority of participants were likely or extremely likely to state they would seek help from at least one person (i.e., friend, professional, intimate partner, doctor, parent, other relative, religious leader, or phone helpline), but one-third of participants were extremely unlikely or unlikely to seek help from others if they were having a problem with their mental health. This signifies a potential service gap for some young adults in this sample who adversely responded to having a hypothetical mental health problem. For the most part, however, the regression analyses showed that mental health help-seeking intentions were positively associated with stress, psychological distress, and depression severity. Although the causality between intention and mental well-being needs to be further explored, young adults in this sample appear to indicate that if they were having a problem with their mental health they would be increasingly likely to seek help from someone. In contrast, social coping was not significantly associated with any of the mental well-being outcomes. Although the limitations of the social coping variable used in this study warrants further exploration of the relationship between social coping and mental well-being, the participants in this study perceived efforts to effectively cope by going to a trusted person underscores the relationship between coping and mental well-being. Moreover, social relations built on trust, respect, mutual obligation, and reciprocity constitute social capital which is strongly supported in the literature as a significant factor that contributes to the transition from homelessness to independent living (Barker, 2012; Hudson, Nyamathi, Greengold, & et al., 2012). There are several explanations for why the transition to housing may cause disruption in the lives of homeless individuals. In the literature concerning adults, there is evidence that after formerly homeless adults gain independence, they can lose access to their social network associated with their homeless experience and experience social isolation (Stergiopoulos et al., 2014). This may also be the experience of young adults transitioning to stable housing who often times are socially estranged or isolated from their families and not able to maintain their social networks because of the transition process itself (Kidd et al., 2016). In their research, Kidd et al. (2016) recognized the lack of supports provided to young adults existing homelessness, and concluded that the presence of someone, like a service provider, who can support a young person through their transition into stable housing is important.

Despite participants' housing status and their intentions to seek help from others, the implications of these findings suggest that participants who are in transitional housing programs need support navigating and coping with stressful life events as well as securing a stronger network of community services to support them in seeking mental health care services. Moreover, the stress experienced by these participants demonstrates a need for greater supports to aid young people with new

responsibilities related to maintaining housing stability (e.g., employment) while also managing their mental health needs (Desjarlais-de Klerk, 2016; Zhang et al., 2018).

In this study it was equally important to understand the association between trauma and mental well-being. Based on what we know about the effects of childhood adversity on health, it was not surprising that trauma was positively associated with poor mental-wellbeing in participants even after adjusting for social coping strategies. First, it is important to note that participants reported a high number of ACEs. This is concerning, in particular, for youth moving out of homelessness since their mental well-being is intricately linked to their social support – both from homeless peers and service providers during their homeless experience (Desjarlais-de Klerk, 2016). Unfortunately, many youths who experience homelessness have dysfunctional or abusive familial or social relations that oftentimes contribute to their pathway into homelessness. In addition to experiencing housing instability, these circumstances also characterize youths' limited access to a social network and social capital (Barker, 2012). Homelessness also creates additional barriers for establishing formal and informal supports which can limit access to resources even after transitioning to stable housing (Barker, 2012; Bender et al., 2018). Although service systems may facilitate relational interactions for youth experiencing housing stability, providers are not always equipped and sometimes contribute to the distrust youth have towards adults (Hudson et al., 2012). For these reasons some young adults learn to manage on their own, but this self-reliance and extraordinary resilience, highlights the shortcomings of a service system that does not adequately engage young adults or provide them a reliable social safety net in their exit out of homelessness. Although research shows that housing is an enabling factor of improved quality of life, programs that support continuity of care during this transitional phase, such as intensive case management, critical time intervention, or assertive community treatment, may enable FHYAs to develop strong connections to their community (Gentil, Grenier, Bamvita, & Fleury, 2020; Herman & Mandiberg, 2010; Kidd et al., 2019).

Limitations

This study has several limitations that are important to consider. Due to the small sample size, the results of this study should be interpreted with caution and replicated on more diverse and larger samples to enhance the generalizability of the findings. Moreover, purposive-sampling was used to recruit participants; thus, these results may not generalize to young people not engaged in services at the time of recruitment. This study also is limited to self-report data from participants rather than standard diagnostic criteria that assesses for mental health symptoms. Despite this limitation, the mental well-being measures used in this study are validated with this population and are considered reliable measures of psychological distress. Another limitation of this study is the conceptual interpretation of social coping, which consists of a one-item measure from the original Coping Scale (Kidd & Carroll, 2007), and thus paints an incomplete picture of participants' social environments and social supports. Additional measures of social coping in the larger social context would meaningfully capture more nuanced social coping mechanisms used by participants (Revenson & Lepore, 2012). Research is needed to expand our understanding of adaptive functioning in relation to social coping mechanisms which are inclusive of problem-focused coping, avoidant/disengagement coping and other domains of coping (Ferguson et al., 2015; Folkman & Lazarus, 1980; Gaetz, 2014; Kidd & Carroll, 2007; Revenson & Lepore, 2012). These cross-sectional data also limit the interpretation of causality of the findings because there were no data to adjust for participants' mental well-being prior to their transition. This means that it is unclear whether the directionality of the participants' mental well-being status changed after they transitioned to an independent living situation. An assessment of participants' mental well-being over the course of their trajectory into stable housing would explain how housing environments impact young adults exiting homelessness. It also is not clear when participants entered transitional housing and when mental health problems occurred. Longitudinal studies that consider prior mental health status of participants will better elucidate the effect of housing on mental well-being.

Conclusions

Our study finds that many young adults, who were formerly homeless and transitioned to stable housing or independent apartments with vouchers, experienced psychological distress. The factors associated with poor mental well-being can help inform and assist in the development of transitional interventions, particularly for FHYAs with histories of trauma; and who also need the presence of social supports they can trust and go to in times of crises. Given the evidence that FHYAs face difficulty transitioning and maintaining stable housing (Ferguson et al., 2015; Kidd et al., 2016), future research is needed to elucidate how the transitional period facilitates or impedes young adults' abilities to rebuild their social networks in order to seek supports that they can trust to manage stress and sustain positive mental well-being.

It also is imperative to understand the implications that housing policies have on the services FHYAs receive, which in turn can impact their mental well-being outcomes. As previous research shows, FHYAs are likely to experience victimization and report symptoms related to trauma, and upon transitioning to stable housing they will continue to need mental health services and even require greater supports to remain engaged in treatment, especially because their rates of service utilization are initially inadequate (Kidd et al., 2019; Martin & Howe, 2016).

In recognizing FHYAs' trauma histories, we also need to adopt approaches that are trauma-informed to mitigate retraumatization (Oral et al., 2016). The therapeutic alliance between a clinician and a formerly homeless young adult, and, in particular, their trust for and relationship with their health care providers have been found to contribute to improved mental well-being (Tsai, Gelberg, & Rosenheck, 2019). Further exploration is needed to understand these structural supports and what underlining mechanisms facilitate dyadic coping and collaborative relationships between FHYAs and behavioral health and health care providers, especially as they phase into independent living (Revenson & Lepore, 2012). This is important because evidence suggests that improved social support and social connectivity is associated with resiliency and mitigating the effects of childhood trauma and adversity (Boullier & Blair, 2018). This study raises awareness about the mental well-being of young adults who exit homelessness; and, its findings underscore the need for interventions that support FHYAs transition out of homelessness by integrating supports so they may be able to rebuild their social networks, learn to seek support when confronted with daily stressors and maintain their mental well-being as they navigate the transition to stable housing.

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