A Longitudinal Analysis of Peer-Delivered Permanent Supportive Housing: Impact of Housing on Mental and Overall Health in an Ethnically Diverse Population

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Permanent supportive housing (PSH) is an evidence-based health intervention for persons experiencing homelessness, but the impact of individual mechanisms within this intervention on health requires further research. This study examines the longitudinal impact of the mechanism of supportive housing within a peer-delivered PSH model on overall health and mental health (as measured by psychological distress and self-report of bothersome symptoms) outcomes in an ethnically diverse population. The 237 participants in the study included persons who were homeless or at risk of homelessness and who also had been diagnosed with a serious mental illness. Sixty-one percent of all participants received supportive housing. All 3 outcomes were significantly associated with quality of life indicators, recovery, and social connectedness. In addition, overall health was significantly associated with employment, age, and psychological distress. Psychological distress was associated with gender, type of housing, and history of violence or trauma. Experiencing bothersome symptoms was associated with drug use, history of violence or trauma, and psychological distress. Longitudinal models of these 3 outcomes showed that supportive housing was significantly associated with good to excellent health 6 months after baseline (odds ratio = 3.11, 95% confidence interval [1.12, 8.66]). The models also demonstrated that the supportive housing and comparison groups experienced decreased psychological distress after baseline. The results of this study demonstrate the importance of supportive housing within the context of PSH, particularly for the overall health of participants, and the positive overall impact of PSH on mental health in a diverse population.

Keywords: homelessness, permanent supportive housing, health and mental health outcomes, peer-support workers

Homelessness is an enduring social problem. More than a century ago Frederic Engels (1845) expressed concern for people experiencing homelessness while describing poverty associated with the Industrial Revolution. In more recent times, the McKinney-Vento Act of 1987 legislated funding for homelessness services and the U.S. Interagency Council on Homelessness (USICH) published plans to prevent and end homelessness (USICH, 2015). Many have reflected on homelessness as a multifaceted problem (Baggett, O'Connell, Singer, & Rigotti, 2010; Baker, 1994; Cronley, 2010; Hwang et al., 2011; Tsemberis, Gulcur, & Nakae, 2004). Cronley (2010) reminds us that individual factors (e.g., mental health and addiction) and structural problems (e.g., poverty and lack of affordable housing) all precipitate homelessness.

The relationship between health and homelessness applies to people who are living on the streets homeless and to those living in homeless shelters. People experiencing homelessness have elevated mortality rates (Baggett et al., 2013; Cheung & Hwang, 2004; Hwang, Orav, O'Connell, Lebow, & Brennan, 1997; Morrison, 2009). Those who are living on the streets face extreme exposure to the elements (Hwang et al., 1997; O'Connell, 2005). Shelters can ameliorate some of these problems but can exacerbate others. For instance, exposure to communicable diseases within shelters can be problematic (Hwang, Kiss, Ho, Leung, & Gundla-

palli, 2008; Khan et al., 2011; Maunder, 2004). Many people experiencing homelessness also have substance use (Grinman et al., 2010) and/or mental health problems (Bauer, Baggett, Stern, O'Connell, & Shtasel, 2013; Greenberg & Rosenheck, 2010).

The overall health of people experiencing homelessness has been found to be worse than that of those in poverty and those that are precariously housed or otherwise at risk of homelessness (Muñoz, Crespo, & Pérez-Santos, 2005). Rates of chronic pain are high (Hwang et al., 2011), and homelessness increases distress and disrupts sleeping patterns (Muñoz et al., 2005). Regarding sleep, Davis and Shuler (2000) found that the majority of their sample of women experiencing homelessness slept less than 6 h a night and frequently reported restlessness. These conditions make healthy lifestyle choices difficult if not impossible and often make health promotion efforts futile (Fitzpatrick-Lewis et al., 2011; Henwood, Cabassa, Craig, & Padgett, 2013). Along with a myriad of health problems, people experiencing homelessness use emergency care at high rates (Folsom et al., 2005).

Housing is a critical and evidence-based health intervention for people experiencing homelessness (Fitzpatrick-Lewis et al., 2011; Kyle & Dunn, 2008). As stated by Henwood and colleagues (2013), housing improves health through "reduced exposure to the elements, infections, and violence" as well as an improved "sense of security and stability missing from life on the streets or in shelters. . . . Housing should optimally provide a foundation for health (a bed, refrigerator, heat, electricity), and the physical space needed to engage in healthy behaviors" (p. S189). Better mental health status among people experiencing homelessness has also been linked to feelings of social support (Hwang et al., 2009). Thus, Hwang and colleagues (2009) argue for services that encourage the development of supportive social networks.

Efforts to end homelessness currently favor permanent supportive housing (PSH) models such as Housing First (HF) and the U.S. Department of Housing and Urban Development (HUD) Veterans Affairs Supportive Housing program. Indeed, the USICH identified PSH using a HF approach as a core strategy for addressing chronic homelessness (USICH, 2015). The HF model is frequently described in contrast to treatment-first approaches. Whereas treatment-first approaches mandate treatment and willingness to accept services before housing, HF favors client choice over treatment compliance (Tsemberis & Eisenberg, 2000; Tsemberis et al., 2004; Woodhall-Melnik & Dunn, 2015).

PSH has been linked to several valuable outcomes. In a review of PSH literature from 1995 to 2012, Rog and colleagues (2014) conclude that PSH has been shown to reduce hospitalizations and homelessness and increase housing tenure over time. Compared with treatment as usual (TAU), studies have found long-term housing stability to be significantly greater among PSH and HF approaches. In a 5-year study, Tsemberis and Eisenberg (2000) found that 88% of HF participants were housed compared with 47% of participants receiving TAU. Aubry et al. (2015) recently found comparable housing stability outcomes in five Canadian cities after 1 year. Additional health outcomes with PSH include reduced use of emergency health-care utilization (Culhane, Metraux, & Hadley, 2002; Doran, Misa, & Shah, 2013; Rog et al., 2014), improved mental health status (Gilmer, Stefancic, Henwood, & Ettner, 2015; Kyle & Dunn, 2008), and improved quality of life (Aubry et al., 2015; Gilmer et al., 2015; Kyle & Dunn, 2008; Woodhall-Melnik & Dunn, 2015). In a recent systematic review,

Rog et al. (2014) described the current level of evidence for PSH as moderate. Of particular importance is that PSH models have demonstrated success among those considered hard to house, such as individuals who are chronically homeless with substance use and mental health problems (Kyle & Dunn, 2008).

Despite the vast and growing literature on PSH, questions remain about the value of core components with respect to health outcomes. Studies that examine outcomes specific to a component of PSH rather than evaluating the impact of the complete model can improve our understanding of how PSH can effectively end or reduce homelessness. Researchers have also questioned the generalizability of the findings and have identified the need for studies with more diverse populations and geographies that include indigenous populations and rural areas (Kyle & Dunn, 2008; Tabol, Drebing, & Rosenheck, 2010; Woodhall-Melnik & Dunn, 2015). Others have suggested the need to study outcomes beyond housing stability and health-care utilization to include other indicators of health and mental health (Benston, 2015). Placing outcomes associated with PSH alongside program fidelity is also critical. In a Rog and colleagues (2014) review of PSH literature, the authors noted that most studies have not included information about model fidelity. Furthermore, to the best of our knowledge, researchers have not published findings on the impact of housing on health as a specific mechanism of PSH.

PSH combines non-time-limited affordable housing assistance with wrap-around supportive services. The purpose of this study was to examine the housing component of PSH by determining its impact on mental and overall health outcomes. We hypothesized that better outcomes would be observed among clients who were housed compared with individuals who were not housed. To accurately quantify the impact of housing on health in the diverse population served by the program, we first examined key relationships between various psychosocial variables and the outcomes of interest. These data are also presented because they provide insight into the lived experiences of the target population. A unique component of the PSH program in this study was that peer-support workers (PSWs) were responsible for delivering case-management services. PSWs are people who self-identify as current or former clients of mental health and/or substance abuse services, have a period of demonstrated recovery (typically $\geq$ 2 years), and have completed specialized training in peer-support services (Solomon, 2004). Although not a requirement for a PSW, the PSWs that were employed in this study also had histories of being homeless. This study contributes to the existing body of literature on PSH by assessing an integral component of the model (i.e., housing) on health and mental health outcomes in an ethnically diverse population. With the majority of the services being delivered by peers, this study also contributes to the literature on peer-delivered services.

Method

The Healthy Homes (HH) program in New Mexico was funded through the Substance Abuse and Mental Health Services Administration's (SAMHSA) Mental Health Transformation Grant (MHTG) program from October 2010 through September 2015. The goal of the MHTG program was to provide states an opportunity to examine whether infrastructure changes, coupled with services, resulted in improved outcomes among individuals who

were homeless or at risk of homelessness. The HH program was operated through the Life Link, a licensed community mental health center in Santa Fe, New Mexico. The Life Link's central focus has been to help individuals and families who are homeless improve their quality of life. As a result of this focus, the Life Link receives referrals from social service, criminal justice, and other behavioral health agencies from Santa Fe county and other nearby counties for individuals who have behavioral health needs and are homeless.

Procedure

The HH program implemented the PSH model using the HF approach to provide wrap-around services to persons from the homeless community in Santa Fe, New Mexico who were experiencing a mental illness and/or a co-occurring substance use disorder (see SAMHSA's KIT on PSH for a full description of the model at http://store.samhsa.gov/product/Permanent-Supportive-Housing-Evidence-Based-Practices-EBP-KIT/SMA10-4510; SAMHSA, 2010a). Santa Fe County is the third largest county and the capital of New Mexico. The county is located in the north-central part of the state, with a total population of 148,164 (7% of the state's population). Eighty percent of the residents are 18 years of age or older. Fifty-one percent identify as Hispanic or Latino. The median household income is $52,917, with more than 17% living below the poverty level (U.S. Census Bureau, 2015). Treatment services available to all participants in the HH program included screening and assessment, diagnostic determination, individual counseling, psychiatric consultations, medication management, crisis intervention, group counseling, educational programming, employment services, client advocacy, housing identification, and referral to community resources. Clients were assigned to a licensed behavioral health clinician and a PSW who assisted in individual planning and care. Clinicians provided individual or group therapy on the basis of need. This included trauma-specific treatment or cognitive–behavioral therapy.

A key goal of the HH program was to build the PSW workforce with an expertise in supportive housing. Four PSWs were employed by the HH program and all had a history of homelessness, mental illness, and/or addiction. In New Mexico, PSWs must complete 40 h of classroom training and a certification exam through the New Mexico Credentialing Board for Behavioral Health Professionals. PSWs in the HH program received additional specialized training in housing and supportive services delivery that resulted in expertise in housing laws and regulations, landlord/tenant relationships, tenants' rights, advocacy for clients in court, and strategies for accessing and maintaining housing. PSWs provided all of the supports/case management/housing services rather than using social workers or other clinical staff who did not have lived experience. More specifically, PSWs in the HH program were responsible for providing assistance in the development of interpersonal, community coping, and functional skills, ensuring interagency collaboration and case management, promoting linkages to natural supports, assisting in the development of the recovery/resiliency plans, and providing support in crisis situations and necessary follow-up to determine if needs were adequately addressed. PSWs also served as liaison between landlord and tenants for those participants who were housed. Another critical service offered by PSWs was recovery services within a group setting to develop and enhance wellness and health-care practices.

These groups promoted self-responsibility among the clients as they learned new health-care practices from a peer who had similar life experiences and who developed self-efficacy in using needed skills. Organizationally, PSWs served on a multidisciplinary team. They provided behavioral observations to staff and offered insights into clients' perspectives from the viewpoint of an advocate/PSW. PSWs also attended and contributed to treatment planning sessions, agency-wide committees, staff training sessions, and other meetings/committees as assigned.

The frequency and intensity of visits were jointly determined by the client and PSW within the first few encounters. Although this varied by client, the average during the first month was 4–8 h per week. Initial meetings were mostly in the office but shifted to where clients were living if and once housed. PSWs spent as many as 8–12 h per week with newly enrolled clients, especially while looking for housing. The staff:client ratio for the HH program was 1:20, which was adjusted depending on acuity level and symptom cycling. The caseload was reduced as new clients were enrolled to allow for more intensive services. PSWs were required to spend at least 50% of their working schedule providing direct services to clients. Direct services took place face to face and typically where clients were located. As with many other supportive housing service agencies around the country, the Life Link's usual productivity standard for direct contact is 60%. Given the complex needs of individuals coming directly from homelessness, direct service contact time was reduced by 10% to allow time for PSWs to coordinate services that did not require the client to be present, such as identifying housing units, communicating with landlords, and securing benefits.

New clients admitted into the HH program completed housing applications for subsidies or vouchers. The HH program team ensured, as much as possible, that clients had a safe and secure place in the early engagement period. The safe place was often emergency shelters, short-term transitional living facilities, family, camping out, living with friends, or couch-surfing. In some situations, the PSW was able to access emergency assistance funds to pay for motel units for families with children for periods of no more than 7 nights. In line with the PSH model, the HH program helped participants identify and select among various permanent housing options on the basis of their unique needs, preferences, and financial resources. The PSWs worked with all clients to secure housing. Funding from SAMHSA did not include money for housing; therefore, it was necessary to use all available sources of housing, such as the HUD Shelter Plus Care Vouchers, State-funded Linkages vouchers, shared living, and the city or county housing authority housing resources. Not all participants received subsidies or vouchers for housing, primarily because of limited supplies. Preferential treatment for housing was not given to any one client over another; a waiting list was created if all housing vouchers were filled and clients were selected sequentially off of the waiting list. The purpose of this study was to assess the impact of housing on health outcomes.

Data were collected through face-to-face structured interviews over a 5-year period: May 2011 through October 2015. Individuals who were determined to be eligible participated in the study in an ongoing enrollment process throughout the 5 years and participated in a baseline interview and follow-up interview every 6 months until discharge from the HH program. Discharge was typically a result of not having any contact with the participant for

90 days or more. Data were collected and entered by research assistants, and data entry was double-checked for accuracy by the lead author. Research assistants were also PSWs who received additional training on evaluation research, including conducting trauma-informed interviews and data entry. Participants received a $20.00 gift card for each interview. This study was approved by the institutional review board at the University of New Mexico Health Sciences Center.

Fidelity

The PSH Fidelity Scale was used to assess adherence to the HH program (SAMHSA, 2010b). Three fidelity assessments were conducted throughout the 5-year SAMHSA-funded study, including initial program start-up, 6 months later, and 3 months before the end of data collection. Because PSH programs must adapt to local conditions such as the housing market, service environments, and local politics, few, if any, programs are able to obtain a perfect score on the PSH fidelity tool. Throughout the study, the HH program implemented the PSH at high fidelity. With a highest possible fidelity score of 28, the baseline and 6-month reassessment total fidelity scores for the HH program were 26.13 and 26.66, respectively. The final fidelity assessment showed that the HH team was implementing the PSH model at near perfect fidelity (fidelity score = 27.38).

Participants

Recruitment of study participants came from the Life Link clients who met the eligibility requirements of being homeless (including at risk of homelessness) with a mental illness or co-occurring substance use disorder as defined by the *Diagnostic Statistical Manual of Mental Disorders* (fourth edition; *DSM–IV*; American Psychological Association, 2000). Diagnoses were determined by a master's level independent licensed counselor through a structured face-to-face clinical interview when participants entered the HH program. During the first visit, clients were notified about the evaluation of the HH program by their PSW case manager and then consented by research assistants. Five individuals unable to provide informed consent were excluded from participating in the evaluation of the HH program. Reasons for exclusion included intoxication ($n = 4$) and side effects from a grand mal seizure ($n = 1$). An additional six clients declined to participate in the evaluation. These individuals still had access to all PSH services through the Life Link agency, just not through the HH program. Two hundred and thirty-seven individuals were enrolled in the evaluation and completed baseline interviews either at the time of consent or within 1 week thereafter. Because the Life Link clients come from all over the county, and no other exclusion criteria were applied, study participants are representative of Santa Fe residents. Because participants were enrolled throughout the 5-year study period, there was a variable length of follow-up depending on the enrollment date. Of the 237 participants, 152 completed a 6-month interview, 98 completed a 12-month interview, 61 completed an 18-month interview, 38 completed a 24-month interview, 27 completed a 30-month interview, 24 completed a 36-month interview, 12 completed a 42-month interview, and 6 completed a 48-month interview. Research assistants were unable to conduct follow-up interviews beyond 12 months (e.g., 18

months, 24 months, etc.) for participants who were not housed within the HH program.

Slightly more than 50% (50.6%, $n = 120$) of the participants reported that they were homeless or without permanent housing in the 30 days before their baseline interview. The other 50% (49.4%, $n = 117$) reported that they owned/rented a home or were staying at someone else's home, with the majority (71.8%, $n = 84$) falling within the latter category. Although this last group was technically not homeless, they were all at risk of homelessness, an eligibility requirement for the HH program. Of the 237 participants, 40.7% ($n = 96$) were diagnosed with bipolar/major depressive disorder, 13.6% ($n = 32$) with anxiety, 41.9% ($n = 99$) with posttraumatic stress disorder (PTSD), and 3.8% ($n = 9$) with schizophrenia/schizoaffective disorders. In addition, 62.0% of participants had a co-occurring substance use disorder. Alcohol was the most common (27.4%), followed by opioids (13.9%), polysubstance (7.6%), cannabis (6.8%), cocaine (3.0%), methamphetamines (3.0%), and other amphetamines (0.4%).

The sample ($N = 237$) ranged in age from 18 to 66 years at baseline ($M = 38.8$, $SD = 11.8$). Seventeen percent ($n = 41$) of participants were aged 18–24 years, 23.2% ($n = 55$) were aged 25–34 years, 27.4% ($n = 65$) were aged 35–44 years, 22.4% ($n = 53$) were aged 45–54 years, 8.4% ($n = 20$) were aged 55–64 years, and 1.3% ($n = 3$) were aged 65–66 years. Women ($n = 140$) comprised 59.1% of the sample. Nearly half of participants (46.8%, $n = 111$) identified themselves as Hispanic or Latino. Of the non-Hispanic/Latino participants, most identified as White (30.4%, $n = 72$), 8.9% ($n = 21$) as Native American or Alaska Native, 4.6% ($n = 11$) as Black/African American, 0.9% ($n = 2$) as Asian, and 8.4% ($n = 20$) responded with multiple races. Regarding education, 29.1% of participants ($n = 69$) had less than a 12th grade education, 28.7% ($n = 68$) had a high school diploma or GED, 36.7% ($n = 87$) had some college education or a vocational technology degree, and 5.5% ($n = 13$) reported holding a college degree or higher. The majority of the sample was unemployed at baseline (87.3%; $n = 207$) whereas 12.7% ($n = 30$) were employed either part or full time.

Measures

SAMHSA's National Outcome Measures. The National Outcome Measures (NOM) is a required standardized data collection tool for grants funded by SAMHSA to determine program effectiveness (SAMHSA, n.d.). In addition to demographic data, the NOM collected information on various psychosocial and clinical variables, of which several were extracted for the purposes of this study. Demographic data included age, gender, ethnicity, race, education, employment status, and homeless status. Homeless status was determined based on where participants reported living most of the time in the 30 days before their baseline interview. Participants who reported living in transitional housing or no housing were coded as "homeless" whereas those who reported that they stayed in their own or someone else's home were coded "not homeless." Satisfaction with housing was rated on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*, and responses were later dichotomized into "satisfied" (*agree* or *strongly agree*) and "dissatisfied" (*undecided*, *disagree*, or *strongly disagree*). Psychosocial and clinical variables included experiences of life-time violence and trauma, use of alcohol or

illegal drugs in the past 30 days, and satisfaction with housing. Data on alcohol and drug use and experiences with violence and trauma were recoded into new variables that indicated use at any time during their involvement in the HH program. The questions relating to violence and trauma were added to the NOM 1 year after the start of data collection; therefore, data for this variable were not available for the entire 5 years. The NOM also included a four-item scale on social connectedness, which assessed perceptions of one's supportive relationships with family, friends, and the community in the past 30 days. This does not include relationships with service providers or the use of specific programs or social support services provided through the mental health system. Participants were asked to indicate their disagreement/agreement on a 5-point Likert scale. A cumulative score was based upon summing these responses, with scores ranging from 4 to 20, with higher scores indicating higher social support. The NOM also included questions on overall health, psychological distress, and experiencing bothersome symptoms. Responses to these items were used to generate the outcome variables and are therefore discussed in outcomes section.

The Recovery Markers Scale. The Recovery Markers Scale (RMS) is a subscale of the Recovery Enhancing Environment (REE) measure and is a self-report survey that collects information about recovery from individuals who use mental health services (Ridgway & Press, 2004). The RMS includes 23 items scored on a 4-point Likert scale. The RMS asks about common elements frequently reported by people about their recovery, including positive self-concept, a future orientation, and connection to others. Answering *agree* or *strongly agree* with an item was identified as an endorsement, and the proportion of items endorsed (of the total 23 items) was calculated for each participant and each point in time (Recovery Council of Michigan, 2011). Although specific psychometric properties have not been reported, the authors confirm the REE to be a reliable and valid instrument (Recovery Council of Michigan, 2011).

The Quality of Life Interview Survey Very Brief. The Quality of Life Interview Survey Very Brief (QOLI-VB) is based on the Quality of Life Interview (Lehman, 1988) and includes various indicators of quality of life, including feelings of safety, criminal justice involvement, and mental and physical health. The QOLI-VB is a 26-item self-report measure with a 5-point Likert scale for each item. On the basis of a review of the PSH literature, five variables were identified as theoretically relevant to our study. These variables included safety ("How safe do you feel in your daily life?"), satisfaction with sleep ("How satisfied are you with your sleep?"), work capacity ("How satisfied are you with your capacity to work?"), and social support, which included two components—support from friends ("How satisfied are you with the support you get from your friends?") and access to needed information ("How available to you is the information that you need in your day-to-day life?"). Each question was recoded into a binary variable that represented satisfaction or agreement with each item. The variables about safety and access to needed information were dichotomized into "yes" (*moderately*, *very much*, or *extremely*) and "no" (*not at all*, or *a little*). The variables about satisfaction with sleep, work capacity, and social support were dichotomized into "satisfied" (*satisfied* or *very satisfied*) and "dissatisfied" (*very dissatisfied*, *dissatisfied*, or *neither*).

Housing and type of housing. The main effect variable was whether an individual was housed during the HH program. Type of housing was categorized as small, medium, or large, in which small includes single and duplex housing and medium includes medium and cluster housing.

Outcomes. Through the NOM instrument, data were collected on three outcomes—overall health, psychological distress, and experiencing bothersome symptoms—with the latter two being indicators of mental health. Each of these outcomes were assessed at baseline and each follow-up interview. Overall health was measured by responses to one item that asked "How would you rate your overall health?" Responses were rated on a 5-point Likert scale, including *poor*, *fair*, *good*, *very good*, or *excellent*. Responses were dichotomized into "poor to fair" (*poor* or *fair*) and "good to excellent" (*good*, *very good*, or *excellent*). Psychological distress was measured by the K6, a screening tool to identify people with mental illness in as few questions as possible (Kessler et al., 2002). Several studies have found the K6 to be significantly more accurate at predicting psychological distress over other short instruments (Furukawa, Kessler, Slade, & Andrews, 2003; Kessler et al., 2002, 2003). The K6 has high internal consistency and reliability (Cronbach's α = .89; Kessler et al., 2002) as well as high sensitivity (.36) and specificity (.96; Kessler et al., 2003). The six questions asked participants how often in the past 30 days they felt (a) so sad nothing could cheer him or her up, (b) nervous, (c) restless or fidgety, (d) hopeless, (e) that everything was an effort, and (f) worthless. The answers to these questions were compiled into a single summary score ranging from 0 to 24 points, with higher scores indicating higher psychological distress. Finally, experience with bothersome symptoms was measured by participants' responses to the statement "My symptoms *are not* bothering me." Those who responded *strongly disagree*, *disagree*, or *undecided* were categorized as experiencing bothersome symptoms, and those who responded *agree* or *strongly agree* were categorized as not experiencing bothersome symptoms.

Analyses

Independent-sample *t* tests, χ^2 tests (for contingency tables with cells greater than $n = 5$), Fisher's exact tests (for contingency tables with less than $n = 5$ in each cell), one-way analyses of variance (ANOVAs), and correlations were used to test the association at each assessment period between the three health outcomes and age, gender, ethnicity, education, employment, alcohol or drug use, experiences with violence or trauma, type of housing, satisfaction with housing, primary mental health diagnosis, whether or not participants were diagnosed with an opiate addiction, whether participants received any housing support, the proportion of recovery markers endorsed, the five items from the QOLI-VB, and social connectedness. The percentage of participants with good to excellent health, the percentage of participants with bothersome symptoms, and the mean psychological distress (K6) score were calculated to quantify the effects of each characteristic.

To control for the psychosocial and clinical characteristics while analyzing the effect of housing on outcomes over time, generalized linear mixed models were built in SAS v9.4. A normal distribution was specified for the psychological distress outcome, and binomial distributions were specified for the overall health and bothersome

symptoms outcomes. All three models included a random, repeated effect of time and a standard variance components covariance structure. The effect of housing on the two binomially distributed outcomes was quantified by calculating odds ratios (ORs), and the normally distributed outcome was assessed by calculating the difference in least squares means. Ninety-five percent confidence intervals (CIs) were also calculated for these measures of effect. Effect modification was assessed by calculating the measures of effect with and without controlling for each variable. Interaction was assessed for control variables that were measured repeatedly by including interaction terms with time in each model. All control variables and interaction terms were evaluated for inclusion in the models using F tests for fixed effects ($\alpha = .05$) and considering effect modification. Baseline outcome measures were included in each model.

Results

Under the HH program, 145 participants received housing (61.2%). The majority of these participants received housing within 3 months (52.4%; $n = 76$), another 40 participants received housing between 3 and 6 months (27.6%), 21 participants received housing between 6 and 9 months (14.5%), 3 received housing between 9 and 12 months (2.1%), and 5 received housing after 1 year or longer (3.4%).

Psychosocial and clinical characteristics and the three outcomes of interest are summarized in Table 1. Slightly less than one third (32.5%; $n = 77$) of the participants reported using alcohol at any time over their involvement in the program. Slightly more participants reported using illegal drugs during the program, (39.7%; $n = 94$). Of the subset of participants ($n = 213$) who were asked whether they had ever experienced trauma or violence at some point in their lives, 93.9% ($n = 200$) responded that they had. At baseline, 14.4% ($n = 34$) were satisfied with their housing, 58.9% ($n = 139$) reported that their overall health was fair to poor, and the majority (85.2%, $n = 202$) were experiencing bothersome symptoms. The average proportion of recovery markers endorsed at baseline was 64.1%, the mean social connectedness score was 13.4, and the mean psychological distress (K6) score was 13.4. Of the 145 participants who received housing, 37.9% ($n = 55$) received small housing, 31.7% ($n = 46$) were placed in medium housing, and 30.3% ($n = 44$) received large housing.

Bivariate Relationships

The relationships between demographic variables and psychosocial variables to the outcomes were examined before model building. Overall health exhibited a statistically significant relationship ($p < .05$) with employment, four items from the QOLI-VB (safety, work capacity, support from friends, and satisfaction with sleep), age group, psychological distress, proportion of recovery markers endorsed, and social connectedness (see Table 2). Those who were employed during all reassessments in the program were more likely to report good to excellent overall health compared with those who were unemployed (100.0% vs. 33.3%, respectively, at baseline). Participants 18–24 years of age tended to report good to overall health more than participants 55–64 years of age (51.2% vs. 51.2%, respectively, at baseline). Participants who felt safe in their everyday lives, satisfied with their capacity

Table 1

Descriptive Analysis for Psychosocial and Clinical Characteristics

Characteristic	Participants ($N = 237$)			
	n	%	M	SD
Mental health diagnosis				
Bipolar or depression	96	40.7		
Generalized anxiety disorder	32	13.6		
PTSD	99	41.9		
Schizophrenia/schizoaffective disorder	9	3.8		
Opiate diagnosis				
Yes	33	13.9		
No	204	86.1		
Any alcohol use at any time				
Yes	77	32.5		
No	160	67.5		
Any illegal drug use at any time				
Yes	94	39.7		
No	143	60.3		
Ever experienced violence or trauma				
Yes	200	93.9		
No	13	6.1		
Safety				
Yes	154	65.0		
No	83	35.0		
Work capacity				
Yes	87	36.7		
No	150	63.3		
Friend support				
Yes	122	51.5		
No	115	48.5		
Sleep				
Yes	47	19.8		
No	190	80.2		
Information				
Yes	178	75.1		
No	59	24.9		
Homeless at baseline				
Yes	120	50.6		
No	117	49.4		
Type of housing				
Small	55	37.9		
Medium	46	31.7		
Large	44	30.4		
Satisfied with housing				
Yes	34	14.4		
No	203	85.6		
Overall health				
Fair to poor	139	58.9		
Good to excellent	97	41.1		
Experiencing bothersome symptoms				
Yes	202	85.2		
No	35	14.8		
Proportion of recovery markers endorsed			64.1%	23.7%
Social connectedness			13.4	3.8
Psychological distress (K6)			13.4	5.4

Note. PTSD = posttraumatic stress disorder.

to work, supported by friends, and satisfied with their sleep were more likely to report good to overall health compared with their counterparts. Lower psychological distress, a higher proportion of endorsements on the recovery markers, and a greater sense of social connectedness were associated with greater overall health. Because of the previously discussed issues with follow-up among the comparison group, tests of the effect of housing on outcomes

Table 2
Association of Psychosocial and Clinical Characteristics With Overall Health (N = 237)

| Characteristic | Reference | Time point (months) | | | | | | | | |
		Baseline	6	12	18	24	30	36	42	48
		Relative ratio of participants with good to excellent overall health								
Housed[a]	Not housed	0.80	0.77	0.64	—	—	—	—	—	—
Employment status[a]										
Every reassessment	Not employed	1.61	1.89*	0.89	2.05	3.00*	—	—	—	—
≥1 reassessment	Not employed	1.67	1.77*	0.97	0.85	2.14*	0.91	1.35	1.50	3.00
Safety[a]	No safety	2.51*	1.53	1.82*	1.77	—	0.36	1.71	1.50	—
Work capacity[a]	No work capacity	3.32*	2.40*	1.38	2.23*	1.96*	1.87	2.33*	1.67	3.00
Friend support[a]	No friend support	1.99*	1.63*	1.34	1.88*	1.43	1.33	2.33*	1.50	—
Sleep[a]	No sleep	1.63*	2.08*	1.29	1.39	2.47*	1.85	2.86*	2.00	—
Age group, years[a]										
25–34	18–24	1.03*	0.56	0.82	0.60	0.83	0.86	0.83	—	—
35–44	18–24	0.73*	0.52	0.98	0.48	0.67	0.60	0.50	—	—
45–54	18–24	0.74*	0.56	0.69	0.57	0.67	0.44	0.63	—	—
55–64	18–24	0.29*	0.56	0.68	0.60	0.22	0.33	0.50	—	—
		Difference of means for participants with good vs. poor health								
Psychological distress (K6)[b]		−2.83*	−3.03*	−3.53*	−4.29*	−5.71*	−4.14	−3.93	−5.38	−7.50
Recovery markers[b]		21.3%*	14.3%*	16.8%*	14.8%*	20.1%*	18.2%	30.2%*	9.3%	10.0%
Social connectedness[b]		2.60*	0.67	1.34*	1.45*	1.50	1.32	2.03	2.25	1.00

Tests used: [a] χ^2 test/Fisher exact test.   [b] t tests.
* At this time point, the outcome differed by this category with a significant level of $p < .05$.

were only performed at baseline, 6-month reassessment, and 12-month reassessment. No significant relationship was found between overall health and housing.

Psychological distress was significantly related to gender, housing type, history of violence/trauma, five QOLI-VB items (safety, sleep satisfaction, work capacity, availability of information, and friend support), proportion of recovery markers endorsed, and social connectedness (see Table 3). Overall, males reported less severe psychological distress than females (mean K6 = 6.2 vs. 10.9, respectively, at 36 months), and those

who had not experienced violence or trauma experienced less psychological distress than those who had (mean K6 = 1.8 vs. 10.2, respectively, at 24 months). Participants placed in large housing units reported significantly less psychological distress compared with those with medium housing (mean K6 = 8.2 vs. 12.6, respectively, at 18 months). Participants who felt safe; supported by friends; and satisfied with their capacity to work, sleep, and access information reported significantly less psychological distress. A higher proportion of endorsements on the recovery markers and a greater sense of social connectedness

Table 3
Association of Psychosocial and Clinical Characteristics With Psychological Distress (K6; N = 237)

| Characteristic | Reference | Time point (months) | | | | | | | | |
		Base	6	12	18	24	30	36	42	48
		Difference in mean psychological distress (K6) score for each characteristic								
Housed[a]	Not housed	−0.2	−1.5	−0.1	—	—	—	—	—	—
Gender[a]	Male	2.4*	0.6	1.6	1.3	0.1	−1.3	3.8*	−3.1	5.3
Housing type[b]										
Medium	Small	−0.5	0.2	1.9*	3.1*	1.4	−1.2	3.5	1.3	—
Large	Small	0.3	0.0	−1.9*	−1.4*	−1.4	−3.6	0.4	−0.8	—
Violence/trauma[a]	No violence/trauma	3.3*	4.0*	4.6*	7.3*	8.5*	1.1	6.6*	7.7*	6.0
Safety[a]	No safety	−5.3*	−5.0*	−4.8*	−4.6*	−4.1	−5.8	−6.2*	−2.0	—
Work capacity[a]	No work capacity	−2.1*	−3.8*	−2.6*	−4.3*	−3.0	−2.9	−7.0*	−1.2	−9.0*
Friend support[a]	No friend support	−4.3*	−3.4*	−4.3*	−4.2*	−3.8*	−5.6*	−2.8	−5.8*	—
Sleep[a]	No sleep	−3.8*	−4.4*	−2.5*	−4.5*	−4.9*	−6.9*	−6.6*	−5.9*	−7.5
Information[a]	No information	−2.8*	−1.0	−3.7*	0.6	−4.0	−5.7	−6.9	−1.9	—
		Correlations (r) between psychological distress (K6) and predictors								
Recovery markers[c]		−.63	−.65*	−.68*	−.63*	−.52*	−.74*	−.62*	−.21	−.89*
Social connectedness[c]		−.56*	−.40*	−.41*	−.45*	−.47*	−.45*	−.61*	−.70*	.79

Note. t tests and one-way ANOVA results represent mean K6 scores. Correlation is Pearson's r.
Tests used: [a] t tests.   [b] one-way ANOVA.   [c] Pearson's (r) correlations.
* At this time point, the outcome differed by this category with a significant level of $p < .05$.

were significantly correlated with less severe psychological distress. No significant relationship was found between psychological distress and housing.

Finally, reports of bothersome symptoms were significantly related to drug use, history of violence/trauma, four QOLI-VB items (safety, sleep satisfaction, work capacity, and friend support), psychological distress, proportion of recovery markers endorsed, and social connectedness (see Table 4). Participants who did not report drug use reported an absence of bothersome symptoms more often than those who did report drug use (71.4% vs. 24.1%, respectively, at 24 months), and those who had not experienced violence or trauma reported an absence of bothersome symptoms more often than those who had experienced violence or trauma (71.4% vs. 22.4%, respectively, at 12 months). Participants who felt safe, satisfied with their capacity to work, supported by friends, and satisfied with their sleep reported experiencing significantly fewer bothersome symptoms. Participants who experienced fewer bothersome symptoms also experienced less severe psychological distress, endorsed a higher proportion of recovery markers, and had a greater sense of social connectedness. No significant relationship was found between bothersome symptoms and housing.

Mixed Models

Base models of overall health, psychological distress, and bothersome symptoms included housing, baseline outcome measures, and time. Again, because of the issues with follow-up among the comparison group, estimates of the effect of housing on outcomes were only quantified at baseline, 6-month reassessment, and 12-month reassessment.

Before controlling for other factors, housing was associated with good to excellent overall health at 6- and 12-month reassessments, although the relationship was not significant (see Table 5). Psychological distress was lower among those who received housing at the 6-month reassessment, but higher at the 12-month reassessment. However, the relationship between housing and psychological distress was not significant. Housing was associated with absence of bothersome symptoms at the 6-month reassessment but

Table 5

Generalized Linear Mixed Models of the Effect of Housing on Three Health and Mental Health Outcomes

	Time point		
Model	Baseline	6 months	12 months
OR of having good to excellent overall health			
Base model ($n = 236$)[a]	1.00	2.12	4.33
Final model ($n = 149$)[b]	0.94	3.11*	47.84
Difference of means of psychological distress (K6)			
Base model ($n = 224$)[a]	0.0	−0.8	0.5
Final model ($n = 196$)[c]	0.0	−0.5	1.7
OR of having no bothersome symptoms			
Base model ($n = 237$)[a]	1.00	1.16	0.43
Final model ($n = 204$)[d]	0.92	0.77	0.36

[a] Base model includes receipt of housing, the outcome at baseline, time, and interactions of time with the outcome at baseline and receipt of housing. [b] Model includes the additional variables of race/ethnicity, primary diagnosis, social connectedness, psychological distress (K6), availability of information, satisfaction with sleep, recovery, and employment. [c] Model includes the additional variables of gender, race/ethnicity, drug use, history of violence or trauma, primary diagnosis, social connectedness, overall health, bothersome symptoms, satisfaction with housing, recovery, feeling of safety, satisfaction with sleep, work capacity, and support of friends. [d] Model includes the additional variables of gender, alcohol use, drug use, history of violence or trauma, social connectedness, psychological distress, satisfaction with housing, recovery, feeling of safety, and satisfaction with sleep.
* At this time point, the outcome differed by housing with a significant level of $p < .05$.

associated with the presence of bothersome symptoms at the 12-month reassessment, although neither of these relationships was significant.

After building models that included demographic, psychosocial, and clinical variables that were significantly correlated with outcomes or that modified the relationship between housing and outcomes, housing was significantly associated with good to excellent overall health at the 6-month reassessment (OR = 3.11,

Table 4

Association of Psychosocial and Clinical Characteristics Without Bothersome Symptoms (N = 237)

		Time point (months)								
Characteristic	Reference	Baseline	6	12	18	24	30	36	42	48
Relative ratio of participants without bothersome symptoms										
Housed[a]	Not housed	1.22	1.33	0.74	—	—	—	—	—	—
Drug use[a]	No drug use	0.70	0.91	0.84	0.41*	0.34*	0.41	0.53	0.60	0.40
Violence/trauma[a]	No violence/trauma	0.34*	0.57	0.31*	0.44	0.38	0.50	0.64	0.20	0.25
Safety[a]	No safety	2.61*	2.72*	2.57	1.94	—	—	2.63	—	—
Work capacity[a]	No work capacity	2.30*	1.91*	1.12	3.40*	0.89	2.18	3.81*	3.00	—
Friend support[a]	No friend support	5.66*	1.85*	2.18*	2.11	3.57*	3.20	3.81*	—	—
Sleep satisfaction[a]	No sleep satisfaction	2.39*	2.48*	2.51*	2.51*	2.20	2.38	1.90	6.00	—
Difference of means for participants not experiencing bothersome symptoms										
Psychological distress (K6)[b]		−5.55*	−5.35*	−4.59*	−5.02*	−5.18*	−5.76*	−3.95*	−5.50	−9.00*
Recovery markers[b]		27.6%*	23.6%*	16.4%*	17.6%*	15.1%*	25.0%*	27.8%	27.5%*	8.7%
Social connectedness[b]		4.18*	2.01*	1.00	1.90*	1.88	0.88	2.77*	5.63*	0.00

Tests used: [a] χ^2 test/Fisher exact test. [b] t tests.
* At this time point, the outcome differed by this category with a significant level of $p < .05$.

95% CI [1.12, 8.66]). This positive relationship remained at the 12-month reassessment, but it was not significant. Housing was still associated with lower psychological distress at the 6-month reassessment and associated with higher psychological distress at the 12-month reassessment, but neither relationship was significant. Housing was associated with the presence of bothersome symptoms at the 6- and 12-month reassessments, but these relationships were also not significant. None of the three outcomes differed significantly at baseline for the housing and comparison groups.

In the final model of overall health, having information necessary for daily life ($OR = 0.36$, 95% CI [0.16, 0.80]) and satisfaction with sleep ($OR = 0.41$, 95% CI [0.23, 0.74]) were each significantly associated with fair to poor health. This model also controlled for race/ethnicity, primary diagnosis, social connectedness, psychological distress, recovery, and employment. Overall health did not change significantly over time for the housing or comparison group. However, there is evidence of an improvement of overall health within the group that received housing at the 6-month ($OR = 1.34$, 95% CI [0.29, 6.23]) and at the 12-month reassessments ($OR = 1.31$, 95% CI [0.28, 6.16]) compared with baseline and a decrease in overall health within the comparison group at the 6-month ($OR = 0.41$, 95% CI [0.02, 8.64]) and 12-month reassessments ($OR = 0.03$, 95% CI [<0.01, 32.83]).

In the final model of psychological distress, Hispanic participants of any race had significantly higher psychological distress scores than White, non-Hispanic participants (difference of Ms = 1.0, 95% CI [0.3, 1.6]). The model also controlled for gender, drug use, history of violence/trauma, primary diagnosis, social connectedness, overall health, bothersome symptoms, satisfaction with housing, recovery, feelings of safety, satisfaction with sleep, work capacity, and support of friends. For the housing and comparison groups, psychological distress decreased significantly from baseline to the 6-month (not housed difference of Ms = −2.5, 95% CI [−4.3, −0.8]; housed difference of Ms = −3.0, 95% CI [−4.3, −1.8]) and 12-month reassessments (not housed difference of Ms = −4.7, 95% CI [−8.2, −1.1]; housed difference of Ms = −3.0, 95% CI [−4.5, −1.6]).

In the final model of bothersome symptoms, male gender ($OR = 2.56$, 95% CI [1.52, 4.30]), satisfaction with housing ($OR = 2.45$, 95% CI [1.31, 4.60]), recovery ($p = .0006$), and satisfaction with sleep ($OR = 1.80$, 95% CI [1.05, 3.09]) were significantly associated with absence of bothersome symptoms. However, feeling of safety ($OR = 0.36$, 95% CI [0.15, 0.83]), alcohol use ($OR = 0.54$, 95% CI [0.33, 0.89]), and psychological distress ($p < .0001$) were significantly associated with presence of bothersome symptoms. The model also controlled for history of violence/trauma, social connectedness, and satisfaction with housing. The presence of bothersome symptoms did not change significantly over time for the housing or comparison group.

Discussion

This study found evidence for improved overall health and decreased psychological distress among individuals who received housing compared with those who just received services under the PSH model. Although not all of these correlations were found to be statistically significant within 1 year of follow-up, the relationship between housing and overall health was significant at 6-month follow-up ($OR = 3.11$). The size of housing units had a significant correlation with psychological distress. Those in large units reported the least psychological distress. Furthermore, those who were satisfied with their housing reported significantly fewer bothersome mental health symptoms ($OR = 2.45$). These results imply that not only does receiving housing correlate with better overall health, but also that the quality and type of housing impacts mental health. This finding underscores the importance of client choice within PSH implementation (Tsemberis & Eisenberg, 2000; Tsemberis et al., 2004).

The impact of PSH on mental health has been documented (Edens, Mares, & Rosenheck, 2011; Leff et al., 2009). For example, Martinez and Burt (2006) found a significant decrease in the number of psychiatric emergency department visits among 236 adults who entered a PSH program in San Francisco. In our study, psychological distress decreased significantly among all clients enrolled in the HH program, but it was not significantly related to housing per se once other psychosocial variables were accounted for. Although this finding is difficult to interpret without a control group (e.g., homeless individuals not enrolled in a PSH program), it might speak to the value of wrap-around services regardless of housing and perhaps even to the value of services delivered by PSWs. Although the impact of PSWs on mental health outcomes and retention in services is growing, further research on the value of peer-delivered services within the PSH model is needed (Cook et al., 2012; Sells, Davidson, Jewell, Falzer, & Rowe, 2006). Overall health and bothersome symptoms did not change significantly over time for either group, but there was a trend toward improvement of overall health within the group that received housing at the 6-month and at the 12-month reassessments that is not seen in the group that did not receive housing. However, these changes were not significant, potentially because of the small number of study participants and resulting lack of adequate power to find a significant change over time.

The diverse community in which this study was conducted allowed the analysis of several demographic, psychosocial, and clinical characteristics that contribute to health and mental health. The bivariate analysis of the association of these characteristics with health and mental health found that all three outcomes were significantly associated with quality of life indicators, recovery, and social connectedness. In addition, overall health was significantly associated with employment, age, and psychological distress; psychological distress was associated with gender, type of housing, and history of violence or trauma; and experiencing bothersome symptoms was associated with drug use, history of violence or trauma, and psychological distress. Race/ethnicity was not associated with psychological distress in the bivariate analysis; however, after controlling for other characteristics in the multivariable model, Hispanic participants of any race had significantly higher psychological distress compared with White, non-Hispanic participants. Previous studies on homeless populations have noted that minority populations have poorer outcomes than their White counterparts. This implies that structural racism may be a present and influential barrier to positive outcomes (Bernet, Warren, & Adams, 2015; Goldfinger et al., 1999; Newman, 2001; West, Patterson, Mastronardi, Brown, & Sturm, 2014).

The strengths of our study include a relatively large ethnically diverse community-based population. The use of mixed models to evaluate the three outcomes of this study accounted for the corre-

lations between repeated measures within each participant; the baseline measures of participants; and several demographic, psychosocial, and clinical characteristics known to impact health and mental health. In addition, mixed models allowed the inclusion of all repeated measures in the analysis, regardless of the length of time each participant remained in the study. Furthermore, our documentation of high fidelity throughout the study strengthens our findings.

The limitations of the study include the examination of only correlates for which data were available and the reliance on self-reported data. The accuracy of self-reported data is always questionable, especially when respondents are asked to report about events that may be highly sensitive (e.g., experiences with trauma) or behaviors that may be perceived as unfavorable (e.g., substance use; Crisanti, Laygo, Claypoole, & Junginger, 2005; Crisanti, Laygo, & Junginger, 2003; Fowler, Blackburn, Marquart, & Mullings, 2010). Aside from the RMS and K6, we relied on data collected from instruments with little or no established psychometric properties (e.g., the NOM and QOLI). We did not control for the number and type of services that participants received, which undoubtedly impacts outcomes. Another limitation is that the effect of housing on outcomes could only be assessed for 1 year beyond enrollment into the HH program. The finding that follow-up interviews beyond 12 months were only completed on participants who, through the HH program, remained in housing or were housed was unexpected and noteworthy. Although there were many reasons for discharge from the HH program, for those participants with discharge information, no contact in the past 90 days was substantially more often listed as the reason for discharge among those who did not receive housing services (70.2%) than among those who did (24.4%). Once discharged from the HH program, follow-up interviews were also terminated. This finding suggests the value of housing in keeping participants engaged in clinical services. Future research should explore whether the provision of housing services increases engagement and participation in PSH. Finally, with case management services being delivered by people with lived experience and the amount of direct service contact being slightly below productivity standards (i.e., 50% vs. 60%), the generalizability of findings to other evaluations of PSH may be limited.

This is the first study to examine the impact of housing within the context of the PSH model delivered by peers on health and mental health over time. One significant challenge with PSH, which typically serves individuals with little or no income and disabilities, is the lack of rental subsidies. This was especially true in Santa Fe, New Mexico, during the study. Eligibility for the subsidies was determined by the funding agencies. For housing authorities and those organizations funded by HUD, priorities or preferences were established, such as being chronically homeless or being low-income, single-adult families, which often resulted in being placed on very long waiting lists. Other lists were short enough that housing was obtained within a few weeks or months. Under the HH program, 145 participants received housing (61.2%) among the 237 enrolled during the 5-year study.

Only six participants without housing completed 12-month follow-up interviews, compared with 92 participants who were housed. The lack of statistical significance at 12-month follow-up may have been a result of low power. For example, the OR of the effect of housing on overall health was 47.8 at the 12-month reassessment, but the *p* value was 0.25. With a higher number of participants without housing services at that time period, it is possible that this result would have been significant, as it was at 6 months. In addition, it should be noted that 46 participants (31.7%) who received housing services were housed more than once during the program. These events were not taken into account during the analysis and may have had a negative impact on outcomes among the housing group, as seen in the 12-month reassessment of psychological distress and bothersome symptoms. Participants were rehoused between 27 days and 4 years from the date they first received services, with 56.5% rehoused within 1 year.

Despite a growing body of evidence for PSH as a health intervention, there remains some level of ambiguity as to the specific components of and differences between similar housing models. Researchers have called for studies on the mechanisms that make PSH effective (Rog et al., 2014). Consistent with the core value of the HF model, findings from this study indicate that housing is a key component of PSH, especially as it relates to overall health. Unfortunately, limited access to affordable housing and housing vouchers are major barriers to ensuring that individuals are able to quickly obtain housing. According to the National Low Income Housing Coalition (2005), federal support for low-income housing has fallen 49% between 1980 and 2003. Therefore, states would benefit from reviewing current policies regarding mandates for affordable housing and ensuring that they plan for low-income housing. In addition, the number of accessible vouchers should be reviewed in comparison with the need in the target population to ensure that supply can meet demand.

The results from this study provide new evidence on the impact of housing on overall health within a PSH program delivered by PSWs. The number and role of PSWs providing services in behavioral health-care systems has substantially increased in the United States in the past 20 years because (a) reimbursement of peer support services under the Medicaid program has been authorized, (b) recovery-oriented behavioral health systems have been increasingly emphasized, and (c) a growing body of literature now demonstrates the effectiveness of peer-delivered services for behavioral health care (Bassuk, Hanson, Greene, Richard, & Laudet, 2016; Chinman et al., 2014; Davidson, Bellamy, Guy, & Miller, 2012; Fuhr et al., 2014; Lloyd-Evans et al., 2014; Repper & Carter, 2011). Although PSWs have demonstrated effectiveness in the delivery of services, such as Wellness Recovery Action Planning (WRAP) and case management (Cook et al., 2012; Sells et al., 2006), this is the first study to report the potential role and value of PSH delivered by those with lived experience. Whenever possible, PSWs addressed issues that impeded access to housing (e.g., credit history, arrears, and legal issues) and helped negotiate manageable and appropriate lease agreements with landlords. PSWs helped participants adopt and learn coping skills for fulfilling responsibilities of tenancy and guarding against eviction, including conflict resolution, personal financial management, bill paying, "good neighbor" skills, and upholding lease agreements. PSWs jointly worked with participants to triage and problem-solve threats to permanent housing stability. PSWs monitored housing stability for all clients who were housed. PSWs were available for all clients regardless of housing status to respond immediately to crisis by extending support and other interventions utilizing mental health, substance use,

developmental or medical intervention, and treatment competencies and resources. PSWs helped those with chronic health conditions or physical disabilities get assistance with their home modifications and/or personal care needs. Through focus groups with some of the participants ($n = 14$), we learned more about the benefits of receiving services from a PSW. Participants reported that PSWs gave them hope and that they were encouraging and supportive. Participants strongly believed that working with a PSW was essential to their recovery. One participant stated that "PSWs come from where you come from. They know the tricks of the trade. They identify with you when you relapse. They don't judge you, they don't look down on you." Another participant stated, "I would rather work with someone who understands me—doesn't matter to me if they have degrees or not—if they have degrees but know nothing about what I have gone through then that doesn't really help me." Future research on the value of peer-delivered services is needed, especially within the context of PSH.

Future Research Directions

Future research should consider a more comprehensive measure of social and recovery factors, which can take into account a more objective measure of neighborhood safety, hours of sleep obtained, and availability of information for daily living. In this study, several variables were used to measure social connectedness, recovery markers, psychological distress, and quality of life, which, when used together, were difficult to individually interpret. Future research should continue to examine each of the core components of PSH to fully understand which aspects have the greatest impact on wellness and housing success. Only then can we start to prioritize services to ensure consistent positive outcomes. In addition, research should compare the implementation of PSH by PSWs versus behavioral health professionals. Our focus groups indicated that the relationship with a peer was critical in housing success. It would be important to have data supporting this relationship to ensure that policy matches the needs of those served by the program.

Clinical Implications

Findings from this study have significant clinical implications. Although not surprising, the finding that housing appears to be the key ingredient to mental health and health outcomes suggests the need to rethink protocols for entry into and movement through services. It appears that securing housing should be seen as the top priority for many individuals, and once housing is secured, individuals can then fully engage in recovery-oriented support services, such as primary care, behavioral health, and peer support. This can be challenging when critical health issues, chronic substance abuse, and/or psychosis is present. Historically, many housing programs have required abstinence, medication management, and/or treatment of critical health issues before participating in housing. We now know that living on the streets or transitional living negatively impacts all of these issues. Thus, programs would benefit from reviewing their policies to ensure that individuals who are in need of housing gain access to housing as a first step toward recovery.

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