Evidence-Based Supported Employment for People with Mental Illness Recently Housed by a Housing First Project: Helping Homeless People Achieve their Goals of Employment.

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Contents

Brief Abstract

People with mental illness, recently housed by a Housing First program, experience rates of unemployment exceeding 95%. A large majority would like to return to employment, but face significant obstacles that result from their experiences of homelessness and mental illness. Some of these obstacles persist after they receive housing support, suggesting that they require assistance attaining their employment goals. Individual placement and support (IPS) is effective at increasing employment rates among stably-housed people with mental illness. Less is known about the impact of IPS on homeless people with mental illness. This mixed methods study was undertaken to evaluate the effect of IPS and Housing First on employment and includes three datasets (two quantitative and one qualitative). It is from these datasets that the content of this thesis is derived: 1) A large dataset of 2148 participants from the At home/ Chez Soi Housing First randomized controlled trial (RCT). 2) A site-specific sample of 90 participants from an RCT testing the effect of IPS. And 3) a sample of 27 participants interviewed as part of the qualitative strand. Dataset 3 was obtained from a subsample of dataset 2, which was a subsample of dataset 1. The randomized control trials of IPS and Housing First suggest that neither alone is sufficient to significantly increase peoples' odds of obtaining employment compared with usual services, but that IPS does increase the odds slightly to a statistically significant extent. With time Housing First does have an impact, but the odds remain lower than those observed in the control group. The effect of IPS may have been diluted by problems related to implementation and homelessness. Qualitative interviews suggest that IPS appears to have beneficial effects on participants' search for employment by facilitating the establishment of trusting working alliances.

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A project of this complexity and breadth would not have been possible without the support and contribution of a large multi-disciplinary team.

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As for what concerns the data analysis, I was responsible for the coding of the programs used to analyse the data. I was also responsible for the selection of methods employed to analyse the data. However, the speed and sophistication of the analyses would not have been possible

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Contribution of Authors

	D. Poremski	E. Latimer	R. Whitley	D. Rabouin	J. Distasio	S. Hwang	V. Stergiopoulos	R. Nisenbaum	E. Braithwaite
Literature review	80%	20% editing							
Employment at baseline, national data	70%	20% editing, ideas			5% ideas, content	5% editing, ideas			
Barriers to employment while homeless	65%	20% editing, ideas	15% methods analysis						
Effect of Housing First, national data	55%	20% editing, ideas			5% editing, ideas		5% editing , ideas	10% ideas methods, analyses	5% analyses
RCT of supported employment	60%	30% design implementation methods editing		10% data analysis					
Trust in supported employment	75%	10% editing	15% methods analysis						

Sections

The following seven sections are, collectively, intended to give a comprehensive answer to the question "Is evidence-based supported employment, also known as individual placement and support (IPS), effective in a group of people who have mental illness and have recently been housed by a Housing First program?" To answer this question, we have used data from the At Home/ Chez Soi project. The project tested the effect of scattered-site Housing First on various outcomes of homeless people with mental illness in five Canadian cities. Each city had its own set of sub-studies in addition to the Housing First study. In Montreal, one of the sub-studies was a randomized controlled trial of IPS, the central focus of this doctoral thesis. What follows is a brief synopsis of the content of each section, designed to give a quick glimpse of each section's content. Sections 2 to 6 have or will be published in peer reviewed journals.

1) Literature review

Very few studies exist to inform practitioners about which service is best to help people with mental illness and recent histories of homelessness attain their goals of employment. One approach that may possibly be effective is IPS. A meta-analysis suggests that IPS could be as effective for people with experiences of homelessness as for other people. But quasi-experimental studies that have tested IPS directly found mixed results, indicating improvement that are inferior to those seen in stably-housed samples. There is evidently a need for a rigorously conducted experimental study testing the efficacy of IPS for this population.

The literature that does exist documents numerous barriers to employment among people who have been homeless without a mental illness, and people who are stably-housed with a mental illness. There is therefore a need to examine the intersection of these two groups to determine

how barriers resulting from homeless and mental illness interact to impede peoples' return to employment.

2) Income and employment rates of homeless people

A few studies document the desire for employment among homeless people with mental illness. Most estimates come from small surveys or American sources. In this article, we describe the characteristics of a sample of people who have a mental illness and are homeless, their employment rate, the composition of their monthly income, and their desire for paid work in the community.

Results indicate that, depending on location, 64% to 82% of people would like paid employment in their community. Rates of unemployment range from 93% to 98%. The majority relied on social support, but remained significantly below the poverty line. Very few report income from illicit or criminal activity.

There is, therefore, a large unmet need for assistance returning to competitive employment. Services that increase employment rates can assist people attain their goal of employment, improve their financial independence and reduce the financial cost to provincial coffers.

3) Barriers to employment while homeless

Difficulties participants experienced when trying to return to employment are linked to homelessness, mental illness, and, sometimes, their interaction. Substance use, having a criminal record, work-impeding shelter practices and difficulties obtaining psychiatric care all interfere with people's search for employment while they were homeless. These findings inform employment specialists of the challenges their clients need to overcome to return to employment.

4) Housing First's influence on employment and income

Since being homeless has been shown to impede people's search for employment, it is reasonable to expect that the provision of housing may reduce these obstacles and increase rates of employment. To explore this hypothesis, analyses were conducted to isolate the influence of Housing First on vocational outcomes of all participants in the At Home /Chez Soi study.

Results suggest that, for the moderate needs groups, the odds of obtaining competitive employment increased with time. However, the odds of obtaining competitive employment remain lower than the odds observed in the TAU group. Those employed at baseline, men, and younger participants had greater odds of obtaining employment. HF appears to have an impact on earnings from government support for moderate needs participants, but not on other types of income. It is possible that the lower odds of obtaining competitive employment is due to the provision of rent subsidies and increased government support, which may reduce the financial burden of unemployment.

5) RCT of supported employment

A trial of IPS attempted to test the effect of IPS on vocational outcomes. Results suggest that people receiving IPS had greater odds of finding work. However, other vocational outcomes, such as the number of hours worked and the wages received, were not different between groups. These finding must be interpreted with a few other findings in mind, namely the implementation difficulties related to selecting employment specialists ready to work with recently homeless people, and the participants wavering desire for work, which influenced engagement. The increased complexity of recent homelessness, both for employment specialists

and participants, therefore reduced the effectiveness of IPS. Additionally, the effect size used to determine sample size may have been overestimated, leading to reduced power of the study.

6) Development of working alliances in IPS

The influence of IPS was quite prominent in the narratives of participants, obtained through qualitative interviews. The trust that develops between employment specialists and their clients is quite positive. Through the development of trust, a working alliance facilitates the discussion of barriers to employment and the conception of solutions. This type of relationship was absent in the group receiving usual services, who never dealt twice with the same vocational counselor in usual services. Without the support of a dedicated employment specialist, participants had to rely on their own internal motivation to find work.

7) Conclusion

Participants in our study experience high rates of unemployment despite their desire for employment in their community, the support provided by Housing First, and the support provided by Individual Placement and Support. Supported employment does not appear to have the same effect in people with mental illness recently housed by a Housing First program as it does in stably-housed people. Participants in our study experienced barriers to employment that resulted from their experiences of homelessness that may have made their return to employment difficult. Additionally, implementing IPS services was hindered by challenges related to training and selecting supported employment specialists. These implementation difficulties had the effect of reducing the fidelity and consequently the effectiveness of IPS services. Supported employment, however, does appear to have a positive effect on participants' ability to trust their employment specialists and build a working alliance, a first step

in a successful search for employment. Perhaps, given enough time, the supported employment program may have been able to lead to greater change.

Literature Review

Introduction

Numerous recommendations have been made in the literature to address the problem of disproportionate rates of homelessness among people with mental illness. Strategies include the systematic integration of social and medical care capable of meeting the medical needs of homeless people with mental illness (Bonin, Fournier, Blais, Perreault, & White, 2010; van Laere, de Wit, & Klazinga, 2009), prioritizing housing and social assistance (Burt et al., 2004; Kresky-Wolff, Larson, O'Brien, & McGraw, 2010; Shinn, Baumohl, & Hopper, 2001), and establishing early intervention to prevent newly-homeless people from entering the ranks of the chronically homeless, such as education and employment services (Morrell-Bellai, Goering, & Boydell, 2000; Pickett-Schenk et al., 2002; Shaheen & Rio, 2007). Indeed, research has shown that contact with vocational services reduces future shelter use (Min, Wong, & Rothbard, 2004). All these recommendations can be harmonized into the three-legged stool of care proposed by Bianco and Shaheen (1998). The three legs representing: housing, health care, and employment. It follows that, in domiciled individuals, instability and consequently homelessness can be caused by the loss of one or more of these legs.

All three interconnected components are essential. Research is establishing evidence-based practices for community-based treatments, and for housing support (Burt, 2012; Fichter & Quadflieg, 2006; Fitzpatrick-Lewis et al., 2011; Goering et al., 2011; Nelson, Aubry, & Lafrance, 2007; Tsemberis, Gulcur, & Nakae, 2004). Less information is available to inform practitioners of evidence-based employment services that may be effective in a population that is experiencing or has recently experienced homelessness and mental illness (Long, Rio, & Rosen, 2008). This

paucity persists despite the fact that some have noted its paramount importance (Cook et al., 2001).

The present review intends 1) to highlight supported-employment interventions that serve this population, and 2) to present emerging ideas that warrant further investigation. A review of the benefits of, and barriers to employment will be presented, followed by a brief history of IPS, and its principles. The existing literature will be categorized into three groups based on the focus of the research (supported employment for people with mental illness, vocational services for people who are homeless, and supported employment services for people who have mental illness and have recently been homeless) to facilitate its discussion.

Housing

Housing assistance, as noted above, is important to stabilize people and, as we will see below, to facilitate their return to competitive employment. The diversity of programs is vast and the corresponding research has expanded in recent years. The Housing First program (Tsemberis & Eisenberg, 2000) is among the most heavily researched with evidence favouring it over other models (Gulcur, Stefancic, Shinn, Tsemberis, & Fischer, 2003; Nelson et al., 2007). These programs assist homeless or precariously housed people who also experience severe mental illness (SMI) find and retain housing of their choice. A multidisciplinary treatment team is paired with a housing assistance team. This integration permits for greater stability, better outcomes, and better resource use. Teams differ in their composition and may include employment specialists (Stefancic & Tsemberis, 2007). Streets to homes is another housing-focused program that seeks to place people into stable housing but has less intensive follow-up. It developed to serve a population with mental health care needs that are not as high as those served by the Housing First programs (Falvo, 2009; Tsemberis, 1999).

These programs attempt to correct for the pitfalls of programs following continuum of care principles. These latter programs emphasise housing readiness, sobriety and treatment compliance. Such requirements were difficult to meet, and therefore services did not meet the needs of service-users, but rather imposed upon them. Lifting these restrictions in favour of more flexible housing support resulted in reduced homelessness hospitalization and incarceration, and increased satisfaction and well-being (Nelson et al., 2007).

Supported housing also has the potential to reduce costs associated with homelessness (Culhane, Metraux, & Hadley, 2002; Stefancic & Tsemberis, 2007) and independent living is more cost effective than alternatives (Dickey, Latimer, Powers, Gonzalez, & Goldfinger, 1997).

Scattered site is favoured over congregate housing because it favours social integration and reflects consumer choice (Kresky-Wolff et al., 2010; Weiner et al., 2010).

A side-effect of Housing First relates to social integration. Following transition to a supported housing accommodation, recent evidence suggests that measures of social integration fail to improve. People who were once chronically homeless remain isolated (Tsai, Mares, & Rosenheck, 2012). While this study had a year-long follow up period, arguably too short to observe appreciable changes to patterns of behaviours that establish themselves as survival mechanism (Osborne, 2002), it does demonstrate that housing on its own contributes partially to recovery. Reintegration is an important step in regaining one's sense of belonging and wellness, the absence of which may limit the recovery process (Hopper, 2007). Employment may be a means of simultaneously increasing financial independence and security, and increasing social contact and community inclusion.

Benefits of employment

Work has long been known to have an important effect on mental health. Employment has the potential to improve quality of life, assist on the pathway to recovery, facilitate social reintegration, as well as reduce the risk of further homelessness (Lam & Rosenheck, 2000; Min et al., 2004; Muñoz, Reichenbach, & Hansen, 2005; Perkins, Raines, Tschopp, & Warner, 2009; Ratcliff & Shillito, 1996). It is associated with many benefits, which influence every facet of life (Kirsh, 2000; Larson et al., 2007; Mueser et al., 1997; Strickler, Whitley, Becker, & Drake, 2009). Contrary to the entrenched beliefs of some medical professionals, the added stress of work does not necessarily precipitate relapse. In fact, unemployment may be associated with a worsening of symptoms (Bond et al., 2001; Burns et al., 2009). Additionally, interventions designed to transition people off the street may have more enduring positive effects if they included supported employment services (Tsemberis, 2010).

Rates of employment among homeless

Rates of employment vary depending on the definition of employment and the composition of the population being sampled. Zuvekas and Hill report data collected in the early 1990s from a sample of Californian homeless individuals and note that 52% of their sample of 471 did not work over the six month study period. Fourteen percent worked at least half the days of the study period for at least six hours each work day. The remainder was engaged in work at levels that fall between these two points (Zuvekas & Hill, 2000).

Rosenheck and Mares report slightly different levels of employment in their sample of 629 homeless veterans. Sixty-three percent worked regularly at some point in the three years prior

to study enrolment, whereas 10% had not worked during that same period. Only 56% of participants worked in the 30 days preceding study enrolment (Rosenheck & Mares, 2007).

Other studies report unemployment rates. Burt reports 95% unemployment in the year preceding study enrolment in the LA HOPE program (Burt, 2012). Harrison and colleagues report 97% unemployment at enrolment (Harrison, Moore, Young, Flink, & Ochshorn, 2008). Neither of these studies noted unemployment as an explicit inclusion criterion in their study on vocational services.

The few estimates of employment among homeless people in Canada are relatively similar: Aubry reported that 12.3% of their sample (n=329) were working (Aubry, Klodawsky, & Coulombe, 2011) and almost a decade earlier Morrell-Bellai reported that 14.3% of 330 homeless people were working (Morrell-Bellai et al., 2000). Low employment suggests that this population is unable to meet their monetary needs and that they would benefit from services designed to facilitate their return to stable work.

These rates must be qualified with further information about the desire for employment. Competitive employment is the goal of many people with mental illness, and according to various studies 55% to 78% of participants would like to return to work (McQuilken, Zahniser, Novak, Starks, & Bond, 2003; Ramsay et al., 2011). Studies about the desire to work among people with mental illness and recent histories of homelessness are less common, mostly because researchers have focused on disability-based estimates to characterise the population. Studies that do look at the desire employment suggest that the proportion of homeless people with mental illness who desire work is in excess of 85% (Acuña & Erlenbusch, 2009; Daiski, 2007). Low rates of employment despite the prevalent desire for competitive employment

suggest that people could benefit from assistance to achieve their goals. Supported employment is one program that could provide the necessary assistance.

Supported employment

Diverse approaches have been included under the umbrella of supported employment, such as job development and job support (Leff et al., 2005). For the sake of parsimony the present review will focus primarily on what has repeatedly been shown to be the most effective supported employment program: Individual placement and support (IPS) (Arbesman & Logsdon, 2011; Bond, Drake, & Becker, 2008; Cook et al., 2008). This model has been applied to different groups of people with mental illness, including people with first episode psychosis (Killackey, Jackson, & McGorry, 2008; Rinaldi, Perkins, McNeil, Hickman, & Singh, 2010), older populations (Twamley, Narvaez, Becker, Bartels, & Jeste, 2008), and veterans (Davis et al., 2012; Kerrigan, Kaough, Wilson, Wilson, & Bostick, 2004), however, it has only recently been applied to people with SMI and recent experiences of homelessness. The present review intends to focus on that research, and is not intended to span the full range of interventions designed to facilitate the return to employment of people with SMI and experiences of homelessness.

History

Supported employment arose from a paradigm shift that occurred in vocational rehabilitation services. The vocational rehabilitation services that are the most recent predecessor to IPS can be characterised as “train-place” programs, which emphasise the need for prevocational training. These programs offer skills training, pre-employment readiness programs, sheltered workshops, and other non-competitive positions reserved for people with mental illness. These are designed to get someone who has not worked back into the rhythm of a regular routine.

They intend to provide service-users with the tools needed to transition to competitive employment.

By the early 1990s evidence demonstrated that people were not successfully leaving these services for competitive jobs (Bond, 1992). The failing of these programs can be traced to several systemic traits. Despite the theoretical framework of a stepped program, one in which an individual transitions to different levels of difficulty and support, some service-users were not transitioned to competitive jobs due to the "for-profit" structure of some of these programs. It was not in the program's best interest to graduate its most productive employees if it depended on their productivity for financial survival.

These services were not choice-oriented and people found themselves performing unrewarding tasks that were irrelevant to their goals, enforcing skills with little generalizable value. The consequence of this was low engagement, poor program retention, low service-user interest, segregation, and ultimately, a lack of recovery and reintegration. The lack of interest demonstrated by people engaged in these programs was frequently misinterpreted as poor job readiness, enforcing the false belief that people with mental illness could not work.

These programs still exist, in the form of work-skill training programs. Recently published findings looking at data collected between 1999 and 2007 suggest that a 14-week work-skill training programs, compared to no treatment at all, produce some improvements in employment (Nelson, Gray, Maurice, & Shaffer, 2012). Specifically, they found that, based on a sample of 333 graduates of the program, 51.1% of their graduates had some full-time gainful employment, a 24.4% improvement since baseline ($p<0.05$).

The shift away from these services began with modifications made to services offered to people with developmental disabilities. Wehman and Moon, (1988) detailed a "place-train" approach

that was intended to resolve some of the shortcomings of its predecessor and challenge the entrenched belief that persons with disabilities were unemployable (Wehman & Moon, 1988; Wehman et al., 1991). By placing people into competitive jobs, service providers accomplished several objectives. The placement, as chosen by the individual, is in a field of the service-user's interest, thereby increasing motivation. The elimination of lengthy pre-employment training also capitalizes on initial motivation, reducing the likelihood of attrition due to dissatisfaction with irrelevant activities.

By providing the support and training after the placement, service providers could better tailor their support to develop the skills required by the person's job. When service users agreed to disclose that they were receiving assistance from a third party (it is not necessary to always disclose all the information (Jones, 2011)) employment specialists could also provide support to employers, thereby increasing understanding and reducing stigma in the workplace (Krupa, 2009). These components increase employment stability.

This rehabilitation paradigm was quickly offered to people with SMI (Bond & Dincin, 1986). Spurred on by success, several programs were developed. These varied programs included six universal components that represent improvements over the previous programs: 1) focus on competitive employment, 2) minimal pre-employment screening, 3) elimination of pre-vocational training, 4) individualized services, 5) follow-along support unbound by time constraints, and 6) focus on client choices (Bond, Dietzen, McGrew, & Miller, 1995; Bond, Drake, Mueser, & Becker, 1997). The IPS program represents an attempt to standardize these many services, build upon their successful components, and assure the presence of essential characteristics. In doing so it provided a well-defined model on which to conduct research, and provided a means of replicating its implementation.

Evidence

Individual placement and support is the most researched approach with a robust evidence-base and therefore is the focus of this review. Programs intended to accomplish the same goals as IPS but via different means will be briefly explored to provide perspective. The IPS model has been replicated in multiple countries with varying levels of success (Bond, Drake, & Becker, 2012). In a Canadian context, the first randomized controlled trial of IPS conducted outside of the United-States confirmed that it could be effective in other countries with differing social support structures and employment policies (Latimer et al., 2006). Research has also shown that it can be implemented in Canadian settings that previously offered sheltered workshop programs (Oldman, Thomson, Calsaferri, Luke, & Bond, 2005).

The endurance of the beneficial effects of IPS is supported by sparse but encouraging evidence. A ten-year follow-up of 36 people who received supported employment services between 1990 and 1992 demonstrated that 75% of participants worked beyond the study period, with 33% working at least five years over the last ten (Salyers, Becker, Drake, Torrey, & Wyzik, 2004). The lack of a control group limits this study. As such, it is not possible to determine if the rates of employment are attributable to the involvement with supported employment services, or to continued contact with mental health treatment teams that emphasized the benefits of employment. Only a few participants in this study successfully transitioned from part-time to full-time work.

Another long-term study of supported employment found that after eight to 12 years, 49% of the original sample of 78 participants from two IPS studies (Bailey, Ricketts, Becker, & al., 1998; Drake, McHugo, Becker, & Anthony, 1996) had worked at least once during the study period.

Thirty-five percent worked at least half of the follow-up period with 42% working in competitive jobs (Becker, Whitley, Bailey, & Drake, 2007).

Principles

The IPS model is based on eight guiding principles that developed out of the six mentioned above: 1) Focus on competitive employment, 2) focus on individual preferences for job placement, 3) rapid job search, 4) integration into the mental health care team, 5) zero exclusion criterion, 6) benefits counseling, 7) systematic job development, and 8) continued individualized support. A comprehensive fidelity scale is used to gauge the implementation and adherence to these principles (Bond, Peterson, Becker, & Drake, 2012), and programs with higher fidelity to the IPS model have consistently been linked with better employment outcomes (Bond, Becker, & Drake, 2011). Fidelity items grade the organizations' focus on competitive employment as well as the assistance IPS specialists provide to their clinical teams. The paradigm encourages clinical teams to broaden their view about which client would be suitable for referral to IPS (Drake, Bond, & Becker, 2012). In this way they cultivate an employment-oriented environment that serves those who are ready and plants the seeds in those who are not. The IPS paradigm emphasises the importance of including employment in the treatment plans of all people who express a desire for competitive employment, even if the service-user has not yet been referred to IPS services.

Varying levels of adherence to these principles, and consequently varying levels of program fidelity, is what differentiate high performing programs from less successful ones (Gowdy, Carlson, & Rapp, 2003; Gowdy, Carlson. & Rapp, 2004). For example, a program may possess prevocational training to expose service-users who have not worked recently to employment

that is non-competitive. Such a practice may be actively avoided in another program seeking to place service-users directly into competitive jobs to capitalize on initial motivation.

Criticisms

Criticisms that have been levied against IPS relate to high attrition, low job duration, and the exclusion of participants who do not express a desire to work (Bond et al., 2008; Essen, 2011; Macias, DeCarlo, Wang, Frey, & Barreira, 2001; Mueser et al., 2005; Roberts, 2007). Proponents of the model argue the contrary, and present studies in their support. Attrition rates in the experimental arm of IPS trials are much lower than those of the control groups and range from naught to 18% according to a five study meta-analysis (Bond et al., 2008). As for short job tenure, evidence (Bond & Kukla, 2011) suggests that the first obtained job for participants in high fidelity IPS programs lasts approximately ten months. Additionally, over the 24 month follow-up period, participants receiving IPS services worked, on average, 12.86 months. This figure must be contextualized by noting that 37% of this experimental group, mean age of 40, had never held a competitive job prior to receiving IPS services. Short follow-up periods are an important limitation and produce an artificial censoring of the data, making it impossible to definitively refute the claim that job tenure is brief. However, research examining the durability of the beneficial effects of supported employment services produced encouraging results. McHugo documented that, in a sample of 126 people with mental illness who received supported employment services, the beneficial effect of supported employment on job tenure lasted up to 24 month beyond the 18-month period of intervention (McHugo, Drake, & Becker, 1998).

The criticism of exclusion concerns referral practices. Participants who have not expressed a desire to return to work are not recommended for referral to IPS programs. This is an important criticism given the findings of Macias and colleagues (2001). They found that participants with an initial desire to work did not differ in vocational outcomes compared to participants who had not expressed such a desire, but were given vocational services none-the-less (Macias et al., 2001). The idea that the IPS model systematically excludes participants is a misconception proponents of the model have tried to dispel. As noted above, the principles of IPS include the focus on competitive employment, and high fidelity programs employ vocational specialists who actively seek to advocate for the role of employment in the process of recovery. In this sense, they seek to augment the number of working individuals by encouraging practitioners to discuss the topic of employment with clients who have yet to be referred to vocational services. Indeed, this encouragement differentiates high performing programs from less successful ones (Gowdy, Carlson, & Rapp, 2004).

Barriers to returning to work

The literature has documented many barriers that hinder an individual's return to work. This literature can be divided into two parallel streams. The one focused on homelessness, and the other on mental illness. Supported employment models evolved in the stream focusing on mental illness, and consequently developed tools to deal with the barriers associated with it, but not homelessness. Revisions to the fidelity scale have been made to reflect the finding of new barriers (Bond, Peterson, et al., 2012), but these revisions do not fully address the barriers associated with homelessness.

Barriers attributed to SMI

Waghorn and Lloyd (2005) have exhaustively enumerated the barriers documented throughout the mental health literature. These include cognitive impairments, clinical symptomatological barriers, comorbid disorders, barriers caused by treatment interventions and side-effects, system barriers such as low vocational expectation, stigma present in the workplace, community and health care practitioners, government funding structures and disincentives such as income support, career immaturity, proximity to employment opportunities, and the individual's subjective experiences and personal limitations such as feelings of low self-efficacy and low motivation (Henry & Lucca, 2004; Waghorn & Lloyd, 2005). The presence of criminal records (Tschopp, Perkins, Hart-Katuin, Born, & Holt, 2007) constitute a more frequent barrier as a result of the increasing criminalization of mental illness and survival behaviours (Hawthorne et al., 2012; Peternelj-Taylor, 2008). Any one, or a combination, of these obstacles may hinder someone's return to competitive employment.

Barriers attributed to homelessness

The research that focuses on employment barriers for people with SMI has usually made little distinction between domiciled and homeless people, occasionally including participants within their samples with recent histories of homelessness. Only recently has research turned to exploring the barriers in individuals with a recent experience of homelessness and mental illness (Radey & Wilkins, 2010). This preliminary research suggests that the barriers encountered by homeless people with mental illness are quite similar to those encountered by homeless people without a history of mental. Additionally, mental illness among homeless individuals is quite prevalent (Fazel, Khosla, Doll, & Geddes, 2008; Fournier, Bonin, Poirier, & Ostoj, 2001), so there

is likely to be overlap between samples of people who are, or have recently been homeless and samples of those with mental illness.

Barriers to returning to employment for people with current or recent experiences of homelessness include the dependency and learned helplessness created by the shelter system, poor work records and career immaturity (Morrell-Bellai et al., 2000). Stigma surrounding substance use, and stereotypes of emotional instability and poor coping skills, characteristics that are popularly believed to accompany the experience of living without a home, produce important interactions between the way this population is perceived by employers, and society (Ratcliff & Shillito, 1996; Rutman, 1994). Poor physical health also represents an important barrier, which is magnified by experiences of homelessness (Radey & Wilkins, 2010). The belief that panhandling and under-the-table wages are more profitable represents a barrier to competitive legitimate employment (Daiski, 2007). Frequent underutilisation of services, depending on whether or not they are available, has also been documented as a barrier to employment (Camardese & Youngman, 1996).

The most prominent barriers to returning to employment for people with both experiences of homelessness and mental illness include the stresses of surviving while homeless, and the logistical issues that accompany living without a fixed address or reliable telecommunication services (Mavromaras, King, Macaitis, Mallett, & Batterham, 2011). These barriers all relate to the absence of stable housing.

It is important to consider the terminology used in the discussions about the obstacles to returning to work. Larson and colleagues (2011) devised a tool to evaluate employment commitment (Larson et al., 2011). Following their application and validation of this tool they concluded that items loading onto their incentives scale (increase responsibility, reduce anxiety,

increase problem solving, show people the ability to handle work stress, and reduce depression) were significantly correlated with employment success. Items that loaded on their barriers scale (disclose criminal record, lose government benefits, experience discrimination, require drug screening, increase stress, and lose free time) did not predict successful return to work. This finding prompted the authors to conclude that programs should focus on incentives and motivating factors, rather than barriers. This is an important consideration that is in line with a strength-based approach to recovery (Rapp, 2006). Negative terms, such as obstacles, barriers, and impediments have a different effect than positive ones, such as strengths, facilitators, and opportunities. It is clear that there are numerous obstacles, but further research is needed to focus on the strengths and positive experiences that may be used to facilitate a return to employment. The recent increase in research on peer support workers highlights the importance of lived experience, even in IPS service delivery (Kern et al., 2013), and suggests that experiences can be an asset(Walker & Bryant, 2013).

Studies on vocational rehabilitation

Studies have looked at a wide range of vocational rehabilitation interventions designed to help people return to work. This research can be divided into three categories: 1) Programs aimed at people with mental illness that unintentionally include some participants with experiences of homelessness, 2) Programs aimed at people with experiences of homelessness that unintentionally include some participants with a history of mental illness, and 3) Programs that intentionally sample people with both.

1) Programs for people with mental illness

Seven studies, documenting the effectiveness of high fidelity supported employment, report some information on homelessness in the sample occurring prior to enrolment (Bond et al., 2007; Burns et al., 2007; Drake, Becker, Clark, & Mueser, 1999; Drake et al., 1996; Drake, McHugo, et al., 1999; Lehman et al., 2002) or during study participation (Gold et al., 2006). None of these articles conduct analyses to differentiate the effectiveness of supported employment between domiciled or homeless participants.

Campbell, Bond and Drake (2011) combined the data of four high fidelity studies to conduct a meta-analysis intended to determine which subgroups in the population may benefit from supported employment services. They determined that supported employment was beneficial in a sample of 103 people who experienced homelessness in the past year. On all outcome measures (job acquisition, total weeks worked, and job duration) the analyses favoured the group receiving supported employment services to a statistically significant extent, with effect sizes comparable to (in the case of job acquisition outcomes), and in excess of (in the case of job duration outcomes) those noted in the domiciled subgroup. We can therefore conclude that the participants with past history of homelessness experienced improvements in employment outcomes as a result of receiving supported employment services. These improvements were similar to the improvements observed in the domiciled subgroup. This analysis, however, does not directly compare the outcome measures of people who experienced homelessness in the past year with those who did not. Additionally, the definition of homelessness was a binary measure, and only one study provides the length of homelessness experiences by its participants, 14.2 ± 4.4 days (Drake, McHugo, et al., 1999). This may limit generalizability of the

findings to people who have experienced chronic homelessness lasting months and even years because of the changes in self-identity that accompany chronic homelessness (Osborne, 2002).

2) Programs for homeless people

Studies focusing on methods of returning homeless people to productive employment represent a more varied range of interventions including employment workshops and employment focused case management (Radey & Wilkins, 2010), vocational rehabilitation as part of a domiciliary residential rehabilitation and treatment program (LePage et al., 2005), short term work-skills training programs (Nelson et al., 2012), veteran industries programs integrating supported employment (Kerrigan et al., 2004) and occupational therapy comprised of prevocational training and follow along support (Herzberg & Finlayson, 2001; Muñoz et al., 2005). The most researched of these interventions is the social enterprises (Ferguson, 2007; Ferguson, 2013; Mavromaras et al., 2011). Results demonstrate that they do have positive impacts on employment retention within the social enterprise, especially in the case of homeless youth (Ferguson, 2013). Given the prevalence of mental illness among homeless people (Fazel et al., 2008; Fournier et al., 2001) it is probable that the majority of studies offering services to this population will include people with a mental illness. However, none of the studies analyse their findings in such a way as to permit the differentiation of effectiveness between groups of participants with SMI and those without. Radey and Wilkins (2010) report the existence of a 12 month project designed to assist homeless people by means of employment workshops and employment-focused case management but have yet to publish the results.

3) Programs for homeless or recently homeless people with mental illness

Studies that have looked at the effectiveness of supported employment for people who are homeless and have a mental illness report favorable results but emphasize the need for further rigorous scientific evaluation (Burt, 2012; Ferguson, Xie, & Glynn, 2011; Harrison et al., 2008; Marrone, 2005; Rosenheck & Mares, 2007). None to date has used a randomized controlled design to test the effectiveness of supported employment in a group of people with mental illness housed by a scattered-site Housing First program.

A recent publication reports data from the LA HOPE program (Burt, 2012). This is the only program to simultaneously combine and test the effectiveness of supported housing and employment. A demonstration sample of 56 individuals was recruited from Los Angeles. Participants included in the study had an axis I diagnosis as well as a current status of homelessness, or were at risk for homelessness. An expressed desire for housing and employment were part of the inclusion criteria. The sample was compared to a group receiving treatment as usual. Participants were offered housing assistance as well as long-term rental assistance. The final step in the program was the reception of employment support services. These services included support from the project's case manager, and a dedicated employment specialist linked to local workforce development centres. These service providers assisted in work readiness activities, if these were deemed necessary, before the participant sought competitive employment. It is unclear if the principles of this program resembled those of the IPS model, and duration of the employment support is not given.

All employment-related outcome measures favoured the experimental group over the control. Participants in the experimental group were 11 times more likely than control participants to

ever have a job since enrolment, and were six times more likely to have competitive employment. Length of time to first employment was also reduced and employment tenure was longer. The authors assert that the study's quasi-experimental design is not a limitation of the study because the pre-enrolment characteristics of both groups were similar.

Given that this area of research is new, small and pilot studies are more common than large ones. The pilot study of Ferguson Xie and Glynn (2012) tests the effectiveness of IPS on a convenience sample of 20 homeless youth. Their program offered IPS services, adapted to work with homeless youth, for a period of 10 months. Results were compared to a comparison sample of 16 youths taken from the same population, and matched by age, gender, and ethnicity. Comparisons favoured the experimental group on all of the outcome measures. The IPS group was more likely to have ever worked during the study period with a rate of 85% vs. 37.5%. The IPS group was also more likely to work a greater number of months than the comparison group. Employment measures of working-at-follow-up, weekly hours of work, and income were non-significant at a p value of 0.05, but favoured the experimental group.

This particular pilot study has many important limitations. The baseline characteristics of the two groups are markedly different with a statistically significant difference of current living on the street: 5% for the IPS group and 44% for the comparison group. Rates of employment at baseline also differed with 45% of the IPS group being employed vs. 25% for the comparison group. Additionally, none of the participants had psychotic disorders, limiting the generalizability of its findings. The sample size is small as it is limited by the agency's capacity to employ an IPS specialist, and by the number of monthly service users. While this study does not provide rigorous evidence for the success of supported employment in a population with

homelessness and SMI, it does encourage further research. Since its publication, no new further studies have expanded upon this pilot study.

Vocational services based on supported employment principles have been offered as part of larger recovery services for people with dual-diagnosis and experiences of homelessness. Harrison and colleagues (2004) report the results of the implementation of the comprehensive treatment approach (Minkoff & Cline, 2004). In this program, participants are housed in a facility, given treatment (for addiction, physical and mental health issues) as well as vocational rehabilitation, and discharge planning. While the original proposal by Minkoff and Cline (2004) lists IPS as a feature of the program, Harrison and colleagues (2004) do not describe in detail the vocational intervention provided by the program. A pre-post comparison was used to gauge the effect of the program. The results were an increase in the sample's employment rate from 1.3% to 17.1%. No information is given about the nature of the employment, its duration or its wage.

Rosenheck and Mares (2007) tested the effectiveness of IPS in the context of a veterans' affairs (VA) program. The sample consisted of 321 veterans who were not receiving VA health services, experienced homelessness at least once in the past 90 days of (either sheltered or unsheltered), and had a diagnosis of a psychiatric or substance abuse problem. Participants were only recruited if they expressed interest in competitive employment. This sample was compared to 308 veterans selected from the same population. While this program notes its adherence to IPS principles, its poor outcomes have been linked to the modest implementation of the program (Bond, 2007).

Results of the study slightly favour the IPS group with a statistically significant increase in days employed. However, the gain of 15% in days of competitive employment is much less than those

reported by other studies. The authors of the IPS model have suggested benchmark rates of employment that can be used to characterise the success of a program: the lowest quartile achieves rates of employment lower than 33% whereas the top quartile achieves 57% employment rate (Becker, Drake, & Bond, 2011). Rosenheck and Mares attribute the low effect size to the fact that: 1) the prevalence of substance abuse disorder was greater among their participants, 2) supported employment specialists were not integrated with the clinical teams, and 3) supported employment specialists had greater case-loads. These latter two are contraindicated by IPS model.

The earliest publication documenting the effect of a supported employment program in this population is a case study of a program that paired transitional housing with employment services. Marrone (2005) documents the success of a transitional housing program that integrated into its practice a supported employment program including some of the IPS principles noted above, including rapid job searches, a focus on individual preferences, and time-unlimited follow-along support. The program documented by Marrone differs from the IPS model by including prevocational training, and by permitting larger case-loads. Over a five year period 543 participants were engaged by the program and completed vocational profiles. Of this group, 129 secured employment, and 93 had job tenure lasting in excess of 90 days. On average they worked 28 hours a week and earned eight dollars an hour. With no control group it is impossible to determine the comparative effectiveness of the program. The absence of demographic data in the analysis also limits its generalizability because the exact composition of the sample is unknown. Marrone, however, notes that these preliminary results warrant additional research. No follow-up study has been published in the nine years following its publication.

The difficulties of developing the evidence base

Difficulties recruiting participants from a transient heterogeneous population may explain the paucity of rigorous research evaluating supported employment programs for individuals with a recent history of homelessness and SMI. High study attrition, a result of the transient habits of people who have not fixed address, has also been a concern (Harding et al., 2008), but strategies exist to assure a solid working relationship between researcher and participant (Hough, Tarke, Renker, Shields, & Glatstein, 1996; McKenzie, Tulsky, Long, Chesney, & Moss, 1999).

Difficulties engaging this population are related to previous unsatisfactory experiences with services. A history of dissatisfaction with vocational services offered to them in the past (Huff, Rapp, & Campbell, 2008) as well as mistrust of outreach workers (Kryda & Compton, 2009) makes it difficult to convince reluctant people to give programs a chance.

Finally, it is difficult to determine if the beneficial effects of the intervention endure beyond participation in these programs. Evaluating the endurance of the effects of the intervention requires a means of reassessing participants after an appreciable length of time has elapsed. Given that the IPS model has only relatively recently been offered to homeless people with mental illness, and, as noted above, has been limited in its implementation, further research is needed to determine if the duration of the beneficial effects of IPS offered to homeless people with SMI could be comparable to the duration of its effects in stably-housed people. The sparse evidence that does exist (Becker et al., 2007; Salyers et al., 2004) sheds only limited light on the long-term effects of IPS. Additionally, both in the case of employment (Strickler et al., 2009) and in the case of homelessness (Osborne, 2002), longer exposures to either is known to have an impact on the identity of the individual, in a beneficial way for the former, and in a deleterious way for the latter. Evidently the processes that lead to successful employment develop over a

period of time, and may not be easily observed over brief periods, necessitating longer longitudinal studies.

Discussion

Several groups of researchers, drawing upon methodologically rigorous and independently produced evidence, have highlighted the importance of employment in ending homelessness (Cook et al., 2001; Morrell-Bellai et al., 2000; Pickett-Schenk et al., 2002; Shaheen & Rio, 2007). It follows that a means of helping people with a history of homelessness and SMI successfully reintegrate into the workforce must be part of any holistic program implemented to assist them. Employment has many benefits, it facilitates social integration, and improves self-esteem health and well-being (Lam & Rosenheck, 2000; Muñoz et al., 2005; Perkins et al., 2009; Strickler et al., 2009). It also serves as a protective factor reducing the risk of further shelter use (Min et al., 2004).

Programs that sought to offer supported employment services to this population have consistently yield less positive results than those offered to stably-housed people. The most parsimonious explanation is their lack of adherence to the IPS model. Some programs have failed to assure optimum caseload size (Marrone, 2005), while supported employment specialists in other programs were not integrated into a unified health care team (Rosenheck & Mares, 2007). Both these practices are inconsistent with the IPS model. The meta-analysis combining data from 4 high fidelity studies (Campbell, Bond, & Drake, 2011) represents the most encouraging source of evidence for the beneficial effects of IPS, though, as noted above, the definition used to classify participants as homeless may limit generalizability to groups of people who have experienced chronic homelessness.

An alternate explanation for the underperformance of supported employment programs is the added difficulties that homelessness imparts on anyone's search for and retention of employment. Research has documented many barriers that hinder the return to work (Henry & Lucca, 2004; Quimby, Drake, & Becker, 2001; Tschopp et al., 2007; Waghorn & Lloyd, 2005). Parallel research has documented the barriers that hinder the return to work for people with experiences of homelessness (Morrell-Bellai et al., 2000; Radey & Wilkins, 2010). One would expect that an individual simultaneously experiencing homelessness and SMI would experience the barriers associated with each condition (Poremski, Whitley, & Latimer, 2014). The IPS model evolved within mental health services and therefore IPS programs may not necessarily be equipped to deal with the barriers caused by current or recent homelessness. It is for this reason that it is important to consider the "three-legged stool" of care: health, housing, and employment. The most recent large-scale attempt at providing employment support has been incorporated into Housing First initiatives (Burt, 2012). In doing so, the barriers caused by homelessness are likely reduced.

Since some of the obstacles facing homeless people may also face people with mental illness, the literature may develop in a complimentary way, such as in the case of barriers caused by having a criminal record. A criminal history may be an obstacle to employment, but recent surveys suggest that out of 128 employers working with IPS services, 81 had knowingly employed people with felony convictions (Swanson, Langfitt-Reese, & Bond, 2012). Furthermore, those that did hire people with criminal records asserted that the supported employment specialist contributed significantly to the decision to hire the individual. This

evidence demonstrates that IPS services can reduce the magnitude of some obstacles indirectly linked to homeless experiences.

Need for future research

Most of the published studies on supported employment for homeless people with mental illnesses have been lacking in scientific rigor. For example, previous studies that combine housing and vocational support (Burt, 2012; Harrison et al., 2008; Marrone, 2005) are limited in their ability to produce conclusions about the source of the observed improvement in employment outcomes. We may assume that the employment support is the cause for the improvement, but evidence produced by quasi-experimental studies does not permit the differentiation of the improvements that result from the supported employment intervention from those that result from supported housing. In order to generate valid conclusion on the effectiveness of supported employment programs, a control group must be used, identical to the experimental group in every respect apart from their receipt of supported employment services.

None of the studies detailed above presents clear conclusions about the effectiveness of supported employment programs offered to this population. They have recommended that future studies evaluate their programs using more rigorous designs to confirm their preliminary results. Pairing employment support with housing support appears to be theoretically sound given the barriers associated with housing instability. Such practice is in line with the "three legged stool" approach to care (Bianco & Shaheen, 1998). The integration of supported employment specialists into a Housing First scattered-site organization fits well with the goals of this recovery model. An important goal of scattered-site Housing First is community integration, assistance returning to competitive employment could contributes to social integration and

society membership (Perkins et al., 2009). This pairing of supported housing and supported employment is especially justified in light of findings suggesting that housing alone is insufficient to achieve significant improvements of social integration (Tsai et al., 2012). Ideally, a large scale randomised controlled trial of supported employment in a population with a recent history of homelessness with a high fidelity intervention and longer follow-up period would provide the best evidence for the effectiveness of these programs. This is a resource intensive method. Future studies may, as well, assess the fidelity of existing programs and attempt to follow individuals who have received services over several years to evaluate the durability of their effects (Lucca, Henry, Banks, Simon, & Page, 2004).

The evidence that does exist appears to suggest that the programs are most effective when paired with supported housing services (Burt, 2012) and when fidelity is high (Bond et al., 2011; Campbell et al., 2011). This conclusion is not surprising and it appears that future research, currently under way, will follow suit.

The benchmarks established for gauging the success of supported employment programs would place programs achieving 57% employment rates as highly successful, with rates below 33% indicating low success (Becker et al., 2011). Given the barriers noted in this review, achieving high success and fidelity may require more time and effort on the part of supported employment specialists. However as noted above, evidence exists that, in specific cases, success is possible.

Back to Table of Content

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Very few Canadian studies exist to inform policy makers and practitioners about the rate of unemployment among Canadian homeless people with mental illness or about the portion of this population that would like to return to work. In the second chapter we assess rates of unemployment at baseline for the participants of the At Home/ Chez Soi project (the project from which the sample used in the experimental trial of IPS is drawn). We have also assessed the number of people who would like paid employment in their community. Income from government support, employment, informal employment, and illicit activities were documented to determine to what extent they make use of various sources. Total income was then compared to relevant low income cut-off lines issued by the government of Canada to provide an indication of the number of participants who live below the poverty line. Rationale, methods and results are further developed in the following section.

Employment and income of people who experience mental illness and homelessness

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Abstract

Objectives: Research suggests that homeless people with mental illness may have difficulty obtaining employment and disability benefits. The present study provides a comprehensive description of sources of income and employment rates in a large Canadian sample.

Methods: 2085 participants from the five sites of the At Home/Chez Soi study were asked about their income, employment, and desire for work during the pre-baseline period. The proportion of participants employed, receiving government support, and relying on income from other activities were compared across sites, as were total income and income from different sources. Generalized linear models were used to identify participant characteristics associated with total income.

Results: Unemployment ranged from 93% to 98% across five sites. The percent of participants who wanted to work ranged from 61% to 83%. Participants relied predominantly on government assistance, with 29.5% relying exclusively on welfare, and 46.2% receiving disability benefits. Twenty-eight percent of the participants received neither social assistance nor disability income. Of the 2,085 participants 6.8% reported income from pan-handling, 2.1% from sex trade, and

1.2% from selling drugs. Regression models showed that income differed significantly among sites and age groups, and was significantly lower for people with psychotic illnesses.

Conclusion: These results suggest that homeless people with mental illness are predominantly unemployed despite expressing a desire to work. In Canada, this group relies predominantly on welfare, but has access to disability benefits, and employment insurance. These findings highlight the importance of developing effective interventions to support employment goals and facilitate access to benefits.

Introduction

Employment and steady income are important contributors to physical and mental health. Apart from contributing to material benefits, stable employment has important implications for social inclusion and recovery for people who are or have recently been homeless and have a mental illness (Lloyd, King, & Moore, 2010; Muñoz, Reichenbach, & Hansen, 2005; Perkins, Raines, Tschopp, & Warner, 2009; Shaheen & Rio, 2007). Employment also reduces reliance on emergency shelters, and can facilitate exit from homelessness (Min, Wong, & Rothbard, 2004; Shaheen & Rio, 2007). Income support can reduce the prevalence of risky and costly behaviours in this population (Riley, Moss, Clark, Monk, & Bangsberg, 2005; R.A. Rosenheck, Dausey, Frisman, & Kasprow, 2000). Research suggests that homeless people with mental illness may have difficulty accessing disability benefits (Dennis, Lassiter, Connelly, & Lupfer, 2011; Greenberg, 2010) and that their rate of unemployment exceeds 80% (Acuña & Erlenbusch, 2009; Aubry, Klodawsky, & Coulombe, 2011; Pickett-Schenk et al., 2002), reducing their options for subsistence. Additionally, the highly visible act of panhandling is the focus of much public attention and has a negative impact on society's opinion of this vulnerable segment of society (Bose & Hwang, 2002). Understanding the extent to which this segment of society depends on various sources of income has important benefits for policy makers and can guide the implementation of targeted interventions, such as evidence-based supported employment and benefits counseling. Small scale surveys have been conducted (Bose & Hwang, 2002; Kutzner & Ameyaw, 2010) but information about the current situation remains limited. The present study seeks to provide a comprehensive description of the various sources of income and employment activities reported by homeless people who also have a mental illness.

Methods

Setting

The At Home/ Chez Soi demonstration and research project (Goering et al., 2011) tested the effect of a Housing First intervention for people with mental illness experiencing homelessness (Falvo, 2009; Tsemberis, 2010; Tsemberis, Gulcur, & Nakae, 2004) in five Canadian cities: Moncton, Montreal, Toronto, Winnipeg, and Vancouver. Participants randomized to the experimental condition received assistance finding and maintaining permanent housing of their choice. They also received services from a clinical team delivering intensive case management (ICM) or assertive community treatment (ACT). Others continued to receive usually available services.

Participants

All participants recruited to the At Home/ Chez Soi project, whether randomized to the intervention or the control groups, were included in the present study. Participants met the following inclusion criteria: 18 years of age or older, legal status in Canada (entitling them to access benefits), presence of a mental illness (psychotic disorder, major depression, mood disorder with psychotic features, mania or hypomania, post-traumatic stress disorder, panic disorder), and being either in a current state of absolute homelessness or precariously housed with at least two separate instances of absolute homelessness in the past year. Absolute homelessness was defined as living on the street without shelter or making use of emergency shelters (Goering et al., 2011).

Recruitment teams sought homeless participants that met these inclusion criteria in a wide variety of settings. These included shelters, emergency clinics, day centers, under bridges, and known homeless hang-outs. Recruitment extended from October 2009 to June 2011. Participants provided written informed consent.

Procedure

Interviewers obtained demographic information before the randomization of participants. The Demographics, Housing, Vocational and Service Use History (DHHS) questionnaire, developed for the At Home/ Chez Soi study, collects information on sex, age, ethnicity, education, employment, reasons for not working, and other background variables. The MINI International Neuropsychiatric Interview 6.0 (MINI) (Sheehan et al., 1998) and clinical file review were used to assess the psychiatric diagnosis at enrollment.

Interviews, conducted three months after enrollment in the study, used the vocational time-line follow-back questionnaire (VTLFB) to retrospectively assess employment histories and income sources. Interviewers used calendars during the interviews to facilitate recall and reconstruct the timeline.

Measure

The current study relies on participant characteristics and current employment status data from the DSSH, and income data from the VTLFB corresponding to the month following enrollment. Participants who did not have a job, worked in informal or non-legal jobs, or volunteered were considered unemployed. Those included in the remaining category worked at regular jobs, were students, or were retired. Age was categorized into groups to reflect different service use populations (young adults 18-24, 25-39, 40-54, 55 and older). Homelessness was considered chronic if a participant had a single period of homelessness longer than 12 months and spent more than 36 total months homeless during their lives. Sensitivity analyses were conducted to determine the effect of varying the length of homelessness. Varying the definition to include a single uninterrupted period longer than 12 months or a life-time total more than 12 months did not alter the interpretation of regression coefficients. Education was split at 12 years. Diagnosis was dichotomized based on presence of psychosis, a choice made because people with

psychotic disorders may have lower levels of functioning and greater difficulty with obtaining employment (Dennis et al., 2011; Evans et al., 2004). A variable indicating whether a participant had been arrested at least once in the past 6 months was included to represent contact with the justice system.

Analysis

Descriptive statistics were used to summarize the different types of self-reported income. Analysis of variance was used to determine if statistically significant differences existed between sites and psychiatric diagnoses. The median and interquartile range (IQR) are reported rather than mean and standard deviation (SD) in cases where data are skewed according to the Shapiro-Wilk test for normality. In cases where distributions were skewed, the Kruskal-Wallis equality-of-populations rank test was used to test for differences between continuous variables. For categorical variables, a Pearson χ^2 test was used. In cases where the number of observations was lower than 5 in any given cell, Fisher's exact χ^2 was used.

As a measure of degree of poverty, the gap between reported total income and the city specific Market Basket Measure (MBM) was expressed as a ratio. Reported by Statistics Canada, the MBM represents the monthly amount necessary to maintain a modest standard of living in a given city. It considers local costs for shelter, transportation, food, and clothing. The gap ratio is only calculated for people who fall below the level of the MBM, and is calculated by subtracting total income from the MBM, and dividing the difference by the MBM. Low income gap ratios (approaching 0) indicate a small gap and greater ability to maintain a modest standard of living. Conversely, a ratio closer to 1 indicates less ability to maintain a basic standard of living.

A generalized linear model, with a normal distribution and identity link function, was used to determine which demographic variables were associated with total income (Barber &

Thompson, 2004). A site variable was included to determine the effect of different metropolitan areas. Analyses were conducted using Stata 13 (StataCorp, 2013). Ethics approval was obtained from local ethics review board at each of the five sites as well as nationally (11 institutions in total, mostly universities and university-affiliated teaching hospitals).

Results

Sample characteristics are reported in Table 1. The sample consisted of 2,085 people who had data available for the purposes of this study. None of these variables differed significantly across sites and diagnostic category. Mental illness diagnoses did not differ significantly between sites. Participants' past length of homelessness differed significantly between sites (Pearson χ^2 (20) = 81.9, $p<0.001$).

Table 1. Sample characteristics.

Age (mean, SD)	40.9, 11.2
Male (%)	67.3
Years education (mean, SD)	10.8, 3.1
Worked at least one year in the past (%)	66.0
Arrested at least once in past 6 months (%)	36.3
Unemployed (%)	95.9
Length of homelessness in months (median, IQR)	36, 12-80
Diagnosis (%)	
Psychotic disorder	44.0
Major depressive disorder	33.6
Mania-hypomania	13.6
Mood disorder with psychotic features	4.3
PTSD	2.5
Panic disorder	2.0
Percent of adult life homeless (%)	
<1%	6.1
1-2.9%	11.5
3-7.9%	16.1
8-19.9%	22.7

20-40%	19.2
>40%	24.3
Would like paid employment in their community (%)	
Moncton	81.6
Montreal	70.7
Toronto	64.3
Vancouver	82.3
Winnipeg	76.7

The overall rate of unemployment at baseline was 96%, but differed significantly across sites, ranging from 93% in Moncton to 98% in Montreal (Fisher's exact test p=0.011). The percent of people who would like paid employment in the community is listed in table 1, and differed significantly between sites (Pearson χ^2 (4)= 57.2, p<0.001).

For those who were unemployed, the variety of reasons for not working was great. Forty-six percent reported mental illness was their reason for not working, 14% physical illnesses, 14% both mental and physical illness and 25% had other reasons. Other reasons included substance use, criminal records, homelessness, educational limitations, and lack of work. Interestingly, less than 1% of the sample stated a fear of losing benefits as the reason they remained unemployed.

Income is detailed in table 2. The distribution of total income was skewed to the right with a median of $713 per month and IQR of $498-907. Respondents obtained their income from a wide range of sources. Sixteen participants reported relying predominantly on income from regular work, and 41 reported that, on average, 71% of their total income came from regular work. Of the 2,085 participants, 29.5% relied predominantly on government assistance programs, and 69.7% reported that, on average 67% of their total income came from welfare. Social assistance revenues differed significantly between sites (F(4, 1984)= 68.75, p<0.0001). This was due to the differences in allocating benefits. In Moncton, Winnipeg, and Vancouver, participants received a basic social assistance, which was then supplemented if they were

entitled to disability benefits under the local regulations. In Toronto, the participants received either social assistance or disability benefits, in both cases determined on a case by case basis. In Montreal, the social assistance amounts could be increased if the person had a disability that prevented them from working, but participants were not reliably able to describe the exact amount of this increase, a finding previously reported in the literature (Rosen, McMahon, & Rosenheck, 2007). Approximately half (46.1%) of the participants reported receiving disability benefits, which represented 66% of their total income. Very few participants reported income from illegal activities like prostitution, or selling drugs and stolen items.

Table 2. Monthly income by source

Income sources n=2,085	Percentage who report income from source	Median[1]	Interquartile range	Percentage who get 95% of income from source	Average percent of total income from source
Total income		713.00	498-907		
Regular work	1.97	640.00	400-1,276	0.77	70.8
Social assistance, mean SD	69.75	421.72	262.09	29.48	67.0
Disability income, mean SD	46.16	521.97	267.91	-	65.6
Pan handling	6.81	200.00	60-450	0.67	36.9
Casual and informal work, mean SD	7.96	128.00	60-300	0.62	29.5
Pension or EI	5.80	624.00	450-991	3.07	10.6
Sex trade	2.06	500.00	200-900	0.19	49.6
Activities associated with illicit drugs	1.15	400.00	90-1,212	0.29	51.8
Thefts	0.58	1,200.00	68-4,000	0.05	60.9
Family support	3.26	100.00	55-275	0.43	33.8
PNA	3.26	120.00	90-120	2.25	73.4
Other	6.76	120.00	50-360	1.49	43.1

EI employment insurance, PNA Personal needs assistance.

[1]Values represent the median for people reporting income from that source.

Very few participants reported incomes above the low income threshold derived from Statistics Canada's MBM. Table 3 lists these low income thresholds by city, the distribution of participants' income, and the gap ratio. Comparisons showed that, at all sites, a majority of the participants subsisted on income that was $200-1,000 below the low income threshold.

Table 3. Relation of monthly income to Market Basket Measure

	Market Basket Measure, CAN$	**Total income, median IQR**	**Percent**				**Low income gap ratio[1], median IQR**
			above MBM	$0-$200 below MBM	$201 - $1 000 below MBM	more than $1000 below MBM	
Moncton n= 155	1,430.92	537, 537-670	3.2	1.9	87.1	7.8	0.62, 0.55-0.62
Montreal n= 449	1,381.08	887, 712-899	6.0	2.7	85.5	5.8	0.37, 0.35-0.51
Toronto n=537	1,596.38	600, 500-943	4.3	2.6	42.5	50.6	0.63, 0.44-0.72
Vancouver n=455	1,569.29	900, 645-1,040	7.0	3.1	70.3	19.6	0.43, 0.38-0.61
Winnipeg n=489	1,400.58	400, 222-586	3.1	3.1	40.1	53.7	0.71, 0.61-0.84

[1]Ratio calculation: (MBM-total income)/MBM, calculated only for those who are below MBM.

For participants who were employed in regular work, the percent of participants above the low income threshold increased to 11.11%, a statistically significant difference compared to those who were unemployed, (Fisher's exact test p=0.022).

Generalized linear model estimates are presented in table 4. The regression coefficients are interpreted as the monetary difference between the category and the reference group. Several variables were statistically significant predictors of total income including age, site, and the presence of a psychotic illness. Compared to the participants from Moncton, total income was significantly greater in Montreal, Toronto, and Vancouver, and significantly lower in Winnipeg. Participants with psychotic illness tended to report obtaining less income than other

participants ($-59.92 p=0.037, 95%CI -116.13 to -3.71). Similar regression models predicting the receipt of disability benefits (results not shown) demonstrated that participants with psychotic illnesses received $35.97 less per month on average than participants with non-psychotic illnesses from (p=0.005, 95%CI -61.33 to -10.60).

Table 4. Predictors of total income.

Total Income	Coef.[a]	Robust Std. Err.	z	*p*	[95% Conf.	Interval]
Research site, Moncton as comparator						
Montreal	274.63	39.45	6.96	0.0001	197.32	351.95
Toronto	109.57	39.77	2.76	0.006	31.63	187.51
Vancouver	316.41	40.89	7.74	0.0001	236.27	396.56
Winnipeg	-147.43	33.36	-4.42	0.0001	-212.82	-82.05
Age, 18-24 as comparator						
25-39	53.15	52.95	1.00	0.315	-50.63	156.94
40-54	108.44	54.76	1.98	0.048	1.10	215.78
55 and older	123.28	67.87	1.82	0.069	-9.74	256.30
Men	-40.84	33.63	-1.21	0.225	-106.76	25.08
Psychotic illness	-59.92	28.68	-2.09	0.037	-116.13	-3.71
Chronic homelessness	27.89	38.33	0.73	0.467	-47.23	103.01
High school education	8.25	28.16	0.29	0.770	-46.95	63.44
Arrested, past 6 months	56.34	31.72	1.78	0.076	-5.83	118.52

[a]Coefficients are interpreted as the monetary difference between the category and the comparator category.

Discussion

In Canada, an important portion of the income of people who are homeless and have a mental illness comes from social assistance and disability benefits. Of the 2,085 participants, 1,220 reported relying predominantly on one of these two sources, but tended to have more than one source of income. Other sources of income were infrequently reported by participants in this study. This is consistent with previous research on the sources of income of people with homelessness and mental illness in a large metropolitan city (Bose & Hwang, 2002). The total sum of their monthly income was considerably below the low income threshold derived from Statistics Canada MBM (average $1484.73 a month). A quarter (26.4%) of the sample reported a

total income that was more than $1000 below the low income threshold. Only 5% of the entire sample reported income above the low income threshold. These figures suggest that they live in considerable poverty, despite obtaining government assistance. Additionally, the income reported by the participants is lower than that reported by stably-housed people with disabilities receiving social assistance (National, 2002). Participants who were in employment tended to report more income and were more frequently above the low income threshold.

The level of unemployment documented in this study, 96%, is in excess of prior estimates ranging from 80% to 90% (Acuña & Erlenbusch, 2009; Aubry et al., 2011; Pickett-Schenk et al., 2002). Additionally, the proportion of study participants who expressed a desire for paid employment in the community was lower at all sites than a previous US estimate. The American National Coalition for the Homeless, in a 2009 report on homelessness and employment, indicated that 86% of a sample of 182 homeless men and women had expressed a desire to work (Acuña & Erlenbusch, 2009). It might be hypothesised that this was due to higher levels of social supports available in Canada compared with the US. If this were the case, however, one would expect the proportion who expressed a desire to work to be directly related to the gap between income and the MBM: in cities where the gap between actual income and the MBM is greatest we would expect to see the greatest desire for work because of a greater financial need. As a comparison of Tables 1 and 2 shows, this is not the case: there was no association between the two, and cities with smaller gaps did not have lower levels of desire for employment. The preference for employment in the community depended on something other than the local amounts of disability or social benefits, or the total income available to this group. Further qualitative research may be well suited to determining in which respect city population characteristics account for varying levels of the desire for work.

Previous research has suggested that accessing disability benefits may be problematic for people with mental illness and homelessness (Dennis et al., 2011). Findings from the present study suggest that disability benefits represent an important source of income for nearly half of respondents. Nonetheless, participants with psychotic illnesses had monthly incomes lower by about $60 (roughly 10% of the average total median income) than those of participants with non-psychotic illnesses, and income for both groups remains lower than that reported for stably-housed people with disabilities receiving social assistance (National, 2002). Dennis and colleagues (8) postulated that the reason access to disability benefits was harder for people with mental illness related to the transient nature of mental illness and the difficulty of establishing a diagnosis. While our study design does not allow a test of this hypothesis, we can support the finding that people with psychotic illnesses tended to receive less income from disability benefits, suggesting that they experienced barriers to accessing this type of social support compared with participants with non-psychotic illnesses.

In all sites, a majority (ranging from 64% in Toronto to 82% in Moncton) expressed a desire to work. Previous research has suggested that this population has trouble obtaining employment (Zuvekas & Hill, 2000), in part because of barriers inherent to living on the streets or in shelters (Poremski, Whitley, & Latimer, 2014). In the present study, 46% of participants stated that mental illness was the reason why they were unemployed. The fear of losing benefits, contrary to previous research in America (Tremblay, Smith, Xie, & Drake, 2006), accounts for less than 1%. Few studies exist to inform service providers about effective interventions to help homeless people with mental illness attain their employment goals. Evidence-based supported employment has been shown to be effective at helping stably-housed people with mental illness gain competitive work internationally (Bond, Drake, & Becker, 2012), and in Canadian settings (Latimer et al., 2006), but fewer studies have looked at its effectiveness when offered to

homeless people with mental illness (Burt, 2012; Campbell, Bond, & Drake, 2011; Ferguson, Xie, & Glynn, 2011; Rosenheck & Mares, 2007). More research is needed to clarify how the effectiveness of such interventions can be maximized by pairing supported housing and supported employment services.

Several limitations should be noted. Coordinating the five data-collection teams to assure a perfectly standardized collection process was difficult. This was especially relevant to the use of "other" categories. Discrepancies in this regard may have influenced the way interviewers probed for additional information, especially information about illegal activities. Secondly, data on earnings were collected in detail only at the three-month interview. As a consequence, we used data from the first month as a proxy for income at baseline. This is reasonable because clinical teams assigned to Housing First participants would not have been able, in such a short time, to affect any change in participants' benefits, or in all likelihood help any get a job, and there was no change in the situation of TAU participants. Thirdly, conclusions are based on self-reported data, a method that could be problematic for identifying the source, but not necessarily the amount, of the income received from government support (Rosen et al., 2007). Administrative data would provide the most consistently accurate amounts of social assistance and disability benefits. However, data sharing restrictions across provinces make the pooling of such data at the participant level impossible, and participants frequently presented to interviewers documents (social assistance assessment letters, direct-deposit bank stubs) to ensure the information they were providing was accurate. No available administrative data could be obtained on other types of income. Social desirability may have increased the number of people who expressed a desire for employment and decreased the number of people reporting income from illegal activities. Determining the exact influence of this effect is beyond the ability of the data. Finally, the sample of participants includes only homeless people with

one of several specific mental illness diagnoses. Previous studies indicate that about 2% to 42% of homeless people have a psychotic illness (Fazel, Khosla, Doll, & Geddes, 2008), our results might therefore have been somewhat different if the study had been carried out on a broader homeless population, who may only receive basic social assistance benefits because they may not be entitled to disability benefits.

Despite these limitations, this study provides the most comprehensive examination yet available of the income and employment status of homeless people with mental illness in Canada. People with mental illness and recent experiences of homelessness living in Canadian cities experience rates of unemployment in excess of 96% despite the great majority expressing a desire for employment. This segment of the population relies predominantly on welfare, but may also, depending on circumstances, have access to disability benefits, employment insurance, and pensions. Despite access to financial support, a significant portion lives well below the poverty line. Participants infrequently report receiving on illegal and informal sources of income. These findings highlight the need for implementation of interventions to support employment and facilitate access to benefits. Further research should determine how service providers may best help people attain their goals of employment.

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Back to Table of Content

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The fact that most participants express a desire for work, while few do, clearly indicates that something is acting as a barrier to achieving their goals of employment. The literature suggests that several factors associated with homelessness may act as barriers. Other factors specifically associated with mental illness have also been documented. However, the precise way in which homelessness and mental illness combine to militate against employment has yet to be determined. To explore this, we have conducted qualitative interviews with a sample of participants. The interviews clearly suggest that each person experiences obstacles as unique as their own personal story. Some common threads emerge from the narratives suggesting the need for interventions designed to address specific obstacles and help people achieve their goals of employment. These obstacles are discussed in the following chapter.

Barriers to obtaining employment for people with severe mental illness experiencing homelessness

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Abstract

Background: The rate of unemployment among homeless people is estimated to exceed 80%. A high prevalence of mental illness partially explains this figure, but few studies about the relationship between employment and homelessness have focused on homeless people with mental illness.

Aim: The present study explores the self-reported barriers to employment in a sample of individuals with mental illness when they were homeless.

Methods: A sample of 27 individuals with mental illness and recent experiences of homelessness, who had expressed an interest in working, participated in semi-structured qualitative interviews. Inductive analysis was used to identify barriers to employment.

Findings: The prominent barriers include: 1) Current substance abuse, 2) Having a criminal record, 3) Work-impeding shelter practices, and 4) Difficulties obtaining adequate psychiatric care.

Conclusion: Individuals who have been homeless and have a mental illness report facing specific barriers associated with mental illness, homelessness, or the interaction between the two.

Additional research should explore how supported housing and employment interventions can be tailored to effectively serve this group.

Declaration of interest: None.

Keywords: employment barriers, homelessness, mental illness, qualitative analysis

Introduction

Unemployment among homeless people has been estimated to be around 80% to 90% (Acuña & Erlenbusch, 2009; Aubry, Klodawsky, & Coulombe, 2011; Pickett-Schenk, 2002). High levels of unemployment among homeless people, who may also have a mental illness (Fazel, Khosla, Doll, & Geddes, 2008), could be attributed to the complex relationship between mental illness, employment and housing status (Frankish, 2005; Shelton, 2009; Zuvekas & Hill, 2000). Employment has the potential to improve quality of life and reduce the risk of further shelter use (Kilian et al., 2011; Lam & Rosenheck, 2000; Muñoz, 2005). It follows that employment represents an important means of successfully exiting homelessness and should be a priority in plans to end homelessness (Shaheen & Rio, 2007). People who are homeless would rather work than rely on welfare (Daiski, 2007) and their preference for part-time or full-time employment exceeds 87% (Acuña & Erlenbusch, 2009).

The literature documenting obstacles that homeless people with mental illness face when seeking employment can be divided into two strands, one pertaining to housed people with mental illness, and the other pertaining to people who experience homelessness. Some obstacles appear significant for both groups, while others are specific. Having a criminal record (Peternelj-Taylor, 2008; Tschopp, Perkins, Hart-Katuin, Born, & Holt, 2007), physical illness or substance abuse (Henry & Lucca, 2004; Radey & Wilkins, 2010; Zuvekas & Hill, 2000), and poor employment histories (Pickett-Schenk, 2002; Waghorn & Lloyd, 2005) appear to impede employment for both housed people with mental illness and people who are homeless.

Barriers specific to homeless people include maladaptive behaviours, such as quitting as a problem-solving strategy (Muñoz, 2005), and learned dependence created by shelter use (Morrell-Bellai, Goering, & Boydell, 2000). The belief that pan-handling provides more revenue

than the minimum wage also acts as a deterrent to competitive employment (Daiski, 2007). As for people with mental illness, side-effects resulting from medication (Henry & Lucca, 2004), low vocational expectations, fears of losing benefits, and financial disincentives associated with benefits rules act as barriers to obtaining competitive employment (Waghorn & Lloyd, 2005).

The qualitative studies that have reported on these obstacles have all relied on samples that included homeless people with and without mental illness. Consequently, they frequently cite mental illness as a distinct obstacle to employment in people who are homeless, but do not explore on its role (Morrell-Bellai et al., 2000; Muñoz, 2005; Radey & Wilkins, 2010). This demonstrates the need to elaborate on the interplay between concurrent mental illness and homelessness. By purposefully sampling participants with mental illness, experiences of homelessness, unemployment, and desire for employment, the interactions between mental illness and homelessness in determining employment rates can be explored in greater detail.

The aim of this study is to elicit specific self-identified barriers to competitive employment in individuals with mental illness who have recently been homeless. In particular, we planned to explore how homelessness and mental illness together generate barriers to employment.

Methods

Participants

Participants were drawn from a randomized controlled trial evaluating the efficacy of the individual placement and support (IPS) (Drake, Bond, & Becker, 2012). These participants were also members of the moderate needs experimental arm of the Montreal site of the At Home/ Chez Soi project, a larger research project testing a Housing First intervention (Goering et al., 2011). Inclusion criteria for the Housing First study were: 18 years of age or older, the presence of a mental illness, and either to have been in absolute homelessness for seven nights or more,

or be currently precariously housed with at least two episodes of absolute homelessness in the past year. Absolute homelessness entails living on the street or sleeping in emergency shelters. Inclusion criteria for the IPS trial were: be unemployed at the time of recruitment, and have a desire to receive supported employment services. Participants for the present study were chosen sequentially as they entered the IPS trial. Of the 39 individuals approached, 27 agreed to participate. Informed consent was obtained from each participant. Ethics approval was obtained from the ethics review board at the Douglas Institute, affiliated with McGill University in Montreal, Canada.

Procedure

A topic guide produced by the authors was used to guide semi-structured interviews. To contextualize experiences, participants were asked to speak about their lives and the events linked to their homelessness. Then they were asked to give their impression about the roles homelessness and mental health played in their employment histories. Questions include "How has being homeless affected your work?" and "What kept you from looking for work while you were homeless?" Interviews were conducted by the first author.

Analysis

The interviews were transcribed and coded in ATLAS.ti (version 7.0). Thematic analysis was used to generate themes (Braun & Clarke, 2006). Coding lists were produced by both the first and second author following the analyses of the first few interviews. To ensure methodological rigor, these lists were compared and discrepancies discussed and reconciled. The reconciled codes were summarized into analytic categories that were then amalgamated based on their relationship with one another to produce themes. An inductive process was used to amalgamate and produce themes specifically related to the interaction of mental illness and

homelessness, and their effect on employment. This code and theme hierarchy was used to code subsequent interviews. The frequency, primacy, and intensity of the content were used to assign importance to themes.

Findings

Demographic characteristics are presented in table 1. The analysis produced four predominant barriers to obtaining employment. In order of frequency and intensity, they are: 1) Current substance abuse, 2) Having a criminal record, 3) Work-impeding shelter practices, and 4) Difficulties obtaining adequate psychiatric care. Self-stigmatizing beliefs tend to accompany barriers resulting from substance use and criminal records.

Table 1 Participant characteristics

Age (mean, range)	48, 26-65
Women	12/27
Place of birth	
1. Quebec	20
2. Outside Quebec	3
3. Outside Canada	4
Years of education (mean, range)	11.5, 6-21
Criminal record	13/27
Diagnosis	
1. Depression	17
2. Psychotic disorder	7
3. Panic disorder	1
4. Post-traumatic stress disorder	1
5. Mania	1
Lifetime length of homelessness in years (mean, range)	4, 0.17-20
Longest uninterrupted period of homelessness in months (mean, IQR)	10, 4-30
Employed continuously for more than a year	22/27

IQR, inter-quartile range

1) Current substance abuse

Homelessness and mental illness contribute to drug and alcohol consumption, which act as a predisposing, a precipitating and a perpetuating factor to unemployment. Participants frequently cite substance abuse as an obstacle that increases with depression and negative rumination. They note that their consumption increased with time spent on the street as it is a precipitates expulsion from shelters with zero-tolerance to substance use. Substance consumption interfered with their ability to maintain employment:

> I lost job after job […] excellent jobs, really similar to my previous one. I lost them time and time again because of my consumption and because of the fact, and the effect of chronic depression had the compounding effect …I didn't value myself enough to accept that I deserved a good job and to be happy, I had convinced myself of this , and alcohol didn't help.

Some participants noted that their consumption was difficult to hide from potential employers:

> Because if you have drug problems you are tired, and if you have an interview [pretends to fall asleep] you are going to have problems. I went for an interview, never again will I do that, I had smoked cannabis the day before, and when I arrived for the interview she was talking and I was [pretends to fall asleep] my eyes were closing …oh my god I lost the job and it was a good one!

Substance abuse continued to play a role in their lives following rehabilitation: "There is also the fear of having money and that it would give me the desire to consume again, that's a big fear of

mine." This sentiment was expressed by other participants and indicates that the struggle to abstain is itself a disincentive to employment.

2) Having a criminal record

Some participants expressed the sentiment that their involvement with the criminal justice system was a result of criminal acts linked to survival behaviors, such as selling stolen items while they were homeless. The criminal records of the participants are usually the consequence of offences like public intoxication, solicitation, theft, and threats against police officers.

People with a criminal record are disadvantaged in their search for employment in general, but our participants expressed a great deal of concern about this barrier:

> I have a big handicap with my criminal record. When you have a criminal record you don't work! You lead the life of a criminal, or you work under the table. You have no choice!

Participants with depression explained they had not been refused employment, but avoided applying for jobs because they anticipation of rejection. Explanations often aligned with Beck's cognitive triad: they expressed negative views about themselves, the world, and the future (1967). They feared being forced to talk about their past:

> It puts me ill-at-ease actually because I am actually afraid of being asked the question and that I would lose a job I like because of [my criminal record]. I think it is a big obstacle.

Participants attributed the difficulty they experienced trying to find and maintain a job to their criminal record.

3) Work-impeding shelter practices

Many participants who had experiences with shelters cited difficulties resulting from shelter practices. Participants noted a variety of ways in which practices impeded obtaining and keeping jobs, but the common thread is that these obstacles were the direct result of shelter regulations. Usually these regulations governed schedules and sleeping accommodations. Participants noted that certain shelters were problematic because they did not provide an environment conducive to rest. This frequently led to fatigue and maladaptive coping mechanism of self-medication:

> We can't get any sleep! And on top of that they kick us out at 6:00 AM!... People who need respite: well, they are put out onto the street at 6 in the morning like it was the smart thing to do! So what happens is that the people who can't sleep medicate themselves to sleep, but that is not respite!

For others, living in this environment while experiencing depression required much effort and participants describe being too tired to keep to their work schedule.

> [You] are too unstable… they need you to perform at work or at school, you need to be well rested and nourished, clean clothes, to have …more clean spirit, otherwise you might be able to work a day or two but then you will be fed up because you are too tired and you don't know where you will be staying the next day…

Another problematic practice relates to the allocation of beds. Participants could reserve a bed one night but would lose their claim to that bed if they arrived late. This policy intends to reduce the number of vacant beds. However, this practice inadvertently limits the movement of people seeking jobs:

> It lets you sleep, it lets you eat, I acknowledge that. They even clothe you if you need it. But for someone who says "Well, look, I'd like to get out of this today, to go see other things and do other stuff" you are stuck in it, you know. You must stay in the area. […] So you are stuck in a cycle. If you say "well I want to go to work" forget that! you will lose your bed. And if you lose your bed you lose your place and stuff, and you start all over again […] waiting in line to get a bed back. And if you are late for check-in because of work, you lose your bed too. So you are stuck in the system!

Participants recognized that they could not present themselves for job interviews burdened with their personal belongings, so they needed a place to leave them. However, as the example above demonstrates, they risked losing their belongings and their place to sleep if they returned late to the shelters. This deterred some participants from pursuing job opportunities.

4) Difficulties obtaining adequate psychiatric care

Some participants noted that during their period of homelessness they had trouble obtaining adequate psychiatric care. Surviving on the street entailed difficulties such as maintaining their treatment regimen because of the loss or theft of their prescribed medications. They also faced challenges assuring the continuity of their care:

> Participant: So I didn't have a doctor and no more medication at the end of the month. You can't imagine how I feel. What's going to happen to me at the end of the month? I don't know!
>
> Interviewer: You might have to go to the emergency?
>
> Participant: I will definitely have to, it's screwed up, and it's giving us misery. Look, with all my worries, I don't have the spirit to search for work! What's going to happen to me in two weeks? […] I'm not alone with this problem.

Obtaining timely care for the treatment of depression or psychosis could be very frustrating and discouraging when services engage people in lengthy proceedings before referring them to the appropriate professional:

> They make you meet a social worker, youth worker, then a counsellor, and then they warn you it may take 6 months to a year to see someone because of the waiting list plus priorities… Sooo yup… so I have not done any other stuff for that.

This participant had given up seeking help and left his mental illness untreated, a major obstacle to returning to employment that can be exacerbated in the case of people who are also homeless.

Discussion

The semi-structured interviews highlight several barriers documented in the mental health literature along with others from the homelessness literature. These barriers often influence

one another; a finding consistent with previous quantitative research on mental illness, homelessness and employment (Pickett-Schenk, 2002) .

Substance abuse frequently leads to criminal activity, the exacerbation of mental illness symptoms, and expulsion from shelters. Participants frequently spoke about substance abuse in their explanations of the cyclical development and exacerbation of mental illness: an increase in one usually led to an increase of the other. For some of the participants it is a habit linked to adapting to shelter conditions that had a paradoxical effect because it is also a reason for expulsion from shelters with zero-tolerance to intoxication. In this way, substance use distances people from the services, perpetuating homelessness and exacerbating mental illness.

Participant's experiences of shelters varied, but difficulties could usually be traced back to a shelter policy. The organization of some shelters was such that obtaining the rest required for finding or maintaining employment was unlikely for participants in our study. This finding is in line with previous evidence suggesting that obtaining adequate sleep is difficult for this group (Daiski, 2007). Being unable to sleep in shelters prompted some people to "medicate themselves" as an adaptation. If participants were able to obtain adequate rest, securing that accommodation monopolized their time, preventing them from engaging in other activities, such as seeking employment. Thus shelters permit the maintenance of a minimal existence, but this maintenance comes at the cost of flexibility in use of time. They may not cultivate the conditions necessary to maintain a productive job hunt or steady employment. While shelters do offer some transitional programs, very few of our 27 participants mention having been served by these programs when they were homeless. Previous studies have noted that habituation to living in shelters could act as a deterrent to seeking employment (Morrell-Bellai et al., 2000). For participants in our study, only two of 27 report such an effect.

A finding which exemplifies the interaction of homelessness and mental illness is the preoccupation with maintaining contact with mental health care providers and adhering to treatments. People who are homeless in addition to having a mental illness face a greater challenge in accessing psychiatric treatment and medications, due to the difficulty of holding on to their medications and the absence of a fixed address, which at least in Montreal impedes receiving steady care at one hospital or treatment centre. Assuring the continuity of treatment is an important obstacle to employment that accompanies surviving on the street because the interruption of treatment can lead to negative consequences, such as hospitalization. Untreated mental illness has been documented as an important barrier to employment for domiciled people with mental illness (Henry & Lucca, 2004; Waghorn & Lloyd, 2005). For our participants, living on the street and the complexities of the system designed to assist them acted as obstacles to care. Without care, symptoms act as a barrier to seeking and maintaining employment.

The barriers noted above may be exacerbated by the individual's beliefs: depression influences the interpretation of the self, the world, and the future in negative ways (Beck, 1967). Some participants have not been refused jobs as a result of barriers, such as having a criminal record or having been homeless, but believe that refusal would be a reasonable reaction to expect from employers. Self-stigmatizing beliefs are a prevalent problem among people with mental illness (West, Yanos, Smith, Roe, & Lysaker, 2011). In the context of employment, it prevents people from seeking opportunities, a finding consistent with previous research (Krupa, 2009). For participants in our study, depression often played a role in exacerbating negative self-stigmatizing beliefs.

It has yet to be seen if the resolution of homelessness has an impact on the barriers noted above, but some obstacles are more changeable than others. The lack of rest resulting from the shelter schedules is likely to be addressed by obtaining private residence. It is also likely to have a positive impact on a person's capacity to obtain adequate healthcare: A private accommodation will facilitate the safe-keeping of medications, and a fixed address may permit them to receive care from a neighbourhood clinic. The housing of homeless people may eliminate the need for self-medication as a tool for obtaining rest, but this alone is unlikely to resolve substance abuse issues. Finally, housing may reduce the need for crimes of survival, but will not erase past criminal records, nor will it help a person overcome the self-stigmatization.

IPS services, which have been developed to assist people with a mental illness gain employment, may be an appropriate tool for overcoming some of the obstacles related to homelessness (Heffernan & Pilkington, 2011). Evidence suggests that IPS can help overcome barriers resulting from criminal records (Frounfelker, Teachout, Bond, & Drake, 2011). Some research suggests that IPS may be successful in a population with experiences of homelessness (Campbell, Bond, & Drake, 2011), while other attempts have been less successful (Rosenheck & Mares, 2007).

Limitations

This study had a limited sample size recruited from one large city and described experiences specific to that city. Experiences of residents of other cities may be somewhat different, for example, to the extent that shelter rules differ. Additionally, participants had been housed as part of the larger research project, which may have influenced their accounts. However, the interviews specifically probed the experiences of participants while they were homeless.

Conclusion

By sampling from a group that has experienced simultaneous homelessness and mental illness, and by providing evidence for the obstacles that impede their return to work, this article sheds some light on the barriers to employment arising from both mental illness and homelessness, including their interaction.

Services designed to assist this population gain employment must address self-stigmatization, worries about having a criminal records, and concurrent substance abuse. Helping people move from shelters into more stable accommodations to facilitate the adoption of a flexible schedule is a natural first step. This will allow people to build their schedules around meaningful activities, such as employment. IPS may then be effective (Frounfelker et al., 2011; Heffernan & Pilkington, 2011). Evidence of its effectiveness in this population to date remains limited and mixed (Campbell et al., 2011; Radey & Wilkins, 2010; Rosenheck & Mares, 2007). Considering also the results of the present study, IPS may need some adaptation to reach maximal effectiveness in this population.

Back to Table of Content

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As the findings of the previous chapter suggest, it is reasonable to assume that a lack of housing is in-and-of itself an obstacle to employment. Therefore, it is reasonable to attempt to estimate the effect of housing as well as the effect of supported housing interventions on the employment outcomes of people who have been homeless and who have a mental illness. The most effective currently available method of housing people with mental illness is Housing First. The particular variant of Housing First being assessed by the At Home/ Chez Soi project includes rent subsidies as well as clinical services organized to respond to participant needs and work with them to achieve their goals, whether they be personal or vocational. We approach the question of the effect of housing on employment by using data from a larger trial of Housing First examining its influence on quality of life, substance use, residential stability, and, among other things, vocational outcomes. This permits the use of a larger participant pool to determine the effect of Housing First on employment. The following section details the assessment of the effect of stable housing and Housing First on employment outcomes as well as on income various sources.

Effects of Housing First on employment and income of homeless individuals: results of a randomized trial.

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Abstract

Objective: Housing First (HF) is being established as an evidence-based practice for housing and supporting homeless people with a mental illness. The objective of the present study is to determine if HF increases the odds of employment in this population and if it affects income, including from informal and illegal sources.

Methods: 2148 homeless people with mental illness were recruited from five Canadian cities. Participants were classified as high needs or moderate needs and then randomized to either HF or treatment as usual (TAU). Interviews were conducted every three months and included questions about employment activities and earnings. Regression models were estimated via generalized estimating equations.

Results: The median follow-up time was 745 days. For moderate needs participants receiving HF odds of obtaining competitive employment increased with time. However, despite this increase

their odds of obtaining employment were lower than the odds observed in the TAU group. For high needs participants, the odds of obtaining employment remained lower than those of the TAU group. Those employed at baseline, men, and younger participants had greater odds of being in employment. HF appears to increase earnings from government support for moderate needs participants, but not other types of income.

Conclusion: This is the first large-scale study to use a randomized controlled design to study the effect of HF on employment outcomes of formerly homeless people with mental illness. Further research is needed to determine why HF led to initially reduced odds of obtaining employment.

Introduction

Housing First (HF) with scattered-site housing, as defined by Pathways to Housing in New York City (Tsemberis, 2010b), is being established as an evidence-based practice for homeless people with a mental illness (Fitzpatrick-Lewis et al., 2011; Nelson, 2007; Tsemberis, 2010a). It increases housing stability, and improves community functioning and quality of life (Nelson, 2007; Tsemberis, Gulcur, & Nakae, 2004). Preliminary evidence also suggests that entering stable housing may increase people's access to government support programs by providing reliable access to a mailing address (Pearson, Montgomery, & Locke, 2009). On the other hand, access to disability benefits continues to be a problem for homeless people (Greenberg, Chen, Rosenheck, & Kasprow, 2007), prompting some to include benefits counselling in the role of service providers (Zlotnick & Robertson, 1996). However, little is known about the effect of HF on employment and on other types of earnings. Studies have included employment as a subscale in quality of life assessments, but improvements on that subscale have not been found (O'Connell, Rosenheck, Kasprow, & Frisman, 2006). Housing instability has been cited as an obstacle to successful employment (Morrell-Bellai, Goering, & Boydell, 2000), so the provision of stable housing may have a positive effect on employment (Bianco & Shaheen, 1998). Indeed, when paired with employment services, housing can have a positive impact on the employment of people who have a mental illness and have been homeless (Burt, 2012), but more research is needed to test the effect of scattered-site Housing First on employment and income.

The objective of the present study is to determine if HF increases employment in this population over the course of the two year study period. We also seek to determine if it affects income, including from informal and illegal activities. This will inform the development of adjunctive interventions to support this population in their search for employment.

We hypothesize that over the study period Housing First will increase the odds of obtaining employment more than would stable housing alone. Additionally, we hypothesize that participants receiving HF will make less use of informal sources of income, like pan-handling, selling drugs and sex, and will receive greater social assistance and disability benefits.

Methods

Setting and Participants

All participants recruited to the At Home/ Chez Soi project were included in the present study. The study protocol, inclusion criteria, and descriptions of interventions are published elsewhere (Goering et al., 2011). Participants were classified as high needs or moderate needs and then randomized to HF or treatment as usual (TAU). Inclusion criteria were: 18 years of age or older, the presence of mental illness, and experience of absolute homelessness, or being precariously housed with at least two instances of absolute homelessness in the past year. Recruitment extended from October 2009 to June 2011.

This trial was registered with the International Standard Randomised Control Trial Register (ISRCTN42520374). Ethics approval was obtained from the local ethics review board at each data-collection site and from the university-affiliated teaching hospital where the coordination centre was based. Written informed consent was obtained from all participants.

Intervention

The Housing First approach aims to facilitate reintegration and recovery by offering people a choice of scattered-site, subsidized housing (Tsemberis, 2010b). Specialized multidisciplinary mobile teams support people in their own homes. Participants received rent subsidies up to $600/month, so that they would spend less than 30% of their income on rent. Participants with high needs received HF from assertive community treatment (ACT) teams, while those with moderate needs received services from intensive case management (ICM) teams.

Participants assigned to TAU could access any intervention programs available in their communities. Their only contact with the project was during their quarterly interviews.

Measures

Interviewers collected demographic variables, health service use history, criminal justice system involvement, and history of homelessness at the baseline interview. Community function at baseline was assessed with the Multnomah Community Ability Scale (MCAS)(Barker, Barron, McFarland, & Bigelow, 1994; Dickerson, Origoni, Pater, Friedman, & Kordonski, 2003). Scores between 48 and 62 represent a medium level of disability, higher scores indicate less disability. Interviewers, with support from clinicians, used the MINI (Sheehan et al., 1998) and clinical chart review to determine psychiatric diagnosis and alcohol and substance use disorders.

Interviews at three-month intervals included questions about places where participants had stayed as well as employment activities and earnings. Employment outcomes included start and end dates of jobs, type of job (competitive or sheltered, regular or casual), hours worked, and wages (Bond, Campbell, & Drake, 2012). Competitive jobs were defined as work not reserved for people with disabilities paying at least minimum wage. Self-reported income was grouped into three categories: 1) government support (welfare, public pension, and disability income), 2) employment income (regular or casual), 3) earnings from street activities (pan-handling, collecting recycling, squeegeeing), and 4) income from illegal activities (sex and drug trade, theft). Interviews were scheduled to end 24 months after randomization, but budgetary restrictions shortened the study period. For the participants recruited during the latter half of the recruitment phase, interviews were conducted up to 21 months only.

Analysis

Employment rates and monthly income from various sources were plotted over time by assigned treatment group. Participants were analyzed in the groups to which they were assigned, along an intention-to-treat design.

Employment outcomes were compared statistically, using a t-test for continuous variables. In cases where distributions were skewed as determined by the Shapiro-Wilkes test for normality, the Kruskal-Wallis equality-of-populations rank test was used. The median and interquartile range (IQR) are reported rather than the mean and standard deviation (SD) in cases where data were skewed. For categorical variables, a Pearson χ^2 test was used. In cases where the number of observations was lower than 5 in any given cell, Fisher's exact χ^2 was used.

Regression models, estimated using generalized estimating equations (GEE), were used to determine the effect of HF on income sources and the odds of obtaining employment. These population-average models yield comparisons between individuals rather than within (Diggle, Heagerty, Liang, & Zeger, 2009). GEE with logit link function models were used to determine the effect of HF on the odds of obtaining competitive employment by month. Separate models were used for each type of income depending on the distribution of the data: Gaussian distribution with an identity link function for normally distributed variables such as government support income, and gamma distribution with log link function for skewed distributions, such as income from employment. An autoregressive correlation structure was specified and appropriate for all models. Robust standard errors were used to account for the use of repeated measures.

The regression models predicted either income or the odds of obtaining competitive employment retrospectively at 30 day intervals. Models were stratified by needs group. Predictors included randomization to HF or TAU, time (as a continuous variable), an interaction

between time and treatment, site, community function at baseline (as assessed by the MCAS), and age. Several dichotomous variables were included: gender, in employment at baseline, 12 or more years of education. Variables derived from the MINI included the presence of a psychotic disorder, the presence of alcohol use disorder, and the presence substance use disorder. To account for a recency effect, a variable tracking the interview schedules was included in the employment regression models. This accounts for the fact that participants may be more likely to recall jobs obtained in the 30-day period prior the interview than in earlier periods, as some jobs last as little as one day.

The regression models were limited to a 24-month period, beginning at randomization. Participants with less than 9 months of data were dropped from the final regression analyses.

Multiple imputation models, by chained equations using predictive mean matching (Landerman, Land, & Pieper, 1997), were used to handle missing outcome data. The imputation of days in employment was programmed to count a month as missing if any period of 30 days included two or more missing days and did not include any days in employment. The imputed values were a function of employment during the two previous and two following months, and depended upon housing stability during the two previous and two following months. The models were set to impute 50 datasets using chained iterations cycling over 2000 iterations, which should be sufficient to guard against reduction in power (Graham, 2009). The models were used to impute 6.1% of missing employment data and 8.6% of missing income data. Analyses were completed in STATA 13 (StataCorp, 2013).

Results

The CONSORT flow diagram is presented in figure 1. The number of participants considered for the present study was 2148: 107 participants assigned to a congregate site in Vancouver

belonged to a sub-study that tested a different type of HF intervention, and therefore excluded from the analytic sample.

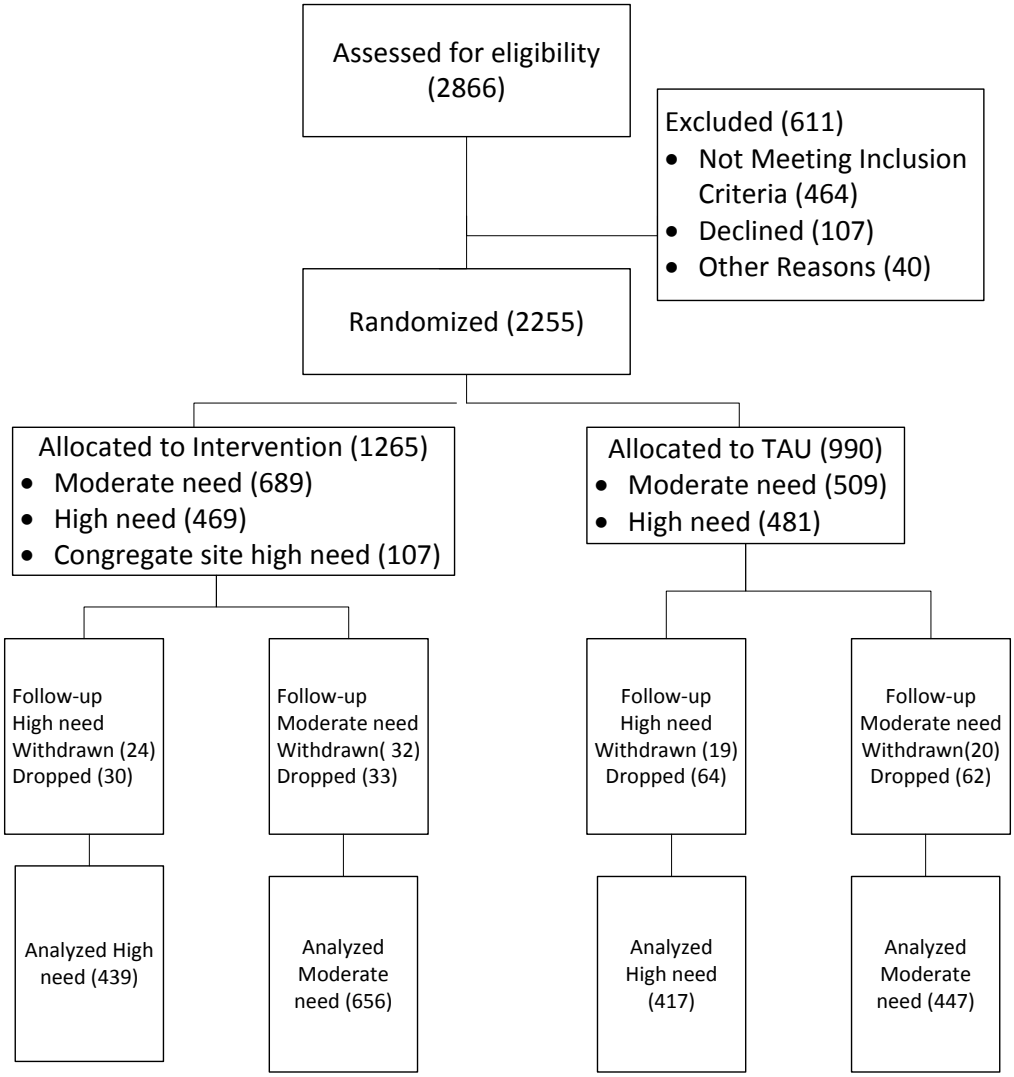

Figure 1. CONSORT diagram of participant flow.

Participants excluded due to insufficient data did not differ significantly from those retained, with the exception of employment at baseline. Of the 2148 participants, 61 reported employment at baseline. Of these, 11 were excluded (18.0%), compared to 178 of the 2087 (8.5%) without employment at baseline (p=0.01). Therefore, participants employed at baseline

were more likely to leave the study early. Participant demographics, mental illness diagnoses and history of homelessness are presented in Table 1.

Table 1. Demographic and baseline variables by group

	High Needs		Moderate needs	
	HF	TAU	HF	TAU
Sample size	469	481	689	509
Follow up duration in days (mean, SD)	684, 169	642, 204	684, 157	640, 202
Male (%)	68.2	68.4	65.0	67.6
Age (Mean, SD)	38.9, 10.8	39.9, 11.2	42.2, 11.1	42.1, 11.3
More than 12 years of education (%)	37.5	37.4	41.1	46.0
MCAS score (Mean, SD)	54.6, 7.3	54.4, 7.2	64.7, 6.2	64.7, 6.2
Worked continuously for at least 1 year (%)	60.3	63.0	68.7	69.9
Employed at baseline (%)	1.82	3.12	2.29	4.03
Not working due to: (%)				
Mental illness	46.1	47.6	41.1	38.1
Physical illness	11.1	10.0	13.8	15.9
Both	15.6	13.3	12.2	13.8
Other*	27.2	29.1	32.9	32.2
No arrests in past 6m (%)	57.1	57.8	71.0	69.7
Would like paid employment (%)	74.0	71.5	75.2	76.0
Diagnosis (%)				
Psychotic disorder	60.8	62.8	27.3	27.9
Major depressive disorder	16.8	19.5	48.8	44.8

Mania-hypomania	15.1	12.5	12.2	14.5
Mood disorder with psychotic features	5.1	3.3	4.1	5.1
Post-Traumatic Stress Disorder	0.2	1.0	3.8	4.5
Panic disorder	1.1	0.4	3.3	2.6
Undetermined	0.9	0.4	0.6	0.6
Alcohol use disorder at baseline (%)	45.4	46.4	43.0	44.0
Substance use disorder at baseline (%)	61.0	58.2	46.6	47.5
Percent of adult life spent homeless (%)				
<1%	3.6	5.0	8.0	7.5
1-2.9%	9.6	8.7	14.1	13.9
3-7.9%	14.9	16.0	17.4	15.9
8-19.9%	22.6	26.0	20.0	24.0
20-40%	18.8	17.9	20.8	18.1
>40%	30.5	26.4	19.7	20.6

MCAS: Multnomah community ability scale; * Other reasons included substance use, criminal records, homelessness, educational limitations, and lack of work.

Employment outcomes are presented in Table 2. None of the employment outcomes differed between HF and TAU groups with the exception of the number of hours worked per week. People in both moderate and high needs TAU groups reported working more hours than HF (26.5 vs. 23.0, p=0.018; 27.1 vs. 22.8, p=0.025, respectively).

Table 2. Employment outcomes

	High Need				Moderate Need			
	HF	TAU	Test statistics	*p*	HF	TAU	Test statistics	*p*
Obtained competitive employment over study period	16.20%	16.22%	χ^2 (1, 854)= 2.15	0.884	15.39%	18.47%	χ^2 (1, 1101)= 1.13	0.289
Obtained any type of employment over study period	22.0%	24.1%	χ^2 (1, 854)= 0.94	0.511	25.3%	27.50%	χ^2 (1, 1101)= 1.97	0.342
Median period of job tenure in competitive employment (Mean;Median, IQR)	124; 85, 38-197	150; 119, 60-258	t(150)=-1.13	0.256	122; 83, 36-203	136; 94, 41-170	t(196)=-0.87	0.381
Hours per week in competitive employment (Mean, SD)	22.8, 14.9	27.1, 20.7	t(364)=-2.22	0.025	23.0, 16.4	26.5, 15.5	t(467)= -2.83	0.018
Hours per week in non-competitive employment (Mean, SD)	9.5, 11.7	13.6, 16.3	t(121)=-2.23	0.053	16.9, 16.3	15.6, 15.3	t(171)=0.768	0.230
Wage/hour for competitive employment (Median, IQR)	12.30, 3.89	13.20, 7.12	t(364)=-1.43	0.131	13.20, 6.39	13.66, 7.01	t(467)=-0.76	0.446

SD standard deviation; IQR, interquartile range.

The details of earnings are presented in Tables 3a-b. From the first three months to the last three months of the study, the proportion of participants reporting employment income increased in both HF and TAU groups while the proportion of participants reporting income from street and illegal activities decreased. The estimated difference between income (reported in the last three columns of tables 3a-b), over time, between HF and TAU indicates that moderate needs participants receiving HF reported more income from government sources

($30.41, p=0.049, 95%CI 0.15-60.66). None of the other differences were statistically significant. Full GEE results for all income sources are provided in the appendix below (Tables A1a-b, A2a-b, A3a-b, A4a-b). Income from government sources and income from employment increased steadily with time.

Table 3a. Generalized Estimating Equations for Monthly income of high needs participants, by source.

High Need		**Housing First**		**TAU**		**Regression model[a]**		
	Month	Amount[b] (Median, IQR)	% reporting Income	Amount[b] (Median, IQR)	% reporting Income	Mean[c]	95% CI	*p* value
Total Income	First 3 months	705, 500-909		663, 480-898		42.06	-1.97 to 86.10	0.061
	Last 3 months	881, 580-975		896, 592-989				
Government Support	First 3 months	675, 500-898	95.2	600, 480-887	84.1	9.69	-22.37 to 41.76	0.554
	Last 3 months	871, 537-925	95.4	880, 578-920	89.9			
Employment Revenues	First 3 months	109, 80-408	10.9	312, 80-817	11.8	-6.50	-28.41 to 15.42	0.561
	Last 3 months	488, 103-1100	14.6	304, 160-1110	13.9			
Street Activities	First 3 months	140, 41-500	19.4	200,100-400	22.3	-5.35	-32.06 to 21.35	0.694
	Last 3 months	120, 69-400	14.1	150, 50-517	11.8			
Illegal Activities[d]	First 3 months	400,200-900	8.0	500, 100-	7.1			

			3000		
Last 3 months	900, 500-1720	3.9	600, 200-1500	3.8	

[a]Full regression models are presented in the appendix below and include housing as a time dependent variable, and age, sex, education, psychotic illness, and site as fixed covariates. [b]Amount obtained from each source per month, averaged over the first three or last three months, only for participants reporting that income in Canadian dollars. [c]Difference between the experimental and control group, expressed as monthly amount. [d]Convergence of regression model not achieved. IQR interquartile range; CI confidence interval.

Table 3b. Generalized Estimating Equations for Monthly income of moderate needs participants, by source.

Moderate Need		**Housing First**		**TAU**		**Regression model[a]**		
	Month	Amount[b] (Median, IQR)	% reporting Income	Amount[b] (Median, IQR)	% reporting Income	Mean[c]	95% CI	*p* value
Total Income	First 3 months	678, 498-898		677, 440-898		6.91	-27.21 to 41.02	0.691
	Last 3 months	872, 589-1009		840, 573-978				
Government Support	First 3 months	655, 474-887	98.8	600, 405-886	93.3	30.41	0.15 to 60.66	0.049
	Last 3 months	821, 574-950	96.2	817, 560-930	93.7			
Employment Revenues	First 3 months	150, 90-476	10.5	360, 176-1208	17.0	-17.54	-38.95 to 3.87	0.108
	Last 3 months	430, 205-1400	13.0	410, 215-1200	15.2			
Street	First 3	103, 50-	16.0	201, 60-	16.1	-19.66	-43.73	0.109

Activities	months	359		537		to 4.42
Illegal Activities[d]	Last 3 months	100, 50-345	11.4	200, 50-400	10.5	
	First 3 months	400, 122-600	5.3	824, 250-2000	9.4	
	Last 3 months	400, 222-1019	3.7	824, 244-2000	5.8	

[a]Full regression models are presented in the appendix below and include housing as a time dependent covariates, and age, sex, education, psychotic illness, and site as fixed covariates. [b]Amount obtained from each source per month, averaged over the first three or last three months, only for participants reporting that income in Canadian dollars. [c]Difference between the experimental and control group, expressed as monthly amount. [d]Convergence of regression model not achieved due to zero inflated data. IQR interquartile range; CI confidence interval.

The results of the analyses of the effect of HF on the odds of obtaining competitive employment are presented in Tables 4a-b. The log odds are plotted over time in Figures 2 and 3 to illustrate the treatment by time interaction. The percentage of participants in competitive employment is plotted over time in Figures 4 and 5.

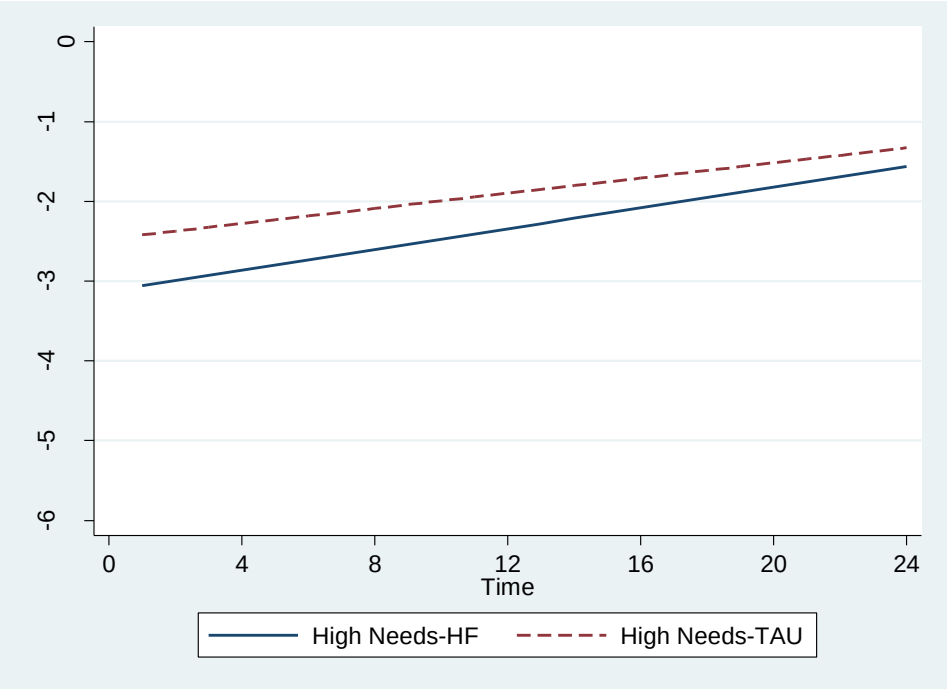

Figure 2. Log odds of obtaining competitive employment over time for high needs participants

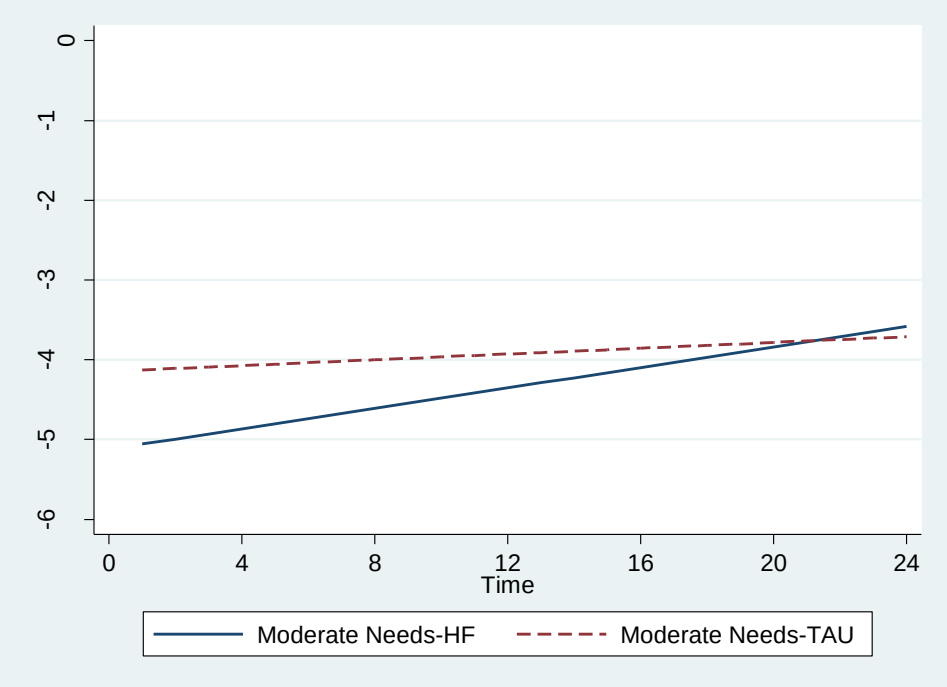

Figure 3. Log odds of obtaining competitive employment over time for moderate needs participants

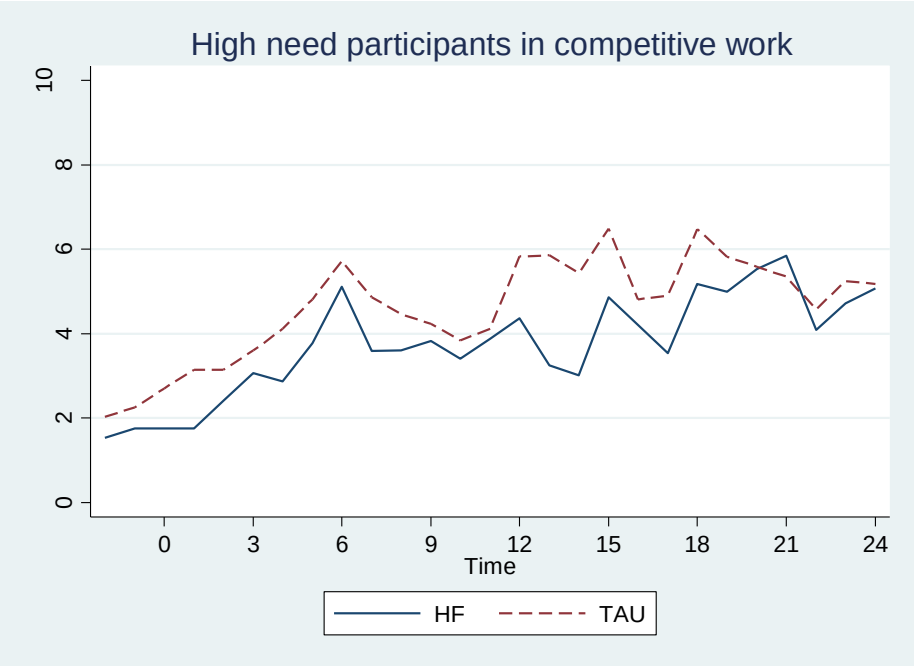

Figure 4. Percent of high need participants in competitive employment over the 27 month period of the study. (n=856)

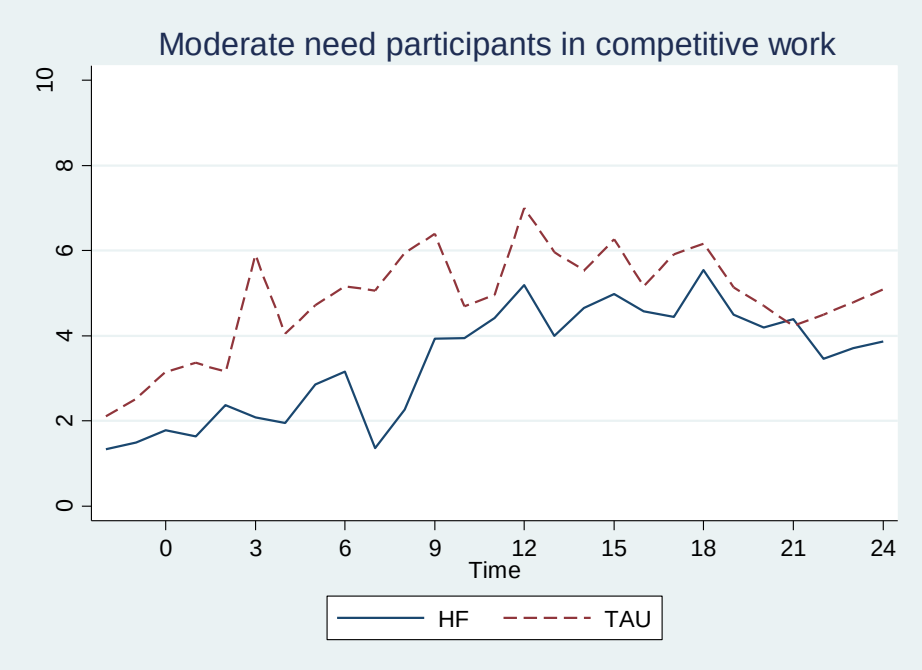

Figure 5. Percent of moderate need participants in competitive employment over the 27 month period of the study. (n=1103)

For the moderate needs group, an interaction between treatment group and time suggests that they have increased odds of finding employment, but that their odds of finding employment never exceed the odds of the TAU group. In both high and moderate needs, the odds of obtaining employment increased with time, but the rate at which the odds increased rose was statistically greater for moderate needs participants receiving HF. Site-specific analyses (not shown) reveal that, for the moderate needs group, the interaction of treatment by time is similar to the estimate reported in table 4b in direction and magnitude, and statistically significant in all but one city. This suggests that the beneficial effect of HF over time is generalizable to various cities with differing demographics, labour markets, and housing policies.

Table 4a. Factors associated with competitive employment, high needs group (n=856)

	OR	RSE	*z*	*p*	95%CI	
Housing First	0.52	1.38	-2.04	0.041	0.28	0.97
Time	1.05	1.01	3.77	0.0001	1.02	1.07
HF x time interaction	1.02	1.02	0.93	0.353	0.98	1.06
Site, compared to Montreal						
Vancouver	2.48	1.32	3.28	0.001	1.44	4.28
Winnipeg	0.77	1.44	-0.72	0.469	0.38	1.57
Toronto	0.65	1.40	-1.31	0.190	0.34	1.24
Moncton	2.79	1.34	3.53	0.0001	1.58	4.92
Male	1.63	1.21	2.58	0.010	1.13	2.37
Education (12y+)	1.29	1.17	1.62	0.105	0.95	1.74
Age	0.96	1.01	-4.84	0.0001	0.95	0.98
Employed at baseline	8.81	1.22	11.16	0.0001	6.01	12.90
Psychotic disorder	0.71	1.21	-1.80	0.071	0.49	1.03
Alcohol disorder at baseline	1.48	1.17	2.45	0.014	1.08	2.04
Substance disorder at baseline	0.64	1.18	-2.65	0.008	0.47	0.89
MCAS	1.00	1.01	-0.09	0.931	0.98	1.02
Month of the data- collection interview	1.70	1.04	15.00	0.0001	1.58	1.82

RSE robust standard errors; MCAS Multnomah Community Ability Scale

Table 4b. Factors associated with competitive employment, moderate needs group (n=1103)

	OR	RSE	*z*	*p*	95%CI	
Housing First	0.38	1.32	-3.47	0.001	0.22	0.65
Time	1.02	1.01	1.54	0.125	0.99	1.04
HF x time interaction	1.05	1.02	2.62	0.009	1.01	1.08
Site, compared to Montreal						
Vancouver	0.72	1.23	-1.53	0.126	0.48	1.09
Winnipeg	0.56	1.24	-2.75	0.006	0.37	0.85
Toronto	0.40	1.22	-4.60	0.0001	0.28	0.59
Male	1.53	1.18	2.61	0.009	1.11	2.10
Education (12y+)	1.49	1.16	2.70	0.007	1.12	1.99
Age	0.97	1.01	-3.72	0.0001	0.96	0.99
Employed at baseline	13.49	1.21	13.48	0.0001	9.24	19.69
Psychotic disorder	0.78	1.18	-1.49	0.136	0.57	1.08
Alcohol disorder at baseline	1.18	1.17	1.03	0.304	0.86	1.62
Substance disorder at baseline	0.79	1.19	-1.36	0.174	0.57	1.11
MCAS	1.03	1.01	2.59	0.009	1.01	1.06
Month of the data- collection interview	1.67	1.04	14.77	0.0001	1.56	1.79

RSE robust standard errors; MCAS Multnomah Community Ability Scale

Other results of the regression models were more straightforward: men, younger participants, and those employed at baseline had increased odds of obtaining competitive employment in both groups. Participants in the moderate needs group with more than 12 years of education, and with higher MCAS scores had greater odds of obtaining employment (OR 1.49, p=0.007, 95%CI1.12-1.99; OR 1.03, p=0.009, 95%CI 1.01-1.06, respectively). Participants in the high needs group with a substance use disorder, as determined by the MINI, had lower odds of obtaining employment (OR 0.64, p=0.008, 95%CI 0.47-0.89)

Participants' greater recall of jobs that began in the 30-day period prior to the interview is noteworthy. This effect was highly significant in both need groups (high needs OR 1.70, 95%CI , p< 0.0001, 1.58-1.82; moderate needs OR 1.67, p< 0.0001, 95%CI 1.56 -1.79). Lagging this variable by 30 days suggested that the odds of reporting a job beginning the 30-day period after

the interview were decreased for both groups (high needs OR 0.84, p< 0.0001, 95%CI 0.74-0.93; moderate needs OR 0.77, p< 0.0001, 95%CI 0.69-0.90, regression tables not shown).

Discussion

In this large trial, Housing First led to increasing odds of obtaining employment among moderate needs participants over time, however their odds of obtaining employment did not surpass the odds of obtaining employment seen in the TAU group. Over time, employment rates rose for both high-need and moderate-need participants, whether assigned to the HF or the TAU condition. Overall, over the 2-year follow-up, approximately 16% obtained competitive employment, and 8% obtained non-competitive or sheltered jobs. In terms of income, HF appears only to have increased income from social assistance and disability benefits.

The finding that HF participants had lower odds of obtaining competitive employment was unexpected. Admittedly, Housing First, as an intervention that consists of several clinical and non-clinical services designed to help people retain stable housing, does not typically include specialized employment support services (Stefancic & Tsemberis, 2007). Qualitative findings suggest, however, that homelessness creates barriers to obtaining employment (Morrell-Bellai et al., 2000; Poremski, Whitley, & Latimer, 2014). The finding that HF does not have a significant impact on employment is emerging in other housing intervention studies and reviews (Bassuk, DeCandia, Tsertsvadze, & Richard, 2014). It may be that stable housing, even with the clinical support of HF, is insufficient to overcome the barriers that result from a recent history of homelessness. Rent subsidies as well as the increased income from government benefits received by participants may have reduced the financial burden of unemployment, allowing participants to focus on other issues. Further research is necessary to replicate the findings of this trial.

The finding that HF increased income from government supports is, in contrast, unsurprising. Some participants did not have any such income when they were recruited into the study. Over and above the fact that having a fixed address facilitates receiving benefits cheques(Pearson et al., 2009), HF staff took whatever measures were necessary (including recovering birth certificates) to ensure that participants were receiving such benefits: these were needed so that participants could pay their share of rent. Problems related to social security number are common in people who are homeless (Wilson 2009).

It may be our intent-to-treat analysis obscures a causal mechanism whereby HF leads to stable housing which in turn leads to increased odds of employment. Controlling for stable housing in a regression model intended to test the effects of HF would be akin to controlling for an intermediate outcome along the causal path between HF and employment. Future research relying on more complex methods, such as structured equation modeling, could explore the complex relationship that exists between Housing First, stable housing, and employment.

Finally, the low rates of employment observed in our study are consistent with previous estimates of employment rates in populations with mental illness of between 8 -30% (Perkins & Rinaldi, 2002; Rosenheck et al., 2006). They contrast markedly, however, with the 74% of participants who, at baseline, expressed a desire to return to employment. Specialized services, such as evidence-based supported employment, may be needed to help people with mental illness and a recent history of homelessness achieve their goals of employment (Burt, 2012; Poremski, Rabouin, & Latimer, Submitted).

Strengths and Limitations

This study has several strengths. First, this is the first study using a randomized controlled design to test the effect of HF on employment outcomes of homeless people with mental illness.

Second, a large sample derived from several sites increases the external validity of the findings. Third, researchers conducting the recruitment searched for participants from various sources, increasing the representativity of the sampling, and extensive means were employed to assure high rates of follow-up (Goering et al., 2014; Veldhuizen et al., 2014).

Several limitations must be kept in mind when interpreting the results. First, the study groups data from five research teams working in different cities. In spite of efforts to standardize data collection procedures, there may have been slight differences across sites. To deal with this limitation, income categories were first separated into smaller components and then recombined into general categories in a way that was standard across all sites.

Secondly, determining the veracity of employment outcomes and income figures was complicated by the reporting of excessively high wages and hours worked, which could be legitimate given the presence of certain high-paying jobs (e.g., oil field worker). Additionally, a low number of people reported income from illegal activities, preventing the use of longitudinal statistical analyses. The reporting of employment was also subject to a recency effect: Participants were more likely to report having been in jobs during the month before the interview and less likely in the month following the interview. There is no reason of which we are aware, however, for these effects to bias either experimental or control groups.

A final limitation is differential attrition. A sixth (11/61) of the participants employed at baseline were dropped from the analysis because these participants contributed less than 9 months of data. This is problematic because analyses suggest that employment at baseline was associated with greater odds of obtaining employment during the study for moderate needs participants. This informative censoring may lead to a conservative effect estimate (Shih, 2002). Furthermore, the TAU group experienced rates of attrition approximately 15% higher than the experimental

group (90% retention rate in the experimental group, vs 75% in the control group). Attrition may be problematic if participants left the study because they obtained employment.

Conclusion

Our data indicate that being assigned to a Housing First group is associated with lower odds of employment. However, the odds of obtaining employment increase over time, particularly for the moderate needs group. Earnings from various sources including earnings and street activities, with the exception of government support for the moderate needs group, did not differ between groups, suggesting that HF did not have a significant impact on the number of people obtaining income from these sources. More research is needed to find out how supported employment may be effectively combined with supported housing to help homeless people with mental illness attain their vocational goals.

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Back to Table of Content

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Appendix

Table A1a Total income, high need participants (n=856)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	42.06	22.47	1.87	0.061	-1.97	86.10
Time	7.80	0.88	8.87	0.0001	6.08	9.53
Site, compared to Montreal						
Moncton	-284.30	29.33	-9.69	0.0001	-341.78	-226.82
Toronto	-64.69	33.18	-1.95	0.051	-129.73	0.34
Winnipeg	-361.45	30.10	-12.01	0.0001	-420.44	-302.46
Vancouver	-31.08	24.28	-1.28	0.200	-78.66	16.50
Male	47.37	22.81	2.08	0.038	2.67	92.07
Education (12y+)	20.96	23.41	0.9	0.371	-24.93	66.84
Psychotic disorder	-70.24	31.48	-2.23	0.026	-131.95	-8.53
Age	0.93	0.93	1	0.318	-0.90	2.76

Table A 1b Total income, moderate need participants (n=1103)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	6.91	17.41	0.4	0.691	-27.21	41.02
Time	7.34	0.77	9.56	0.0001	5.83	8.84
Site, compared to Montreal						
Toronto	-9.40	24.68	-0.38	0.703	-57.77	38.98
Winnipeg	-266.22	22.43	-11.87	0.0001	-310.18	-222.26
Vancouver	59.72	25.65	2.33	0.020	9.46	109.99
Male	8.59	17.95	0.48	0.632	-26.59	43.76
Education (12y+)	43.49	18.57	2.34	0.019	7.10	79.89
Psychotic disorder	-7.32	18.71	-0.39	0.696	-44.00	29.35
Age	2.16	1.00	2.15	0.031	0.19	4.13

Table A2a Government support, high need participants (n=856)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	9.69	16.36	0.59	0.554	-22.37	41.76
Time	6.85	0.68	10.06	0.0001	5.52	8.19
Site, compared to Montreal						
Moncton	-251.00	21.92	-11.45	0.0001	-293.96	-208.04
Toronto	-51.62	24.71	-2.09	0.037	-100.05	-3.19
Winnipeg	-349.57	21.86	-15.99	0.0001	-392.41	-306.73
Vancouver	-23.76	17.72	-1.34	0.180	-58.50	10.97
Male	-24.35	18.80	-1.29	0.195	-61.21	12.51
Education (12y+)	36.81	17.23	2.14	0.033	3.04	70.57
Psychotic disorder	-25.35	20.33	-1.25	0.212	-65.19	14.50
Age	2.26	0.79	2.85	0.004	0.70	3.82

Table A2b Government support, moderate need participants (n=1103)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	30.41	15.44	1.97	0.049	0.15	60.66
Time	6.41	0.58	11.07	0.0001	5.27	7.54
Site, compared to Montreal						
Toronto	27.04	21.89	1.24	0.217	-15.87	69.95
Winnipeg	-232.41	19.12	-12.16	0.0001	-269.89	-194.93
Vancouver	77.87	22.05	3.53	0.0001	34.66	121.08
Male	-61.02	16.67	-3.66	0.0001	-93.69	-28.34
Education (12y+)	-1.43	16.28	-0.09	0.930	-33.33	30.47
Psychotic disorder	27.43	16.60	1.65	0.098	-5.10	59.96
Age	5.42	0.83	6.5	0.0001	3.78	7.05

Table A3a Employment, high need participants (n=856)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	-6.50	11.18	-0.58	0.561	-28.41	15.42
Time	2.96	0.98	3.03	0.002	1.04	4.88
Site, compared to Montreal						
Moncton	67.83	33.57	2.02	0.043	2.03	133.63
Toronto	11.25	11.84	0.95	0.342	-11.95	34.46
Winnipeg	-5.70	8.90	-0.64	0.522	-23.14	11.75
Vancouver	20.69	11.62	1.78	0.075	-2.08	43.46
Male	69.13	19.55	3.54	0.0001	30.81	107.46
Education (12y+)	37.08	13.89	2.67	0.008	9.85	64.31
Psychotic disorder	-28.03	12.50	-2.24	0.025	-52.52	-3.54
Age	-3.25	1.03	-3.16	0.002	-5.26	-1.23

Table A3b Employment, moderate need participants (n=1103)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	-17.54	10.92	-1.61	0.108	-38.95	3.87
Time	2.49	0.56	4.45	0.0001	1.39	3.59
Site, compared to Montreal						
Toronto	-29.25	18.59	-1.57	0.116	-65.69	7.20
Winnipeg	-44.16	18.13	-2.44	0.015	-79.69	-8.62
Vancouver	-37.56	19.83	-1.89	0.058	-76.43	1.31
Male	43.27	13.33	3.25	0.001	17.14	69.40
Education (12y+)	19.26	11.99	1.61	0.108	-4.25	42.76
Psychotic disorder	-19.10	12.01	-1.59	0.112	-42.65	4.45
Age	-2.49	0.61	-4.08	0.0001	-3.69	-1.29

Table A4a Street activities, high need participants (n=856)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	-5.35	13.63	-0.39	0.694	-32.06	21.35
Time	-0.38	0.52	-0.73	0.465	-1.40	0.64
Site, compared to Montreal						
Moncton	-76.29	23.09	-3.30	0.001	-121.55	-31.03
Toronto	-44.63	26.29	-1.70	0.090	-96.16	6.91
Winnipeg	-23.33	29.35	-0.79	0.427	-80.86	34.20
Vancouver	-25.68	24.54	-1.05	0.295	-73.78	22.43
Male	60.27	21.69	2.78	0.005	17.75	102.79
Education (12y+)	-45.70	18.60	-2.46	0.014	-82.16	-9.25
Psychotic disorder	-40.37	16.82	-2.40	0.016	-73.34	-7.41
Age	0.75	0.51	1.47	0.141	-0.25	1.76

Table A4b Street activities, moderate need participants (n=1103)

	Coef.	*Robust SE*	*z*	*p*	95% CI	
HF	-19.66	12.28	-1.60	0.109	-43.73	4.42
Time	-0.40	0.38	-1.06	0.290	-1.13	0.34
Site, compared to Montreal						
Toronto	-17.06	10.07	-1.69	0.090	-36.81	2.68
Winnipeg	10.43	15.82	0.66	0.509	-20.57	41.44
Vancouver	54.33	19.85	2.74	0.006	15.42	93.24
Male	83.90	21.33	3.93	0.0001	42.08	125.71
Education (12y+)	14.55	13.89	1.05	0.295	-12.67	41.76
Psychotic disorder	-12.17	15.27	-0.80	0.425	-42.10	17.76
Age	-0.84	0.54	-1.55	0.122	-1.91	0.22

Back to Table of Content

The core purpose of this thesis is to determine if evidence-based supported employment, also known as IPS, is effective in a group of people who have mental illness and have recently been housed by a Housing First program. The previous section suggests that, alone, Housing First offered to homeless people with mental illness does not increase their odds of obtaining competitive employment, despite the fact that the odds do increase with time. The following section presents the results of a randomized controlled trial intended to directly assess the effect of IPS on vocational outcomes of participants with moderate needs receiving scattered-site Housing First.

A randomised controlled trial of evidence-based supported employment for people who have recently been homeless and have a mental illness

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Abstract

Background: The Individual Placement and Support (IPS), the most effective vocational model for helping people with mental illness obtain competitive employment, has not yet been tested experimentally among formerly homeless people housed by a Housing First program.

Methods: Ninety participants from the Montreal site of the At Home/Chez Soi project were randomized to IPS or treatment as usual. Days in competitive employment, earnings, and hours worked were measured every three months. Regression models were used to evaluate the effect of IPS on employment during the 8-month period that the IPS program reached a good level of fidelity.

Results: The odds of obtaining competitive employment were greater in the group receiving IPS (OR 2.42, p= 0.022; 95%CI 1.13-5.16). Employment rates reached 34% in the IPS group and 22% in the comparison group. Participants receiving IPS reported higher satisfaction scores than participants receiving usual services. Reliance on sources of income, such as welfare or income from sheltered workshops, did not differ between groups.

Conclusions: While the odds of obtaining employment are greater in the IPS group, the percentage of people who found work is lower than what could be expected from an IPS program. The short period of observation, as well as experiences of homelessness, may have contributed to this finding.

Background

Unemployment among homeless people is estimated to be between 80 and 90% (Acuña & Erlenbusch, 2009; Aubry, Klodawsky, & Coulombe, 2011; Pickett-Schenk et al., 2002) in spite of their frequently expressed desire for regular work (Acuña & Erlenbusch, 2009; Daiski, 2007). People who are homeless encounter many obstacles to returning to work (Morrell-Bellai, Goering, & Boydell, 2000; Pickett-Schenk et al., 2002; Waghorn & Lloyd, 2005) including obstacles that result from simultaneous homelessness and mental illness (Poremski, Whitley, & Latimer, 2014). Individual placement and support (IPS) has been shown to be the most effective service model to help people who have a mental illness obtain and maintain competitive employment (Bond & Drake, 2012; Marshall et al., 2013). Indirect evidence of its effectiveness for people who had been homeless comes from a meta-analysis (Campbell, Bond, & Drake, 2011). The majority of the existing research, however, has yielded modestly positive, but encouraging results (Burt, 2012; Ferguson, Xie, & Glynn, 2011; Rosenheck & Mares, 2007).

This article presents the first trial of IPS offered to people with mental illness who had been homeless, and have been recently housed by a scattered-site Housing First program (Goering et al., 2011). We hypothesize that participants assigned to IPS will have better vocational outcomes, in terms of competitive jobs, compared to participants receiving usual vocational services within the same Housing First program. We also hypothesize that participants receiving IPS services will be more satisfied with IPS than participants receiving usual vocational services.

Methods

Study setting and participants

Participants to this trial were recruited from among the 204 participants of the Montreal site of the At Home/Chez Soi study who had been classified as having moderate needs and who had

been assigned to the scattered-site Housing First experimental group (Goering et al., 2011). Among the 204 experimental-group participants, 188 were invited to participate in this trial. No further participants were recruited once the study reached its enrollment target of 90. Having been housed in an apartment of their choice at the beginning of the At Home/Chez Soi study, they were followed by one of two Intensive Case Management (ICM) teams (one community-based, the other affiliated with the institutional sector) as well as by a common housing team that was responsible for handling issues involving leases and landlords. All participants had access to a rent supplement, set so that they had to contribute 25% or 30% of their income towards monthly rent.

Inclusion criteria for the larger At Home/Chez Soi study were: 18 years of age or older, the presence of a mental illness (major depression, mania or hypomania, post-traumatic stress disorder, panic disorder, mood disorder with psychotic features, psychotic disorder), and to have been either in absolute homelessness for at least seven nights, or precariously housed with at least two separate instances of absolute homelessness in the past year. Absolute homelessness was defined as living on the street or sleeping in emergency shelters.

In order to be included in the present study, participants had to be unemployed at the time of recruitment into the IPS study and to express a desire for help in obtaining regular employment.

Study procedure

Recruitment for the larger At Home/Chez Soi study took place from October 2009 to May 2011, and participants were followed for up to two years. At each in-person interview (every six months), for the first year, participants desiring help returning to work were offered the opportunity to participate in this randomized trial of IPS. Recruitment for this sub-study took place from November 2009 to March 2012. Participants continued to be followed for the IPS

trial beyond the end of their main study follow-up period, up until March 2013 when all data collection ended.

Those who accepted to participate in the IPS trial were randomized to IPS services or standard Housing First (SHF). Stratified randomization, with blocking within strata, was used to assign participants to groups. Randomization was stratified by ICM team and by past work experience (having worked in the past five years, or not).

All participants signed an informed consent form prior to participation. Ethics approval was obtained from the ethics review board at the Douglas Institute, affiliated with McGill University in Montreal, Canada.

Intervention

Participants randomized to IPS received services for the duration of the study. The aim was to implement and maintain a high-fidelity IPS intervention (Drake, Bond, & Becker, 2012) with the goal of helping participants who so desired obtain and maintain a competitive job of their choice. Employment specialists were trained and supervised by a senior member of an experienced local IPS service. They worked closely with the clinical teams from whose caseloads their clients were drawn.

Participants randomized to TAU received the services associated with their participation in the At Home/Chez Soi project. They were free to seek employment by any means of their choice. Services associated with the Quebec welfare and social service system were available. These services included training with eventual placement in jobs reserved for people receiving welfare. Community-based services for people who were homeless were also available. These typically provide day- or week-long contracts. None of these services were integrated into the clinical teams, or offered continued time-unlimited personalized support.

All participants, regardless of the IPS study group to which they were assigned, received the Housing First intervention offered as part of the larger At Home/Chez Soi project (Goering et al., 2011). These services included intensive case management and rent subsidies. The clinical teams providing a Housing First intervention helped clients attain their goals, and in some cases this did involve helping them obtain employment.

Program fidelity

Program fidelity was assessed twice, approximately 15 months after the first employment specialist was hired, and 9 months after that. The 25-item supported employment fidelity scale (D. Becker, Swanson, Bond, & Merrens, 2008; Bond, Peterson, Becker, & Drake, 2012) was used to evaluate program fidelity. The evaluation relied on document review, key informant interviews, and direct observation of employment specialist activities. The fidelity scale was modified for the Quebec setting by dropping an item documenting the collaboration between employment specialists and Vocational Rehabilitation counselors, an American service for which there is no equivalent in Quebec.

The first rating was fair (73/120), and the second (after the replacement of one employment specialist by another, hiring of a second employment specialist, and renewed training efforts) good (100/120). The 8-month period of good fidelity, between mid-April and mid-December 2012, could not be given a higher rating because of insufficient support from the executive team and insufficient documentation of the ongoing vocational assessments and the contacts with potential employers. During the period of fair fidelity, between the beginning of December 2011 and mid-April 2012, in addition to the problems noted above, integration into the clinical teams was problematic. Caseloads were not within IPS standard limits because the first employment specialist left, and several months were needed to recruit a replacement. Finally, the three items relating to job characteristics had to be given the minimal rating of 1, because fewer than

10 jobs were found during that period. The period prior to December 2011 had low fidelity and could not be considered IPS because of the issues noted above, and because one of the employment specialists did not spend time in the community and failed to build relationships with potential employers. The period considered in the analysis represents the period when the IPS services had reached good fidelity, approximately one month after the hiring of the second employment specialist.

Measures

Self-reported vocational outcomes were assessed retrospectively at three-month intervals. The primary outcome of interest was being in employment. This was represented by a binary indicator of whether or not the participant had worked at least one day in a 30-day period. Interviewers asked for the start and end dates of any jobs, the nature of the job (whether competitive or sheltered, regular or casual), weekly hours worked, and wages. These outcomes were chosen to facilitate the comparison of our results with other IPS studies (Bond, Campbell, & Drake, 2012). Income obtained monthly from competitive jobs was calculated by multiplying wage by the number of hours worked in the month. Other income sources include non-competitive employment, and welfare.

Demographic data and service use histories were obtained at baseline via self-report. Mental health status and substance use disorders were evaluated by trained interviewers, with support from a clinical psychologist, using the MINI international neuropsychiatric interview (Sheehan et al., 1998). The MINI was also used to determine alcohol dependence and abuse at baseline. Criminal records were accessed via provincial and municipal criminal court docket databases and were coded as present if a sentence for any type of offense was rendered or absent if no sentence was on-file.

A detailed history of homelessness experiences prior to enrolment was also obtained at baseline. Participants were considered chronically homeless if, prior to recruitment, they 1) had an uninterrupted period of homelessness that lasted at least 12 months and, 2) were homeless at least 80% of the time since first becoming homeless.

A residential time-line follow-back questionnaire (Tsemberis, McHugo, Williams, Hanrahan, & Stefancic, 2007) was administered at three-month intervals. Information gathered included the dates of accommodation in any residence or shelter, and type of residence (i.e. private home, institutional residence, or emergency shelter). For this study, the various types of residences were categorized into three groups: 1) stable (permanent accommodation, obtained by the participant or by the HF team), 2) institutional (hospital inpatient units, or prisons), and 3) unstable (precarious housing, street, or emergency shelters). Since this is a time-dependent variable, the study period was divided into 90 day periods. Participants were considered to belong to a category if they had spent at least 60 out of a given 90 day period in residences of that category. If they had not, housing during that period was classified as mixed.

The 10-item Service Satisfaction Scale (Greenfiels & Attkinsson, 2004; Mitton, Adair, McDougall, & Marcoux, 2005) worded so as to refer to employment services, was administered at six-month intervals, and completed by participants who had actually received IPS services or, for those in the usual vocational services group, who had availed themselves of available vocational services. Items were rated on a five point scale, with higher values indicating greater satisfaction.

Finally, observation of a graph tracing employment rates by 30-day periods according to experimental group revealed an unexpected association between the timing of interviews and reported employment rates. This association was common to both groups. To account for this

effect, we included a binary variable indicating that the 30 day segment immediately preceded the interview from which employment data were recorded. (Recall should be maximal for such months.)

Allocation concealment and blinding

Allocation concealment was achieved by supplying allocations in opaque envelopes. Group assignment was only revealed after the end of the baseline interview. Due to the nature of the questionnaires used to measure satisfaction with services, interviewers could not be blinded to group assignment.

Analyses

Baseline differences for covariates and outcomes were compared statistically, using a t-test or the non-parametric Somers' D (Newson, 2001) for continuous variables as appropriate, or a χ^2 -test for categorical data. Due to the number of comparisons, an alpha level of 0.01 was used as a threshold of statistical significance. On the basis of the typically large effect sizes (0.8) for the difference in the proportion of participants obtaining a competitive job that are documented in the literature (Bond, Drake, & Becker, 2008), a power calculation had estimated that 45 participants in each treatment arm would be sufficient to detect effects at a value of p=0.001.

We performed an intent-to-treat analysis: all participants were analyzed in the group to which they were assigned at randomization. A generalized estimating equation (GEE) with logit link function was used to estimate the population averaged longitudinal effect of the intervention on the primary outcome (Diggle, Heagerty, Liang, & Zeger, 2009). Both fixed covariates (alcohol and substance abuse at baseline, education, criminal record, and past history of chronic homelessness) and a time-dependent one (housing status) were used. Multiple imputation by chained equations (Azur, Stuart, Frangakis, & Leaf, 2011) was used to impute missing employment data. The imputed values were a function of employment during the three

previous and three following months, and depended upon housing stability during the two previous months. The imputation model also included all covariates used in the final GEE.

Two sets of sensitivity analyses were conducted 1) to determine the effect of different ways of completing missing data, and 2) to determine the influence of the cut-off dates used to determine when fidelity attained a good level, and of restricting the analysis to the period with good fidelity. In the first sensitivity analysis, multiple imputation was not used, and missing days were counted as days during which the person had not worked. For the second set of sensitivity analyses, cut-offs used to determine the period of good fidelity were varied by plus or minus one month. Then, instead of restricting the analysis to the period of good fidelity, the entire study period, from randomization to the last point in the study, was considered and the estimated fidelity rating at that time included. All analyses were carried out using STATA 13 (StataCorp, 2013).

Results

Participant flow through the trial is illustrated in Figure 1.

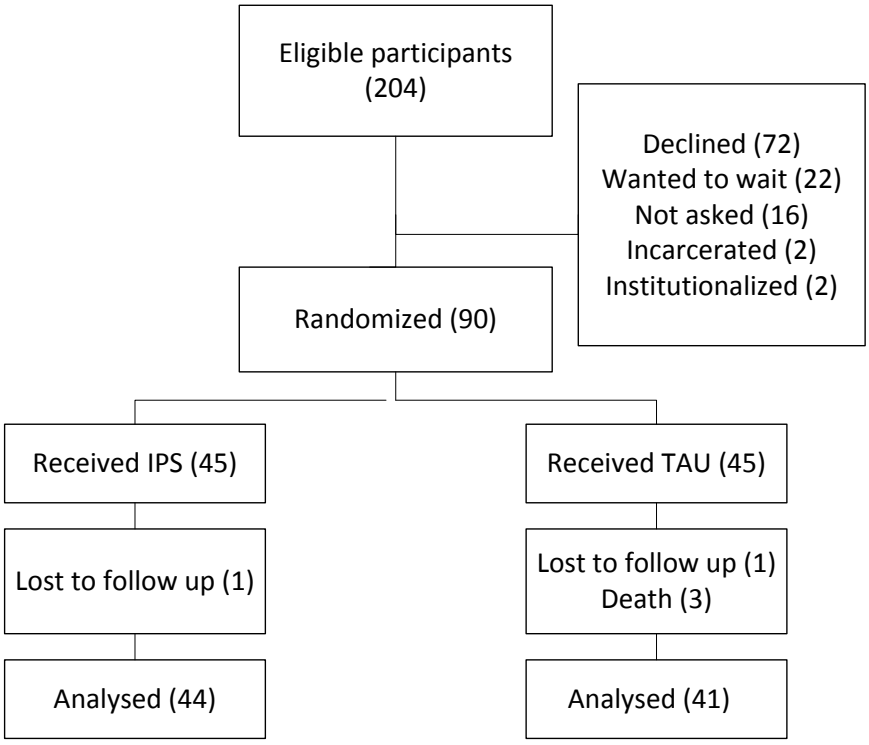

Figure 1. CONSORT diagram of participant flow.

Five participants left the study before contributing 9 months of data: two withdrew and three passed away. The average length of follow-up considered in the analysis (during which fidelity had attained a level considered good) was 222 days (SD 38) in the IPS group, and 206 (SD 59) in the TAU group (p=0.13). Demographic characteristics, MINI diagnoses, and history of homelessness are presented in Table 1. None of the differences in potential confounders were statistically significant between groups at the 0.05 level (tests of significance not shown).

Table 1. Sample characteristics.

	IPS n =45	TAU n=45
Follow-up duration in days (Mean, SD)	222, 38	206, 59
Male (%)	64	62
Age (Mean, SD)	45.2, 9.4	47.1, 10.6
More than 12 years of education (%)	43	60
Worked continuously for 1y+ (%)	82	87
Not working due to mental illness (%)	42	44
Not working due to physical illness (%)	7	9
Both mental and physical illness (%)	16	16
Other reasons for not working (%)	35	31
Criminal record present (%)	62	64
One or more arrests in the past 6m (%)	29	16
Alcohol dependence/abuse at baseline (%)	38	36
Substance dependence/abuse at baseline (%)	36	47
MINI Diagnosis (%)		
Major depressive disorder	64	64
Psychotic disorder	18	27
Panic disorder	4	7
Mania-hypomania	7	2
PTSD	7	0
History of chronic homelessness (%)	20	13
Spent at least 60 of the past 90 days at the midpoint of the analysis period in:		
Stable housing (%)	75	90
Unstable housing (%)	18	10
Institutional setting (%)	7	0

Employment outcomes are presented in table 2. Thirty-four percent (15/44) of participants in the IPS group obtained a competitive job during the eight-month observation period compared to 22% (9/41) in the TAU group (p=0.16). Job tenure among participants who obtained competitive employment was not significantly different between groups. Job tenure had a median of 53 days (IQR 18.5- 107.0) in the IPS group compared with 72 (IQR 26-92) in the TAU group (p=0.618).

Table 2. Employment outcomes

	IPS	TAU	Test statistics	*p*
Obtained competitive job during study	34%	22%	$X^2(1)=1.05$	0.16
Median period of job tenure in competitive employment, in days (Mean; Median, IQR)	57.9; 53.5, 18.5-107	79.1; 72, 26-92	t(52)= 0.73	0.46
Hours per week in competitive work during jobs (Mean; Median, IQR)	38.7; 30.5, 8-45	23.2; 26.5, 9-40	t(53)=1.03	0.10
Wage/hour for competitive work (Mean; Median, IQR)	$16.82; $12.00, 10.00-13.00	$13.19; $13.00, 10.00-15.00	t(53)=0.89	0.344
Hours per week in casual work (Mean; Median, IQR)	7.2; 3.3, 0.8-12.8	15.3; 3.3, 1, 41.6	t(12)= 0.99	0.34

IQR: interquartile range

Incomes from various sources are reported in table 3. Income from competitive employment among those who worked was greater in the TAU group, but the difference is not statistically significant.

Table 3. Monthly income in Canadian dollars and number of participants reporting income from each source

	IPS	n=	TAU	n=	Test statistics	*p*
Competitive work (Median, IQR)	830.20, 681.43-1618.75	15	1890.74, 369.81-2900.51	9	Z=-1.54	0.179
Total income (Median, IQR)	776, 622-939	44	840, 688-937	41	Z=-1.75	0.081
Work in sheltered settings[a] (Median, IQR)	32, 11-129	2	1007, 138-1287	5		na[b]
Casual work (Median, IQR)	238, 100-4000	3	430, 140-800	2		na[b]
Welfare (Median, IQR)	623, 589-896	41	715, 598-890	34	Z=-1.43	0.153

[a] Employment specialists did not place participants in sheltered settings

[b] too few values to calculate meaningful test of statistical significance

IQR: interquartile range

Results of the intention-to-treat logistic regression model are reported in table 4. Multiple imputation was used to impute 10.5% of missing data for whether the participant had a competitive job during that period. In sensitivity analyses, assuming that participants did not work during missing periods did not materially change the odds ratios or the confidence intervals.

Participants in the IPS group had a 2.4 greater chance of obtaining employment, compared with participants receiving treatment as usual. Few variables had an impact on the odds of obtaining employment. People with more than 12 years of education had two-fold greater odds of obtaining a competitive employment, and men were more likely than women to obtain employment. People reporting substance use at baseline had three-fold greater odds of obtaining employment. People were significantly more likely to report jobs they had in the 30 days before the interview.

Table 4. Regression estimating the effect of IPS on being in employment for the 8 month period of good fidelity (n=85).

	OR	RSE	z	*p*	95% CI	
IPS	2.418	1.472	2.28	0.022	1.133	5.157
Alcohol dependence at baseline	0.996	1.002	-1.71	0.089	0.992	1.001
Substance dependence at baseline	3.030	1.515	2.67	0.008	1.342	6.843
Education (12y+)	2.509	1.437	2.54	0.011	1.233	5.106
Criminal record	0.538	1.532	-1.45	0.147	0.233	1.243
Chronic homelessness	1.452	1.636	0.76	0.449	0.553	3.808
Thirty days prior to interview	2.531	1.202	5.04	0.0001	1.764	3.632
Type of residence compared to Stable housing						
Mixed	0.684	1.430	-1.06	0.288	0.339	1.379
Unstable	0.234	2.923	-1.35	0.176	0.028	1.921
Institution	0.452	3.818	-0.59	0.554	0.033	6.248
Male	2.555	1.557	2.12	0.034	1.072	6.086
Psychotic disorder	0.533	1.677	-1.22	0.223	0.193	1.467

OR: odds ratio; RSE: robust standard error; CI: confidence interval.

In sensitivity analyses, varying the time period of observation by starting one month earlier or one month later did not alter the odds ratios or confidence intervals reported in Table 4

In additional sensitivity analyses, we extended the time period from the point of randomization to the final data-collection point and included a measure of fidelity as a covariate. Doing so did produce a different result with a non-significant odds ratio for IPS of 1 (OR 1.01, p=0.96, 95%CI 0.59-1.73). Neither the period of fair fidelity, nor the period of poor fidelity was associated with statistically significant reduced odds of obtaining employment (0.70, p=0.34, 95%CI 0.34-1.45; 0.67, p=0.18, 95%CI 0.38-1.20, respectively).

Satisfaction scores are presented in Table 5. Every domain returned a significant difference between the groups, favouring IPS, with the exception of the role of IPS in dealing with mental health symptoms.

Table 5. Satisfaction with employment services

What is your overall feeling about:	IPS n=33[a] Mean, SD	TAU n=22[a] Mean, SD	*p*
How the services help you with employment?	4.1, 1.0	3.4, 1.3	0.0026
The knowledge and skills of the staff?	4.2 0.1	3.5, 0.2	0.0002
The ability of staff to listen to and understand your problems?	4.1, 0.1	3.5 0.2	0.0091
How involved and caring the staff are?	4.3, 0.1	3.5, 0.2	0.00001
The way services help you get well and stay well?	4.1, 0.1	3.6, 0.2	0.0100
Confidentiality and respect for your rights as an individual?	4.2, 0.1	3.6, 0.2	0.0062
The amount of help you receive?	4.3, 0.1	3.5, 0.2	0.00001
The way services help reduce symptoms and/or problems?	3.9, 0.1	3.4, 0.2	0.0230
The way staff address your most important concerns/needs?	4.1, 0.1	3.4, 0.2	0.0008
In a general, how satisfied are you with the services?	4.2, 0.1	3.7, 0.2	0.0050

[a]3 participants who had taken advantage of the IPS program did not complete the questionnaire, and 6 participants from the TAU group who had received alternative vocational services did not complete the questionnaire. The remaining participants had not in fact availed themselves of IPS or of alternative vocational services and thus we consider the questionnaire to be non-applicable to their situation.

Discussion

This study is the first randomized trial of evidence-based supported employment offered to recently homeless participants of a scattered-site Housing First intervention. By including IPS services within a larger Housing First project, it is possible to attribute the difference between experimental and TAU groups to the IPS services, unlike in previous studies.

People receiving IPS, during the period when IPS services had attained a good fidelity level, were more than twice as likely to obtain employment compared with people receiving usual services. Participants who received IPS services, even when these services were of fair fidelity, were also more satisfied with the IPS intervention than the TAU participants were with the limited

vocational services that their case managers may have referred them to. Differences in other vocational outcomes were not statistically significant. Compared with other IPS programs, the employment rate observed in this study, 34%, suggests a program with lower performance. In one review, programs achieving employment rates above 57% were classified as high-performance services (Becker, Drake, & Bond, 2011). Additionally, the effect sizes of 0.34 for job acquisition (dichotomous outcome, standardized mean difference effect size computed via the logit method (Lipsey & Wilson, 2001)) and 0.20 for job tenure (Hedges g) documented in this study are considerably lower than those reported in previous studies: A meta-analysis grouping data from 103 people who had been homeless in the past year found that the effect size of IPS was 1.13 for job acquisition and 0.89 for job tenure (Campbell et al., 2011) . Even though our comparison involves IPS services that had achieved good fidelity, our results are more similar to those of a handful of studies of programs specifically targeting homeless people with mental illness, but that were not as close to the IPS model (Burt, 2012; Ferguson et al., 2011; Rosenheck & Mares, 2007).

Several factors may account for the relative ineffectiveness of IPS reported here: the short duration of the follow-up period included in the analysis, prompted by the generally low fidelity achieved over the study period; characteristics of the participants, including wavering desire for work; and the fact that the study was conducted outside the United States.

First, the unusually short period over which employment outcomes were observed (eight months instead of, in most studies, one to two years) undoubtedly helps explain why employment rates did not exceed 34%. The IPS program achieved a good level of fidelity only for a period of about 8 months out of the 3 ½ year study duration. Although the study was initiated and designed by the investigators, the responsibility for recruitment and management

of employment specialists was left to one of the institutional providers that had established the Housing First intervention. This was done to facilitate the eventual long-term retention of employment specialists in the organization. However, this, combined with the time-limited nature of the employment specialist positions, and the union rules that impeded letting go of ineffective employment specialists, contributed to the modest level of fidelity attained during most of the study duration. If the entire study period is included in the analysis, even controlling for varying fidelity levels at various periods, no statistically significant association between IPS and employment rates emerges. Had a good level of fidelity been achieved and maintained over a longer time period, the results suggest employment rates would have been higher in the IPS group, and more markedly different from those in the TAU group.

Second, participant characteristics may have played a role as well. Qualitative findings not presented here suggest that desire to search for work fluctuated greatly over time for most participants. This appears to have been an important obstacle to finding competitive work, a finding in line with previous research that underscores the importance of consistent motivation (Alverson, Carpenter, & Drake, 2006; Henry & Lucca, 2004; Rinaldi et al., 2008). The high proportion of participants with an uncertain desire for work may be attributable to the manner in which they were recruited. Due to the limited potential pool of study participants, the limited duration of the trial, and the widely dispersed locations where they were housed (which made group meetings impractical), participants were only required to express a desire to participate once to be enrolled in the study. This contrasts with some other trials that required participants to attend two information sessions prior to enrollment (Drake, Becker, & Anthony, 1994; Latimer et al., 2006). Some IPS trials have invoked uncertain motivation of participants as at least one reason, among others, for relatively low effectiveness (Howard et al., 2010; Lehman et al., 2002). Furthermore, other characteristics of the formerly homeless sample may also have

played a role. For example, nearly two-thirds had a criminal record, which as noted in some qualitative interviews reported elsewhere, contributed to self-stigmatization in some participants (Poremski et al., 2014) thus compromising the desire for work, and could also directly increase employer resistance to hiring, though the regression model does not suggest that having a criminal record reduces the odds to a statistically significant extent. In addition, the studies included in the meta-analysis noted above, which had reported large effect sizes for individuals who had been homeless in the past year, included people who had been homeless in the past year, but did not target homeless people, as did the Housing First trial in which the present IPS study was nested.

Finally, studies carried out outside the US, including the present one, have tended to show lower employment rates than studies in the US (Bond, Drake, & Becker, 2012). Nonetheless, with all these factors and perhaps others militating against the intervention, it was modestly effective, achieving rates of employment of 34%, with 2.4 greater odds than in the control group of obtaining employment.

The large and statistically significant odds ratio for substance dependence reported in Table 4 is unexpected. It may be that people with substance abuse may be referred to additional substance use treatment services, which may include some form of vocational rehabilitation, or that they received more assistance from employment specialists because substance abuse can be a barrier to employment (Morrell-Bellai et al., 2000; Waghorn & Lloyd, 2005). It is also possible that having a substance dependence may lead to greater desire to seek revenue, including via employment, to supply the dependence (Anjana, Drake, & McHugo, 1998; Zuvekas & Hill, 2000). Another alternative is that participants have reduced substance use due to dissatisfaction with its consequences, thereby removing an obstacle to employment.

Three limitations may be noted: no attempt was made to blind interviewers to group assignment, participants were more likely to recall jobs they had in the month preceding the interview, and the sample had an over-representation of people with diagnoses of depression. Blinding the interviewers was unfeasible due to the nature of the questionnaire assessing satisfaction with services, which may have made them realize which group participants were assigned to. Interviewers did not, however, have a stake in the outcome of this study. As for the effect of recalling more jobs that happened in the 30-day prior to the interview, it is likely to be an issue for jobs of short duration, but not for jobs that spanned more than one assessment period. Possibly, if all jobs had been tracked, the difference between the IPS and TAU groups would have been greater. Future studies of employment outcomes should take this unexpected finding into account, which to our knowledge has not yet been noted in the IPS literature. Finally, the nature of the parent study split its samples into two groups based on needs level, this meant that people with schizophrenia and psychotic disorders were more often classified as having higher needs. This high needs group received ACT treatment, and intervention which, according to fidelity guidelines, should incorporate some focus on vocational services. As a result, we sampled from the moderate needs group who received ICM, an intervention without an integrated vocational service component. This sampling led to an over-representation of people with depression. This may limit the generalizability of the findings.

In conclusion, participants randomized to IPS services had greater odds of obtaining employment and participants who availed themselves of IPS services were much more satisfied with them compared with control group participants who were referred to traditional services. Nonetheless, IPS was less effective at increasing competitive employment rates in this study than in previous studies. Several factors, notably a short observation period during which fidelity to the IPS model attained a level considered good, and unfavourable participant

characteristics including a wavering desire for work, appear to have contributed to the low employment rates. Further research is needed to better understand the potential of IPS as a service model for homeless people recently housed in the context of a scattered-site Housing First program.

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Back to Table of Content

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Research to date demonstrates that evidence-based supported employment greatly increases the odds of finding competitive employment. However, the effects reported in the previous chapter are smaller than those documented in the literature. Despite this, participants receiving IPS were much more satisfied with the services they received compared with the group receiving usual services. The quantitative results provide only a partial picture of the effect of the intervention. Anticipating the limitations of quantitative data, parallel qualitative interviews were conducted to explore the effect of IPS on participants. These qualitative interviews paint a complex picture of the participants. The following section presents five representative case studies intended to produce a picture of participants' experiences of services; more specifically their experiences of building trust with vocational service providers. The experiences of participants in the experimental group are contrasted to those of the comparison group. This study is intended to explore one of the ways in which IPS contributes to the attainment of participants' vocational goals.

Building working alliances with people receiving supported employment and Housing First services.

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Abstract

Objectives: The developing literature on supported employment for people who have a mental illness and recent history of homelessness has yet to explore in depth the relationship between clients and their employment specialists. Because a recent history of homelessness is known to influence engagement with services in general, understanding the development of trust will help equip employment specialists to better serve this marginalized group.

Methods: Semi-structured qualitative interviews were conducted with 27 people, 14 receiving supported employment, and 13 receiving usual services. Thematic content analysis was used to generate themes and compare experiences between the two groups.

Findings: Trust emerged as an important facilitator to development of a collaborative relationship. It developed with time and featured in the narratives of participants who found jobs. Lack of trust and communication was associated with greater difficulty finding work. People receiving usual services rarely had repeated contact with service providers and therefore did not develop working alliances to the same extent as people receiving supported employment.

Conclusion: Without the support of an employment specialist, participants receiving usual services must rely more on internal motivation to search for employment opportunities. Programs seeking to assist this population must be sensitive to the experiences of homeless people that may make establishing trust difficult. Services should be designed to allow one service provider to deal exclusively with a particular client to permit the development of a working alliance.

Background

Studies indicate that 50 to 70% of people with severe mental illness want to work (Frounfelker, Wilkniss, Bond, Devitt, & Drake, 2011; McQuilken, Zahniser, Novak, Starks, & Bond, 2003). Yet, a much smaller proportion – about 11% to 30% - actually do (Kooyman, Dean, Harvey, & Walsh, 2007; Waghorn & Lloyd, 2005). Competitive work facilitates integration into community settings and emerges as an important factor in many recovery narratives (Kirsh, 2000; Larson et al., 2007). Numerous randomized trials have consistently shown that Individual Placement and Support (IPS) is the most effective model of supported employment currently available to help people with mental illness obtain and keep competitive employment (Bond & Drake, 2012).

Much less is known about the potential relevance and effectiveness of IPS with people who, in addition to having mental illness, have a history of homelessness and have recently been housed by a Housing First program. Studies that assess the desire for employment among people who are homeless and have a mental illness indicate a high desire for competitive employment, exceeding 85% (Acuña & Erlenbusch, 2009; Daiski, 2007). It is evident that employment represents an important goal for them. One meta-analysis of several IPS trials suggests that IPS is as effective for people who have a history of homelessness as it is for those stably housed (Campbell, Bond, & Drake, 2011). Other studies, which have directly tested various forms of supported employment, have yielded less encouraging results (Rosenheck & Mares, 2007), possibly a consequence of poor model fidelity (G.R Bond, 2007). Some studies suggest that homeless people with mental illness can be difficult to engage if they feel that the services are untrustworthy (Kryda & Compton, 2009; Morse et al., 1996). Research has yet to explore whether or not IPS programs may suffer from difficulties establishing working alliances with recently homeless service users because of issues of trust.

Research has begun to explore the development of working alliances between employment specialists and stably-housed people with mental illness (Donnell, Strauser, & Lustig, 2004; Kukla & Bond, 2009). This research suggests that a working alliance can positively influence participants' perception of their job prospects. Additionally, stably-housed people receiving IPS are more likely to develop good working alliances with employment specialists compared with participants receiving team-based services (Kukla & Bond, 2009). But more is needed to explore the extent to which the working alliance concept applies to employment specialists helping people with recent experiences of homelessness and mental illness because of the peculiar difficulties of providing services to marginalized populations (Kryda & Compton, 2009; Morse et al., 1996).

In theory, IPS could be well suited to engaging this population and establish working alliances because recommendations made in the literature to facilitate engagement and the key elements of a working alliance align with principles of IPS. Recommendations made to facilitate engagement include the use of personalized approaches, rapid access to services, and low caseload sizes with more time devoted to each person (Morse et al., 1996; Ng & McQuistion, 2004). The key elements of building a working alliance include a collaborative relationship, an affective bond between client and service provider, and agreement about the goals of the relationship and tasks necessary for accomplishing the goals (Bordin, 1979). The principles of IPS similarly emphasize personalized approaches to goal development and job placement, collaboration with clear roles and responsibilities, the rapid search for employment, and low caseload size to be able to devote sufficient attention to each service user (Drake, Bond, & Becker, 2012). Additionally, since the purpose of IPS is solely related to employment, its goal naturally aligns with the goals of its users who are seeking employment. The present study

investigates the way recently homeless people with mental illness experiences IPS services and how their experiences compare with those of participants receiving usual services.

Methods

Study Setting and Participants

Participants in this study were associated with two overarching studies: the At Home/Chez Soi project testing Housing First, and a randomized trial of IPS embedded within it. All participants received scattered-site Housing First services, including services from Intensive Case Management (ICM) teams, as part of the At Home/Chez Soi project (Goering et al., 2011). Inclusion criteria for the At Home/ Chez Soi project were: 18 years of age or older, the presence of a mental illness, and either to have been in absolute homelessness for seven nights or more, or to be currently precariously housed with at least two episodes of absolute homelessness in the past year.

From this Housing First sample, 90 participated in an RCT of IPS (45 in experimental arm, 45 in treatment-as-usual (TAU)). Participants for the present study were recruited shortly after they were randomized to the RCT of IPS. Sampling was contingent on membership in the RCT: 14 participants were recruited from the experimental arm and 13 from TAU. By virtue of their inclusion in the IPS trial, participants were unemployed at the time of recruitment, received Housing First services, and had expressed a desire for help returning to employment. This recruitment method was designed to sample on a theoretical basis participants whose experiences would differ on exposure to IPS services. Therefore, no additional selection criteria were applied. Participants were contacted mainly by phone or mail. Six of the eight mailed

invitations were accepted. Of the 31 people contacted by phone, 21 participated. People who declined did not differ in employment outcomes from those that participated: three of the 12 were in employment, a proportion similar to that of the group that participated.

Participants in the experimental arm received IPS services implemented with good fidelity (R. Drake, Bond, & Becker, 2012). The TAU participants were free to seek employment services of their choice. Existing services included a mix of sheltered jobs, job banks, and community-based jobs reserved for homeless or unemployed people receiving welfare. Other employment services were linked to social support organizations and homeless outreach programs. None of these services is integrated into the clinical teams.

Procedure

The experimental group was interviewed three times over the course of 12 to 16 months: near the beginning, half-way, and at the end of their participation. Participants receiving TAU were interviewed once near the end of the project, 12 to 16 months after their randomization. Since fewer participants in the control group received vocational services, and since the focus of the study was IPS, repeated interviews with the control group were judged unlikely to yield much additional information. A total of 53 interviews were conducted. The authors produced a topic protocol to guide semi-structured interviews. Interviews explored participants' opinions about the role supported employment or regular services played in their search for jobs. Guiding questions were broad to allow participants to discuss what was important to them (i.e. "How have services contributed to your search for employment?", "How has homelessness impacted your career?"). Interviews were conducted in English or in French, according to participant preference, by a bilingual interviewer. Approximately 1/6th of the interviews were conducted in

the homes of the participants, the remainder were conducted in offices familiar to them. All participants signed an informed consent form. Ethics approval was obtained from the ethics review board at the Douglas Institute, affiliated with McGill University in Montreal, Canada.

Analysis

Thematic content analysis was used to determine common and divergent experiences (Braun & Clarke, 2006) to compare themes. To ensure methodological rigor, two authors (DP & RW) separately coded the first few interviews, then compared and reconciled differences. Once agreement was reached, the joint coding list was used by the first author to code all interviews anew. The authors discussed points of confusion to reach consensus on the importance of codes. Experiences that had the greatest influence on participant behaviors were given priority in the coding. The coding lists used to code interviews with participants receiving IPS included IPS-specific codes not found in TAU services, such as codes specific to the integration between employment specialists and clinical teams. Codes related to experiences of homelessness, housing mental illness, employment were the same in both coding lists. Coding lists were English but the interviews were analyzed in their original language. Quotes presented below have been translated by consensus between the first author and by a second fully bilingual person. The interviews were analyzed in ATLAS.ti (version 7.0).

Findings

Participants of both groups spoke about experiences related to the theme of trust. People in the experimental group spoke about building trust with their employment specialist, whereas no participants receiving usual services noted the establishment of such a relationship with any one individual involved in their search for employment. In both groups distrust developed when promises were broken and services providers failed to listen to their goals. The samples' demographic information is presented in table 1.

Table 1. Participant demographics.

	IPS		TAU	
Study	RCT n=45	n=14	RCT n=45	n=13
Age	45.2, SD9.4	45, SD 7.6	47.1, SD 11.6	47, SD 10.6
Women	36%	36%	38%	54%
Percent of adult life spent homeless	3.1, IQR 1.5-26.7	4.4, IQR 0.9-34.5	4.7, IQR 0.8-10.2	6.8, IQR 1.6-21.4
Years of education	11.4, SD 3.0	10.5, SD 4.0	12.5, SD 5.4	12.5, SD 3.4
Criminal record	62%	49%	64%	58%
Worked continuously for 1y+	82%	79%	87%	85%
Obtained competitive employed	34%	50%	22%	15%
Received services	80%	100%	62%	62%

SD: Standard deviation, IQR: Inter-quartile range

At the final interview, four of the 14 participants receiving IPS were competitively employed, two had left employment, one was about to begin a new job and the remaining 7 had suspended their search. Of the 13 participants in the TAU group, one was in stable competitive employment, two were working in sheltered jobs, one worked part time, and another had just left a job reserved for people with a disability. Three used employment services available in the community but did not find work, and five did not seek employment.

Trust

The theme of trust can be divided into two: 1) The process of building trust, 2) The consequences of its development. Results are illustrated below with the case studies of Melanie and Rebecca. The consequences of having no one with whom to build a trusting relationship are illustrated with Mark's case study.

Building trust

For most participants, trust took time to build; only one participant's relationship with his employment specialist was characterized, from beginning to end, by trust. For others, initial

difficulty trusting appears to be a direct consequence of the participant's experiences while homeless. Melanie's story typifies the process. A woman in her mid-40s, she was laid off when her company downsized. She mourned the loss of this job, fell into depression, and began to drink regularly. After losing other jobs, she eventually lost her home. She spent the next several months living with family, but alcohol consumption led to her being cast out of their home. She felt abandoned with no recourse but to use emergency shelters. Having spent several months homeless, she found it difficult to trust professionals:

> Interviewer: If you had one piece of advice to give to new referrals, what would it be?
>
> Melanie: Advice? "Trust them" Yes, that is what I would say to new referrals. Let's say I was talking to myself a year ago, I would say "Trust IPS. They are there to help. They will accompany you. But tell them exactly what you need help with. You need to be clear, because the best way that they will be able to help you is if they know what you need. What are your expectations, and what is the best approach to use with you. […] So you need to be clear on the subject. It is the best way, and they will not quit until they find you a job."
>
> Interviewer: Was it difficult to trust them at first?
>
> Melanie: Yes… because of the environment from which I come. The people who were dearest to me turned their back on me, like my parents. And then, I found myself in emergency shelters where it is a free-for-all. Nobody really trusts anyone there. So… it was not impossible but it was hard. However, my employment specialist made trusting so easy. She was quick to try to build confidence and trust. I was hesitant at first, but she really put me at ease.

Melanie's case suggests that the experiences of homelessness and mental illness may alienate people from those they once trusted. This alienation makes it hard to trust strangers, including professionals. According to Melanie, her employment specialist was able to overcome this obstacle with empathy, understanding, and respect. Eventually, this trust facilitated open communication necessary to discuss participants' expectations of services. Participants who trusted their employment specialist had also discussed their roles and responsibilities in their search for employment as well as the roles and responsibilities of the employment specialist.

Consequences of the development of trust

Once trust has developed, a working alliance could be established. Employment specialists were then able to change negative beliefs and highlight peoples' strengths and potential for employment. Rebecca's story demonstrated the progressive erosion of self-confidence and self-esteem that made applying for jobs difficult. A mother of two in her early 40s, she became homeless after spending several months hospitalized for depression. During her brief period of homelessness she was charged with public intoxication and assault of a police officer. She had felt uneasy about discussing her criminal record with her employment specialist. After a few months the unease had passed and she trusted her employment specialist with her personal history. Consequently her beliefs about her criminal record as an impediment to employment had changed:

> Rebecca: [At] the beginning, I was very insecure because of my criminal record. I was telling myself "My God, they are going to ask me that question". I was always afraid. For me, it's been like three years that I flat-out refused to go to interviews because I was worried about being asked that question. And rejection and being refused by employers, me, I did not want to live that! You know? I would be too devastated. And then when I met my employment specialist she said "everything can be explained, and we can

> prepare for it, you will see…" she encouraged me. […] And when I saw how easy it was to pass interviews and that they were not pressing the issue, it encouraged me. I told my employment specialist that she was right.

Trusting the employment specialist led to many opportunities she had previously been unwilling to explore. Supported by her employment specialist Rebecca found competitive work, as did three other participants. The working alliance also facilitated discussions about losing jobs. Rebecca was not discouraged by job loss and found three jobs with the support of her employment specialist. Services helped her learn from rather than be discouraged by job loss. This helped her refine choices and improve her application to the next job.

The consequence of having no one with whom to develop a trusting relationship

Participants receiving TAU had similar experiences of homelessness as participants in the experimental group. They had trouble trusting strangers and service providers. Without regular contact with employment specialists, participants needed additional self-motivation to persist with their search. Working alliances rarely developed between them and their service providers. Because participants had to rely on their own initiative, having a proactive approach to seeking services and opportunities was associated with positive outcomes. Mark is a 50-year-old man whose troubled youth involved violence, addiction, and psychosis. Despite encountering stigma related to mental illness and homelessness, he was proactive about his search for employment:

> Mark: First of all I went to the welfare, because I get disability from them. So I asked them if I qualify for any of the employment programs. And they told me I did, the PAAS Action program, and… they suggested a local mission, I went there and they refused me into the program after they guaranteed me the program and everything. And it was

> actually at a different program when I was explaining it to them there that they told me they had one position left and that they were giving it to me.

Mark's journey through the services illustrates the hurdles that may discourage people from pursuing employment. He had to be determined to find the few opportunities that exist for a man with his checkered past. His story also demonstrates that usual services channel people first into jobs reserved for people receiving social support or for people with disabilities. Transitioning into competitive employment is harder: only one participant successfully transitioned from a sheltered job to competitive employment.

Those who successfully found some form of work (whether in a competitive or sheltered setting) report using many different services. They persisted and were not disappointed by defeat, noting that "there was no one to tell you, to motivate you to 'go work, go work', that voice has to come from within." This is in sharp contrast to people receiving IPS services who could rely on an employment specialist to boost their motivation.

The development of distrust

In both groups, trust in service providers' ability to help could be lost as a result of failed communication, poor satisfaction, and repeated negative experiences. The following experts from Alber's (receiving IPS), and Lisa's (receiving usual services) interviews illustrate how distrust can emerge.

The development of distrust results from more than the failed establishment of a working alliance. It is an active process that distances people from service providers and can be a direct result of the joint influence of homelessness and mental illness. Albert is a middle-aged man who believed the government and mafia were hindering his search for work. He moved to Montreal to find work but was injured in an accident. Unable to return to work, he was

eventually evicted and spent almost half his adult life homeless. Albert's file was transferred in succession to three different employment specialists during the study period. He faced these challenges when working with the employment specialists:

> Albert: She tried to manipulate me! She had this manipulative style, like she wanted to teach me how to find a job, but I know how to find a job! What I need is help from someone to …like tell me…but with their style…like when I said "look this is what I expect as wages" and she did not like that! I was not there, but they say it was difficult for me to find a job because of my expectations, but look: when you are looking for a job you are expecting a certain wage!

He was critical of the employment specialist's ability to listen to his goals and felt that she did not care for his opinions. While Albert's peculiar beliefs about the mafia influenced the type of work he wanted, they did not influence his understanding of the process of searching for work. He felt that his employment specialist did not appreciate the job-searching skills he already had and that she could not accomplish the tasks he believed she should. This resulted from poor communication when setting up goals and responsibilities.

In a process that is similar to the development of distrust in the experimental group, participants receiving usual services were discouraged by repeated negative experiences. This led to a passive approach to seeking help. Lisa is a recent university graduate who worked in a high-pressure job until addiction overwhelmed her. She spent more than a quarter of her adult life homeless. A very motivated individual, she sought help from employment agencies but found these services inadequate. The services offered basic workshops and a uniform approach to helping all clients. She also sought help from institutions to fund her university education. Repeated disappointments led her to describe her struggle to find employment as follows:

> Lisa: I've been stagnating, for 3 years in fact. […] it's because I keep depending on promises from others and at the last minute "Oh we're sorry we don't have the budget we expected", or "oh you don't fit in our services" , you know? It's always something like that. Maybe my expectations are too high. But it is mostly depending on promises from others, promises that finally turn out to be worthless. […I] was depending on [the funding] to restart my life on the right track, but it ended up being another failure, and that…that really demoralized me.

Lisa has stopped seeking help from employment services and currently depends on part-time work she obtained through an acquaintance. Lisa's story is not unique, and other individuals with low trust in service providers had not consulted employment services because of past experiences with services that did not meet their needs. In both cases (IPS and TAU), repeated failures to communicate with service providers led to distrust of the services intended to assist them.

Discussion

The key finding of this study is that trust emerges as an important factor associated with service engagement. Through increased engagement and increased activity, people who wanted help returning to work and who were receiving services from trusted employment specialists found more employment opportunities. Trust took time to develop for our participants because of their experiences on the street. For many participants, their path to homelessness negatively impacted their ability to trust strangers, including professionals. Employment specialists were able to establish working alliances and service continuity by rebuilding trust. Empathy, respect, and communication contributed to satisfaction with services and helped rebuild and maintain

trust. This echoes research exploring important traits of effective outreach workers working with homeless people (Lam & Rosenheck, 1999) and effective employment specialists working with people with mental illness (Whitley, Kostick, & Bush, 2010).

In the context of IPS services, the relationship with an empathic employment specialist who is invested in your success alters the interpretation of failure: it becomes an opportunity for growth. Once a working alliance developed, discussing barriers to employment, such as having been homeless, became easier. These discussions often lead to solutions, and productive job searches. Because employment specialists emphasize the importance of competitive work, people receiving IPS services more often sought, and therefore obtained, competitive employment. As the experiences of the TAU group suggests, people receiving usual services are channeled into sheltered jobs reserved for people with disabilities, a finding echoing previous research (Koletsi et al., 2009).

People may not believe in their employment potential unless they have the self-determination to persist, or they have a trustworthy ally to bring possibilities to light. This is consistent with previous findings that have suggested that IPS helps people believe in their self-efficacy (Koletsi et al., 2009) and that a working alliance can increase people's perception of their job prospects (Donnell et al., 2004; Kukla & Bond, 2009). When employment specialists and clients communicate poorly and agreement about the goals of the relationship is not reached, important components of a working alliance, distrust may develop. This could lead to reduced collaboration and a distancing between service providers and service users, as Albert's case suggests. Clear communication is a well-established component of successful IPS services (Kostick, Whitley, & Bush, 2010) that must not be compromised because of bizarre beliefs or mannerisms.

The experiences of participants receiving usual services suggest that, in the absence of the support of an employment specialist, participants need more intrinsic motivation to overcome repeated negative experiences. They never dealt twice with the same professional at employment agencies. This made the establishment of a working alliance difficult, if not altogether a moot point. Participants had to rely heavily on their own motivation to pursue leads: "That voice has to come from within." For the participants who had waning desire for work, the effect of continued frustration and disappointment led to a passive approach to searching for employment, as Lisa's case demonstrates.

Overcoming difficult personal histories and dissatisfaction with previous services is a key challenge in supporting people with mental illness and a history of homelessness. Repeated disappointments and mistrust can act as deterrents to seeking future help, as Lisa's case illustrates, a finding in support of the influence of past dissatisfaction on motivation (Huff, Rapp, & Campbell, 2008). This appears often in the stories of participants receiving TAU, and rarely in those of participants receiving IPS services. A program seeking to help people find employment must be organized so that a client can deal repeatedly with the same service provider. In this way the organization facilitates continuity of service by providing specific case workers with which service users can build a working alliance. This recommendation echoes that of Kukla and Bond (2009) who noted that team-based services were less effective at establishing a working alliance than IPS services. Further research should determine if the establishment of trust has long-term effect on job tenure via the intermediary outcome of building a working alliance.

Strengths and limitations

This study is the first to use rigorous qualitative methods to examine the establishment of trust between service providers and people with mental illness who have recently been housed by a scattered-site Housing First program. It is the first to compare these experiences with those of

similar individuals receiving usual employment services. We have extended the working alliance literature by highlighting the development of a working alliance and its consequences in a group of people who have experienced homelessness and mental illness, via the process of building trust.

Limitations should be noted. Participants receiving usual services were interviewed only once. This interview schedule was chosen because few participants in the TAU group received employment-related services, reducing the need for repeated interviews. Secondly, the results of this study come from self-report; triangulation was not use to determine to what extent the theme of trust would be present in interviews with employment specialists. Thirdly, by virtue of the inclusion criteria of parent studies, these results may be specific only to people who express a desire to obtain assistance returning to work. Finally, it is important to note that both groups received services related to Housing First and that the influence of these services was not systematically queried. It is reasonable to assume that the influence of Housing First was uniform between groups since participants were served by the same professionals.

Conclusions

One mechanism that differentiates evidence-based supported employment from usual services among recently homeless participants of a Housing First intervention is the establishment of trusting relationships. This leads to a collaborative bond with clearer roles and responsibilities that facilitate the search for employment. Trust helps participants discuss difficult obstacles to employment, alters their interpretation of failures, and helps protect them from discouragement. It helps participants to adopt behaviors that enable them to actively participate in a job search, and ultimately, obtain competitive employment.

It is important for clients to feel comfortable to articulate their goals and concerns. When trust and a working alliance fail to develop or deteriorate, wishes may be misunderstood and it appears that IPS is ineffective. When service users never deal twice with the same professional, promises tend to be broken and communication is fractured. This distances users from services and should be avoided.

Back to Table of Content

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Conclusion

Effectively addressing the problem of homelessness among people with mental illness will have to take into account the three-legged stool of care proposed by Bianco and Shaheen (1998). Research has established evidence-based practices for community-based treatments, and for housing support, addressing two of the three legs: housing and health care (Burt, 2012; Fichter & Quadflieg, 2006; Fitzpatrick-Lewis et al., 2011; Goering et al., 2011; Gulcur, Stefancic, Shinn, Tsemberis, & Fischer, 2003; Nelson, Aubry, & Lafrance, 2007; Tsemberis, Gulcur, & Nakae, 2004 Tsemberis & Eisenberg, 2000). The third, employment, has received less attention (Cook et al., 2001), a surprising fact considering the role employment has to play in increasing an individual's independence and reducing their need for external support. Employment has many benefits including increasing self-reliance, reducing shelter use, and increasing social inclusion and participation (Lam & Rosenheck, 2000; Min et al., 2004; Muñoz, Reichenbach, & Hansen, 2005; Perkins, Raines, Tschopp, & Warner, 2009; Ratcliff & Shillito, 1996). Considering that, as argued above, this segment of the population lives considerably below the low income cut off line set by the Government of Canada, further support, in addition to the support provided by income supplements, is needed to assist this population meet their financial needs. Additionally, evidence suggests that, contrary to the entrenched beliefs of some medical professionals, employment may contribute to recovery rather than precipitate relapse (Bond et al., 2001; Burns et al., 2009). However, the research exploring interventions to help homeless people with mental illness obtain employment is in its infancy.

Several vocational interventions have been developed including employment-focused case management (Radey & Wilkins, 2010), short term work-skills training programs (Nelson et al., 2012), veteran industries programs (Kerrigan et al., 2004), occupational therapy including prevocational training (Herzberg & Finlayson, 2001; Muñoz et al., 2005), and social enterprises

(Ferguson, 2013). One intervention that is particularly promising is evidence-based supported employment, also known as Individual Placement and Support (IPS) (Arbesman & Logsdon, 2011; Bond, Drake, & Becker, 2012; Cook et al., 2008). Research on its benefits in stably-housed people with mental illness has repeatedly shown its superiority over other programs, including some of those listed above (Bond & Drake, 2012; Marshall et al., 2013). However, the evidence to support its provision to a group that has mental illness and recent experiences of homelessness is limited to one experimental study (Rosenheck & Mares, 2007) criticized for its limited program fidelity (Bond, 2007), four quasi-experimental studies (Burt, 2012; Ferguson, Xie, & Glynn, 2011; Harrison et al., 2008; Marrone, 2005) and one meta-analysis (Campbell, Bond, & Drake, 2011). The present project has reduced this knowledge gap by evaluating the first evidence-based supported employment program to serve homeless people with mental illness housed by a Housing Frist program. By using a large sample, multiple approaches, sophisticated longitudinal analyses, and complementary qualitative methods, the present project has avoided limitations of past research to provide a comprehensive evaluation of supported housing and supported employment services.

The papers that constitute this thesis demonstrated that the proportion of people with mental illness who were homeless and who wanted to return to paid employment in their community was quite high, in excess of 74%. However, despite the assistance offered by a Housing First program, rates of competitive employment remained low, at approximately 16%. In fact, while people with moderate needs receiving Housing First had increasing odds of finding employment, their odds of obtaining employment remained lower than the odds observed in the TAU group. Fully explaining this finding will require more data than was collected during the present project. This data will have to compare the sample receiving Housing First and the comparison group in a more detailed way to determine why Housing First may not contribute to greater increases in

competitive employment. We may hypothesize that the subsidies provided to Housing First participants together with the increased income provided by government support reduced the financial burden associated with unemployment. Additionally, Housing First services did not necessarily target employment; consequently people who may have been looking for work may not have received help dealing with the difficulties they encountered.

It is evident that more than supported housing alone is needed to reduce the disparity between the number of people who want to work and the number of those who do. IPS, as the most effective service model for helping people with mental illness return to work, could be an effective adjunct to supported housing. However, it appears that, for many participants, the obstacles associated with having been homeless may have been greater than an IPS program with good fidelity was able to overcome, at least within the limited timeframe of the study. Participants who received IPS services had greater odds of finding employment and higher rates of employment, approximately 34%, compared with 22% in the control group. However, these employment rates are consistent with a low performing IPS program and improvements are still possible: Employment rates in excess of 55% are seen in high-performing high fidelity IPS programs (Becker, Drake & Bond, 2011). The IPS randomized control trial demonstrated that, while IPS increases the odds of finding employment, a program may require more time for successful implementation because of problems related to finding dedicated staff that are able to meet the needs of this challenging population. And in light of the qualitative findings that suggest trust and working alliance take time to build when working with people who have experienced homelessness, further allowances must be incorporated into a program's implementation schedule, and projections of performance need to be scaled over a longer period of time.

Further research is needed to 1) replicate the findings and expand upon the methods used in the present series of studies, and 2) determine if any particular adjuncts to IPS may be necessary to assist recently homeless people with mental illness housed by a Housing First program attain their goals of employment.

Researchers attempting to increase the generalizability of these findings by replicating the project may choose to include staff members in the IPS programs with prior experience working 1) in the community in which the services are implemented, 2) with a population that has experienced homelessness and mental illness, and if possible 3), in a high fidelity IPS program. Finding such qualified individuals may be difficult, but this step would help avoid the growing pains associated with newly implemented programs. In any case, consulting with an experienced IPS trainer is an integral part of implementing further programs (Boardman & Rinaldi, 2013; Schneider & Akhtar, 2012). Conducting regular fidelity assessments and providing appropriate feedback will help the program develop to meet a high standard of implementation. In addition to replication, the present series of studies may be expanded upon by using methods such as structured equation modeling. Structured equation modeling could untangle the influence of stable housing and Housing First on the odds of obtaining employment. Such a method could help determine which intermediate outcome, such as building trust and a working alliance, influence the odds of finding employment, and have been used in the evaluation of IPS programs before (Kilian et al., 2011). These models need to be informed by qualitative research and expert consultation, a further necessary direction to improve services.

IPS has been paired with adjunctive treatments to improve vocational outcomes. For example cognitive remediation therapy has been added to IPS to help people with schizophrenia and cognitive impairments improve their concentration and subsequently their vocational outcomes.

Such a complementary combination may be necessary in the present population: we have noted that adapting to housing may take additional time and that the desire for work may fluctuate, these may be points of intervention. An intervention that has the flexibility to address these concerns specifically, such as a targeted cognitive behavioural therapy or focused group therapy may help alter cognitive distortions about people's ability to achieve their goals. While IPS is effective at increasing people's perception of their job prospects (Donnell et al., 2004; Kukla & Bond, 2009), further consideration may be given to explore people's fluctuating desire for work. Such adjunctive interventions must be carefully balanced with the principle of IPS of a rapid job search; otherwise programs may begin including services that act as prevocational training rather than services that can be given simultaneously, dampening initial motivation to search for employment.

The political climate of the city in which this research was conducted, and indeed the political climate of the country, has begun to lean toward addressing problems of homelessness, especially among the most vulnerable segments of this group: families and people with mental illness. Strategies that have been implemented include predominately emergency response measures, such as the creation of emergency shelters, increasingly available for women, youth, and families (Gaetz, S. 2004), and increased funding toward relief efforts (Gaetz, S. 2013). New approaches, such as Housing First, have received greater attention because of their success. This preliminary success paired with the political will to act led to the funding of the parent project under which this series of studies was conducted. While this research is continuing, recommendations may be made based on current results. Policy makers looking to reduce homelessness may find success by increasing the availability of Housing First as well as IPS. While the present research has looked only at supported employment for homeless people with mental illness, the mature evidence in the literature clearly demonstrates that IPS is effective in

stably-housed people with mental illness. If unemployment and poverty among people who have a mental illness act to further increase their risk of homelessness (Draine, Salzer, Culhane, & Hadley, 2002; Morrell-Bellai, Goering, & Boydell, 2000; Zuvekas & Hill 2000), increased availability of IPS services would partially reduce the number of people who eventually become homeless due to a lack of financial support. Implementing IPS services specialised for homeless people would increase the likelihood of successfully exiting homelessness, while expanding sparse existing IPS services may reduce the risk of entering homelessness by increasing their financial independence (Shaheen & Rio, 2007). IPS programs implemented in conjunction with Housing First services may require time to achieve success because 1) homeless people with mental illness need time to adapt to their new housing, 2) the supported housing and supported employment services will need time to integrate with each other and for allied staff to recognize the value of employment, and 3) employment specialists will need time to develop trusting working alliances with their services users.

In a society that demands quick results, the fact that deleterious effect of mental illness compounded by the trauma of having been homeless may take more than a few months to resolve, special considerations must be made to help the most marginalized members of our society regain their place and reintegrate.

It is safe to conclude that the IPS program had several modest but positive influences, both on the participants' odds of finding employment and on the way in which they worked with their employment specialist. With time, these influences are likely the cause of increased vocational attainment of service users. It is only through the collective evidence provided by this series of mixed-methods studies that such a conclusion could be justified.

Back to Table of Content

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