Drug and Alcohol Dependence 146 (2015) 24–29

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

The impact of a Housing First randomized controlled trial on substance use problems among homeless individuals with mental illness

Maritt Kirst[a,b,*], Suzanne Zerger[a], Vachan Misir[a], Stephen Hwang[a,c], Vicky Stergiopoulos[a,d]

[a] Centre for Research on Inner City Health, St. Michael's Hospital, 30 Bond St., Toronto, ON, Canada M5B 1W8
[b] Toronto Central Community Care Access Centre, 250 Dundas St. W., Toronto, ON, Canada M5T 2Z5
[c] Department of Medicine, University of Toronto, 200 Elizabeth St., Toronto, ON, Canada M5G 2C4
[d] Department of Psychiatry, University of Toronto, 250 College St., 8th floor, Toronto, ON, Canada M5T 1R8

ARTICLE INFO

Article history:
Received 20 September 2014
Received in revised form 18 October 2014
Accepted 20 October 2014
Available online 28 October 2014

Keywords:
Homelessness
Substance use
Mental illness
Housing First

ABSTRACT

Background: There is strong evidence that Housing First interventions are effective in improving housing stability and quality of life among homeless people with mental illness and addictions. However, there is very little evidence on the effectiveness of Housing First in improving substance use-related outcomes in this population. This study uses a randomized control design to examine the effects of scatter-site Housing First on substance use outcomes in a large urban centre.
Methods: Substance use outcomes were compared between a Housing First intervention and treatment as usual group in a sample of 575 individuals experiencing homelessness and mental illness, with or without a co-occurring substance use problem, in the At Home/Chez Soi trial in Toronto, Canada. Generalized linear models were used to compare study arms with respect to change in substance use outcomes over time (baseline, 6, 12, 18 and 24 month).
Results: At 24 months, participants in the Housing First intervention had significantly greater reductions in number of days experiencing alcohol problems and amount of money spent on alcohol than participants in the Treatment as Usual group. No differences between the study arms in illicit drug outcomes were found at 24 months.
Conclusions: These findings show that a Housing First intervention can contribute to reductions in alcohol problems over time. However, the lack of effect of the intervention on illicit drug problems suggests that individuals experiencing homelessness, mental illness and drug problems may need additional supports to reduce use.
Trial Registration: Current controlled trials ISRCTN42520374.

1. Introduction

The prevalence of homelessness in many Canadian cities continues to rise, despite the development of services targeting this issue. Research has shown that the prevalence of mental illness and addictions is higher among homeless individuals than in the general population, and that homeless individuals often have complex unmet service needs (Fischer and Breakey, 1986; Goering et al., 2011; Padgett et al., 1990). Studies have found that 25–70% of homeless individuals have co-occurring mental health and substance use problems (Collins et al., 2012; Drake et al., 1991; Padgett et al., 2006; Palepu et al., 2013a,b; Street Health, 2007), and co-occurring substance use presents a considerable hindrance to mental health recovery (Padgett et al., 2011). This subpopulation of homeless individuals is particularly vulnerable, and is more likely to experience chronic physical illness, premature death, longer length of time homeless, and poor treatment retention (Palepu et al., 2013a,b).

1.1. Housing First

Housing First (HF) is an intervention designed to address the unique needs of this subpopulation; it provides permanent

* Corresponding author at: Toronto Central Community Care Access Centre 250 Dundas St. West, Toronto, ON, M5T 2ZS Canada. Tel.: +1 416 217 3820x2551.
E-mail address: maritt.kirst@utoronto.ca (M. Kirst).

http://dx.doi.org/10.1016/j.drugalcdep.2014.10.019
0376-8716/

housing without prerequisites for abstinence or treatment, and access to supportive health services. This approach contrasts with more traditional supportive housing models that require sobriety and engagement in mental health treatment before consumers are deemed "housing ready" (Tsemberis et al., 2004). Operating from a harm reduction philosophy, the HF approach posits that providing housing to homeless individuals with mental illness first provides the foundation, stability and safety necessary for consumers to move towards recovery (Tsemberis et al., 2004). Several research studies have supported its designation as an "evidence-based practice," showing consistently positive outcomes on residential stability, reductions in cost of public services, and improved quality of life (Padgett et al., 2006; Pearson et al., 2009; Perlman and Parvinsky, 2006; Tsai et al., 2010; Tsemberis et al., 2004). Researchers continue to caution, however, that variation in HF programs, lack of consistent fidelity measures, and methodological constraints weaken the current knowledge base, and recommend more research seeking clarity about its effectiveness for specific subpopulations (Groton, 2013; Kertesz et al., 2009; Mark, 2014).

In particular, there is no consistent evidence regarding the effectiveness of HF for individuals with active substance use problems. Authors reviewing comparative trials involving HF concluded that "for homeless individuals with a prominent and active problem of addiction, the data on HF are mixed and unsettled," arguing that most of the program studies have served individuals experiencing chronic homelessness but whose "severity of substance misuse" has been moderate" (Kertesz et al., 2009). Variability in measurements of substance use contributes to mixed findings, though it is widely acknowledged that assessing substance use with dually diagnosed or homeless persons is especially complicated (Sacks et al., 2003).

Though one of the most consistent outcomes has been HF's positive impact on housing stability and retention, varied effects of substance use on mediating that outcome emerge in the research literature. One study, for example, found consumers without a substance use diagnosis were much more likely to achieve consistent stable housing than those with a diagnosis, especially those with both alcohol and drug problems (Hurlburt et al., 1996). Other studies have similarly echoed the impact of substance use on predicting shorter tenure in housing (Collins et al., 2013; Lipton et al., 2000; Wong et al., 2006), though others taking substance use into account have found significant differences in housing outcomes (Edens et al., 2011; Palepu et al., 2013a,b; Pearson et al., 2009).

Effects of HF on substance use outcomes remain unclear. One recent review of the five most rigorous HF studies concluded that the majority found neither HF nor the control group programs decreased substance use (Groton, 2013), affirming the same conclusion from an earlier review (Kertesz et al., 2009). A recent study using interactional analysis suggested these effects "may not be universal across subgroups;" these authors found, for example, that African American veterans in the HF program had greater reductions in severity of drug problems than Caucasians (O'Connell et al., 2012). Another study assessing differences in substance use outcomes between HF and Treatment First (i.e., temporary congregate housing with prerequisite of detoxification/sobriety and 'housing readiness') participants using qualitative data, found that participants who received treatment first were more likely to use drugs and/or abuse alcohol 12 months after program entry than HF participants (Padgett et al., 2011). Studies based on an HF program in Seattle serving chronically homeless persons with severe alcohol problems found steady decreases in daily alcohol use, reductions in median number of drinks and number of days intoxicated among the intervention group (Collins et al., 2012; Larimer et al., 2009).

1.2. The At Home/Chez Soi project

In 2009, the Mental Health Commission of Canada initiated the At Home/Chez Soi project, a multi-site randomized controlled trial to assess the effectiveness of scatter-site HF in the Canadian context (Goering et al., 2011; Hwang et al., 2012). The mixed (quantitative and qualitative) methods study followed participants for two years post enrolment. The At Home/Chez Soi project was implemented across five cities in Canada–Moncton, Montreal, Toronto, Winnipeg and Vancouver. Inclusion criteria for the study were: aged 18 or older; absolutely homeless or precariously housed status; the presence of a mental health disorder with or without a co-occurring substance use disorder, as determined by the Mini International Neuropsychiatric Interview (MINI 6.0; Goering et al., 2011). At Home/Chez Soi project participants were randomized to either scatter-site HF or 'Treatment as Usual' (TAU). Participants in the HF intervention received choice in the location of housing across the city, a rent supplement, and mental health service supports according to their level of need. In the Toronto site, 97 participants were randomized to an intervention designed for those with high service needs (housing + assertive community treatment), 204 were randomized to a moderate needs intervention (housing + intensive case management), and 274 were randomized to the TAU arm. Those randomized to the TAU arm received no specialized services but received information materials about services available in the community. Moderate needs participants who identified as ethnoracial were provided with the option to participate in an ethnoracial-ICM intervention (ER-ICM—specific to the Toronto site of the project). A description of the study intervention arms has been published elsewhere (Goering et al., 2011). Study participants were classified as high or moderate need using criteria that correspond to Section 3 of the Ontario Standards for Assertive Community Treatment teams (Goering et al., 2011). All other study participants were classified as moderate need.

This study examines the effect of HF on substance use outcomes by comparing scatter-site HF and treatment as usual for a population of homeless adults with mental illness in Toronto, Canada. We examined the impact of the HF intervention on both alcohol and drug use problems, and addressed the following research question: are there differences in substance use (alcohol and illicit drug) outcomes between the HF intervention group and TAU group over time? We hypothesized that participants in the HF intervention arms would have greater reductions in substance use problems over time than participants in the TAU group.

2. Materials and methods

2.1. Data collection

Participants in both study arms completed surveys at baseline, and at 3 month intervals up until 24 months after enrolment to assess changes by study arm in such outcomes as mental health, substance use, social functioning, community integration, and criminal justice system involvement. Participants were also asked about sociodemographic characteristics at baseline. Interviews were conducted by trained interviewers in the project office or in participants' homes. Interviews were conducted between 2009 and 2013. Written consent was received from all study participants. The follow-up rate for the sample at 24 months was 80%. Ethics approval was received for the study from the St. Michael's Hospital Research Ethics Board.

2.2. Study measures

Outcome Variables: Substance use problem outcome variables included the global assessment of individual need–substance dependence scale short screener (GAIN-SS; Dennis et al., 2006), and four questions derived from the Addiction Severity Index (ASI; McLellan et al., 1992). The GAIN-SS consisted of five questions to determine participants' severity of substance use problems (such as getting into fights, problems at work, dealing with withdrawal symptoms) in the 'past month', '2–12 Months' or '1 or more years.' Using these questions, the GAIN past month score is calculated by counting the number of times the participant identified that they had these problems in the last month. The resulting score has a range from 0 to 5 with