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Trajectories of recovery among homeless adults with mental illness who participated in a randomized controlled trial of Housing First: A longitudinal, narrative analysis

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TITLE. Trajectories of recovery among homeless adults with mental illness who participated in a randomized controlled trial of Housing First: A longitudinal, narrative analysis

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ABSTRACT

Objectives: This study used longitudinal, narrative data to explore trajectories of recovery among homeless adults with mental illness alongside the factors that contribute to positive, negative, mixed or neutral trajectories over time. We expected that participants who received Housing First (HF) through the study would describe more positive trajectories of recovery than those who were assigned to Treatment as Usual (TAU; no housing or support provided through the study).

Design: Narrative interview data was collected from participants at baseline and 18 months after random assignment to HF or TAU.

Setting: Participants were sampled from the community in Vancouver, British Columbia.

Participants: Fifty-four participants were randomly and purposively selected from the larger trial; 52 were interviewed at baseline and 43 were re-interviewed 18 months after randomization.

Method: Semi-structured interviews were conducted at both time points. For each participant, baseline and follow-up narratives were classified as positive, negative, mixed, or neutral trajectories of recovery, and thematic analysis was used to identify the factors underlying different trajectories.

Results: Participants assigned to HF (n=28) were most likely to describe positive or mixed trajectories; those assigned to TAU (n=15) tended to describe neutral or negative trajectories. Positive trajectories were characterized by obtaining good-quality housing, reduced substance use, efforts to expand social networks, positive expressions of identity, and the willingness to self-reflect. Negative and neutral trajectories were characterized by recent eviction, heavy substance use and/or recent relapse, perceived failures and disappointments, loss, and social isolation.

Conclusions: HF is associated with positive trajectories of recovery among homeless adults with mental illness. Those who did not receive housing or support continued to struggle across a wide range of life domains. Findings are discussed with implications for addressing services and broader social change in order to benefit this marginalized and disenfranchised population.

ARTICLE SUMMARY

Article focus

- Trajectories of recovery among homeless adults with mental illness over 18 months of participation in a randomized controlled trial where participants received Housing First (HF) with intensive support services or treatment as usual (TAU; no housing or supports through the study).
- Narrative interviews (n=43) were conducted at baseline and at 18 months follow-up and were classified as positive, negative, mixed or neutral trajectories of recovery.
- Thematic analysis was used to examine the factors that contribute to different trajectories of recovery.

Key messages

- Participants assigned to HF described predominantly positive trajectories; no participants reported negative trajectories. Participants assigned to TAU reported predominantly negative or neutral trajectories; only two TAU participants received supported housing outside of the study.

- Positive trajectories were characterized by obtaining good-quality housing, reduced substance use, efforts to expand social supports, positive expressions of identity, and the willingness to self-reflect.
- Negative and neutral trajectories were characterized by recent eviction, heavy substance use and/or recent relapse after a period of decreased use, perceived failures and disappointments, loss and social isolation.

Strengths and limitations of this study

- This study is the first to use longitudinal, narrative data from adults with mental illness who were randomly assigned to HF or TAU. Additional strengths include specific measures to enhance trustworthiness of the data.
- Despite using multiple, independent coders, classifying trajectories among such a marginalized population is challenging given the volatility in people's lives.

Introduction

It is well known that the co-occurrence of homelessness and mental illness is associated with a range of health, social and systemic challenges that make goals of residential stability and recovery difficult.[1-3] As a result, many homeless individuals with mental illness appear to be caught in a "revolving door" of institutional care, shelter use, substandard accommodation, and periods of sleeping rough on the streets.[4-6] In an effort to interrupt this cycle, *Housing First* (HF) was developed to reach the "hardest to house."[3] HF offers homeless people with mental illness immediate access to independent, market-lease apartments without any requirements around sobriety or engagement in treatment. HF has also been offered in congregate settings where all or a significant proportion of the tenants are program participants.[7] In both independent and congregate settings, HF participants are provided access to treatment and services, but choose their level of participation. A growing body of research on HF has documented a variety of positive outcomes including residential stability,[8,9] quality of life,[10] community integration,[11] and client satisfaction.[12]

Over the past 20 years, a number of qualitative studies have examined homeless people's subjective experience of life on the streets and in shelters,[13] mental illness,[14] substance use,[15,16] various health and social services,[17,18] and different types of housing.[8,19,20] However, few qualitative studies have followed homeless adults over time, before and after receiving supported housing[20] or have examined what factors influence different trajectories of recovery.[21] For the most part, prior research on trajectories among a variety of marginalized populations has followed variable-centered (e.g., cluster analysis and other quantitative techniques) rather than person-centered strategies, thereby

losing the focus on how multiple events, conditions and experiences come together to comprise an individual's perception and experience.[22] Moreover, few qualitative studies have been conducted alongside randomized controlled trials.[23,24]

The Vancouver At Home Study is part of a multi-site, mixed-methods randomized controlled trial to examine the effectiveness of HF interventions compared to existing services (Treatment as Usual; TAU) among homeless adults with mental illness in five Canadian cities.[24-26] The current study focuses on narrative data from the Vancouver site, which includes a high proportion of participants who met criteria for substance dependence, and is the only site that implemented HF in a congregate setting as well as in independent apartments. The current study uses thematic analysis to examine participant narratives before and after random assignment to HF or TAU (no housing or supports provided by the study) and seeks to identify positive, negative, mixed or neutral trajectories of recovery and the factors related to different trajectories.

Methods

Participants and Sampling

Eligibility criteria included legal adult status (over 19 years of age), presence of a current mental disorder based on a semi-structured interview, and being absolutely homeless or precariously housed.[25] Participants were recruited through referral from a wide variety of agencies that serve the homeless including shelters, drop-in centers, outreach teams, hospitals, and corrections programs. All participants met with a trained research interviewer who explained procedures, confirmed study eligibility, and obtained informed consent.

Eligible participants completed a series of baseline questionnaires, and were differentiated into two groups based on the complexity and intensity of their needs. Participants were categorized as High Need (HN) based on a Multnomah Community Ability Scale (MCAS) score of 62 or lower and current bipolar or psychotic disorder as well as one of the following: legal involvement in the past year; substance dependence in the past month; two or more hospitalizations for mental illness in any one of the past five years. All other eligible participants were categorized as Moderate Need (MN).

HN participants were randomized to one of three study arms: (1) HF with Assertive Community Treatment (ACT)[a] in which participants could choose from up to three market lease apartments in a variety of neighborhoods and services were provided by a multi-disciplinary outreach team; (2) Congregate Housing with on-site support (CONG) in which participants had their own room and bathroom but shared amenity space with 100 other program participants and received three meals per day as well as activity programming and various health services on site; and (3) Treatment as Usual (HN-TAU) which provided no additional housing or support services beyond what was already available in the community. MN participants were randomized to one of two study arms: (1) HF with Intensive Case Management (ICM)[b] in which participants could choose from up to three market lease apartments in a variety of neighborhoods and

[a] ACT is a multi-disciplinary outreach team that works with people with SMI in their neighborhood. It was available to participants assigned to Housing First with ACT but was not mandatory. The only requirement for housing was compliance with the rental lease and weekly visits with a case manager to ensure well-being.

[b] ICM is comprised of a team of case managers who link participants to existing services in the community. As with participants assigned to ACT, it was available to participants assigned to ICM but was not required.

services were provided by a team of case managers who connected participants to existing services; and (2) MN-TAU. Randomization was completed via a central computerized algorithm that assigned participants to groups at the completion of the baseline interview.

Participants in the present study were both randomly and purposively selected from the larger sample of Vancouver study participants. Purposive sampling was based on both typical and unusual cases, in an effort to represent differences across gender, ethnicity, sexual orientation, duration of homelessness, and degree of functional impairment. After completing a series of baseline questionnaires, participants were randomized to one of five possible study arms, based on their level of need ("moderate" or "high"). Need level and study arm were determined by a computer algorithm.[25]

Within one month of enrollment in the larger study, selected participants were contacted and asked if they would like to participate in a "personal story interview." Participation was voluntary, and two out of 54 participants declined to participate. The current study is based on narrative interviews from 43 participants who were interviewed at within one month of recruitment and re- interviewed 18 months later. Reasons for loss to follow-up include: death (1), refused participation (1), in jail (2), moved out of town (1), and unable to locate (4). Of the 52 baseline interviews, 32 participants were assigned to HF (ACT: n=10; CONG: n=10; ICM: n=12) and 20 were assigned to TAU (HN-TAU: n=10; MN-TAU: n=10). Of the 43 follow-up interviews, 28 participants received HF (ACT: n=9; CONG: n=10; ICM: n=9) and 15 participants were assigned to TAU (HN-TAU: n=7; MN-TAU: n=8).

Data Collection

Four university-based researchers and one peer interviewer, who had experienced homelessness and mental illness, conducted the narrative interviews. Interviews lasted from one to two hours and were conducted at a setting chosen by the participant, usually a community agency or the project field office. All participants gave informed consent and received $30 upon completion of each interview. Institutional Research Ethics Board approval was obtained from Simon Fraser University and the University of British Columbia.

Using a semi-structured interview format, participants worked with interviewers at baseline to co-construct a personal story highlighting (a) their pathway into homelessness; (b) experiences of being homeless or inadequately housed; (c) experiences around first learning they had a mental illness and obtaining help for their illness; and (d) high, low, and turning points in their life. The 18-month follow-up interview focused on changes since the first interview in the areas of typical day, housing, service use, experience of community, social ties, hopes for the future, and key life events. Interviews were audio recorded and transcribed verbatim.

Data Analysis

Each participant's baseline and the 18-month follow-up interview were compared and their overall trajectories were categorized as 'positive,' 'negative,' 'mixed' or 'neutral.' Categorizations were based on 22 identified domains including housing stability, mental health, substance use, physical health, criminal justice activity, social interactions, hopes for the future, sense of self and interviewer observations. Each

transcript was coded for positive, negative, mixed or no change on each of the identified domains. If the number of positive events or attributions clearly outnumbered the number of negative factors, the trajectory was coded as "positive." Conversely, if the number of negative events clearly outnumbered positive, the trajectory was coded as "negative." If the number of negative and positive events were roughly equal, the trajectory was categorized as "mixed;" and if there was no clear change over time on the majority of factors, the trajectory was categorized a "neutral."

Thematic analysis was used to examine the interview transcripts in relation to factors that contribute to positive, negative, or neutral trajectories. To ensure rigor, the interviewing team met four times during the early phase of thematic analysis to co-code and discuss emergent themes in the narratives. Subsequently, two researchers independently coded all transcripts line-by-line, classified trajectories, and identified repeated or similar codes to build a set of overarching themes.[27,28] After a thorough review of the transcripts and field notes, conceptual impressions were integrated into key thematic areas. At this point, thematic areas and initial interpretations were shared with field interviewers and researchers whose interpretations were cross-checked with the initial findings. Any coding differences were resolved by consensus review of the data.

According to this approach, emphasis is on the content of the text (*what* is said) rather than on structural or discourse analysis (*how* it is said). The thematic approach is useful for finding commonalities in the events and experiences reported by participants. Our thematic analysis reflects ideas brought to the data set from the research questions and existing literature (i.e., top-down), as well as themes that emerge from the data (i.e., bottom-up).

Monitoring quality. All interviewers received training on qualitative interviewing in general and how to use the interview guides. The first two interviews that each interviewer conducted were reviewed in detail by the team and feedback was provided to the interviewers. The qualitative team met as a group bi-monthly to review transcripts. These meetings focused on improving the quality of interviewing (e.g., posing open ended questions, probing adequately, avoiding leading questions, etc.) as well as exploring emerging themes. Five audio files from both the baseline and follow-up interviews were reviewed by a qualitative researcher external to the team who was familiar with the interview guide. The audio files were checked against their respective transcripts and a checklist, which assessed coverage of key topics and probes, was completed.

Results

Sample characteristics

Demographic characteristics at baseline for participants who took part in the narrative interviews at both baseline and at 18 months follow-up are presented in Table 1. No significant differences were observed among baseline demographic characteristics for the original baseline sample and those re-interviewed after 18 months. As noted in Table 1, the age of the follow-up sample ranged from 21 to 66 years (mean = 43 years) and included 25 men (58%), 16 women (37%), and 2 (5%) transgendered individuals. At baseline, the mean lifetime duration of homelessness was 6 years and only 30% had completed high school. The most commonly identified mental disorders among the

sample were Psychotic Disorder (49%) and Major Depressive Episode (49%). In addition, 67% met criteria for Substance Dependence.

[Insert Table 1 about here]

Narrative findings

Classification of trajectories: Participant narratives reflected a variety of trajectories over time (see Table 2). Participants who received HF (n=28) through the study most often reported positive (n=17) or mixed (n=9) trajectories over the 18 month observation period; two participants were classified as neutral; and none were negative. Participants assigned to TAU (n=15) were most often classified as negative (n=5) or neutral (n=5) trajectories, with the remaining trajectories distributed among the positive and mixed categories.

[Insert Table 2 about here]

Significant improvement across a range of domains (positive trajectories) was reported by 17 HF participants, including two female participants in MNTAU who received supported housing outside of the study. A third participant in MNTAU was living in a recovery home and making progress toward managing his substance use. At the time of the interview, he felt very proud of being abstinent for eight months and felt very optimistic about the future.

Key themes: Obtaining **good-quality, stable housing** was clearly the primary contributor to positive trajectories as it affected many areas of people's lives (e.g., health, social, identity, financial, leisure time). For example, according to one HF participant,

"Having a nice place makes me think better about myself. I can tell people where I live and invite them over. Like my family. I can't describe how it makes me feel!" It is notable, that no one who received HF (of any type) reported negative trajectories.

Several participants in the HF study arms had achieved a period of stable housing (typically for six to 12 months) but had since experienced eviction. The experience of **losing housing** greatly affected their perceptions of well-being across multiple life domains. For example, one woman had been stably housed for eight months and had made significant gains before relapsing and losing her housing. At the time of the interview, she had been living in a single room occupancy (SRO) hotel for six months and felt deeply ashamed about her circumstances: *"I'm an addict. I screwed up. ... Maybe I'm not good enough to have an apartment. I'm thinking that now."*

The primary reason for eviction was **relapse into substance use** and related behaviors that created problems with neighbors and landlords. Drug relapse was often triggered by boredom and social interactions that elicited painful memories and feelings related to the past (e.g., perceived rejection by friends and family, interpersonal conflict). The few participants who did not have histories of heavy drug use and those who were able to significantly reduce their use of drugs were more likely to report positive trajectories than those who continued with frequent and heavy substance use.

Mixed trajectories indicated a roughly even split of positive and negative change. Often, participants made efforts to create change from baseline to follow-up, but encountered obstacles such that they did not follow through with the change. Mixed trajectories were often characterized by **perceived failures and disappointments** across multiple domains. For example, one man who received housing attempted to return to

school and to reconnect with his family; however, both of these attempts at creating change did not go well from his perspective and contributed to feelings of depression and hopelessness. *"I made contact with a couple of my aunts and took them for dinner. It didn't go well. It brought everything back again. Whatever. So I just said, 'screw it. I give up."* As a result, he isolated himself from others, which further increased thoughts and feelings related to failure and disappointment.

Neutral trajectories were characterized by no significant change (e.g., continued drug use, health problems, negative experiences with the system, feelings about one's self and others, etc.). The emotional tone of these trajectories was often also neutral or flat. For example, according to one TAU participant who was evicted from social housing, *"I don't know why. (Interviewer: How did that affect you?) I don't know. It just happened."* Neutral trajectories were most common among the TAU groups compared to the HF groups, which were more likely to report positive or mixed trajectories.

Perceived loss of one's health and loved ones was a common theme among mixed, neutral and negative trajectories. One man was struggling with a chronic physical illness which caused him significant pain. One woman was hit by a car while riding her bike and suffered a head injury. Another man had separated from his long-term girlfriend. In all of these cases, the perceived loss and associated pain (both physical and psychological) colored participants' perceptions of change and well-being across a wide range of life domains. For example, the woman who had been hit by a bike stated, *"I have no one to blame but myself for any of this crap. It's all my fault."*

Many participants reported difficulties with social ties, particularly **trusting others** and developing healthy relationships. As a result, many participants reported

being very socially isolated. Those participants who had more well-developed social skills and were able to take risks to engage with others and their community tended to report more positive trajectories than those who self-isolated. For example, according to one HF participant, *"I'm trying to build acquaintances into friendships, which I've had a really hard time with. I'm surprised I have a girlfriend now. That really surprises me because what I've gone through, I find it hard to get close to people."* In some cases, pets were helpful and made it easier for people to interact with others as well as experience the benefits of caring for and feeling responsible for another living creature.

A factor that closely aligned to positive trajectories was **expression of positive identity**. Many participants struggled to let go of their homeless identity, especially those participants who had been homeless for long periods of time (several participants had been homeless for more than ten years). Opportunities that promoted the development of a positive personal and social identity, independent of homelessness, were often present among those who described positive trajectories. One participant was very involved in a community choir, which provided a sense of purpose and identity. Another participant was coaching a softball team for homeless and formerly homeless people. Several other participants were training to become peer support workers. Being able to expand one's social roles as a parent, sibling, friend, lover, employee, among other roles, allowed participants to challenge longstanding beliefs related to negative self-worth. At the same time, it was important for many participants to maintain links with their old identities and routines; among those who described positive trajectories, there appeared to be a gradual process of letting go and shifting to new social roles and activities.

Finally, narratives classified as positive trajectories tended to reflect a **willingness to introspect** and reflect on one's experience and to learn from the past. Some participants' responses were very cryptic and it was very difficult to elicit introspection around changes and reasons for change or lack thereof. This was particularly the case among TAU participants; while the majority engaged in the interview, approximately one-third provided very cryptic responses (i.e., one-word answers, "I don't know," " I don't want to talk about it," etc.) in what seemed like a strategy to end the interview as quickly as possible.

Discussion

This study is the first to use longitudinal, narrative data from homeless adults with mental illness who were randomly assigned to HF or TAU (no housing or supports provided through the study) to examine trajectories of recovery. Given that most other longitudinal narrative research has not been conducted alongside a randomized controlled trial, our research is an important contribution to the growing literature on the effects of HF on adults with mental illness.

Participants assigned to HF presented with positive, mixed or neutral trajectories over the 18-month study period. No HF participants (of any type) reported negative trajectories over time. By contrast, positive trajectories were rare among TAU participants. No participants in HN-TAU presented positive trajectories, while three participants in MN-TAU described positive change. For the most part, narratives among TAU participants reflected negative or neutral trajectories; participants continued to experience a range of challenges related to housing, physical and mental health,

substance use, trauma, and marginalization that culminated in increasingly poor functioning. Social losses including deaths of loved ones and severed relationships with parents, children and siblings highlight seriously depleted social networks similar to previous studies.[21,29,30]

Perceived success and positive change was often attributed to obtaining good quality housing and reduced substance use. Positive trajectories were also characterized by positive expressions of one's identity, efforts to expand one's social network and social roles (particularly with children and family), and the willingness to introspect and reflect on one's thoughts, feelings, and behaviors. Negative and neutral trajectories were characterized by continued heavy substance use and/or recent relapse after a period of decreased use, perceived failures and disappointments, loss (especially related to health and the death of loved ones), and social isolation. Neutral and mixed trajectories were inherently more variable than positive and negative trajectories. For example, neutral trajectories could reflect a continued negative path or a continued pattern of positive and negative (mixed) experiences. Mixed trajectories were often reflective of a tumultuous pattern of positive and negative experiences that could not be clearly categorized as positive or negative.

Narratives revealed that recovery and reclaiming stability in housing, health, social ties, among other domains, is very difficult work -- slips and relapses are common. Collectively, the narratives highlight the tremendous challenge for people to move indoors and into community after years and sometimes decades outside, and often longer as people 'on the margins.' Eighteen months provided most participants only the initial steps into recovery. Many HF participants who demonstrated positive trajectories had

experienced either an eviction or a planned move from their original housing placement. Our findings highlight the importance of supporting homeless people with mental disorders through stages of change that include relapse and eviction. Oftentimes, in hindsight, these moves and the support received from service teams were significant turning points and learning experiences for participants.

Recovery depends, in part, upon addressing the often hidden psychological burdens of previous traumas, as well as the ongoing chronic stressors of poverty and social isolation. In this context, recovery needs to be broadened to address complications and challenges beyond mental illness. Although all of our participants struggled with mental health issues, mental illness and treatment per se was not the focus of the interviews.[30,31] Themes related to social support, identity, substance use, and daily living skills were much more prominent.[21]

As noted in past research,[21,32] good quality housing is pivotal to recovery; however, isolation and boredom are key challenges once housed. For most participants, many of the structural and individual factors that contributed to homelessness continued to impact their daily lives (i.e., poverty and lack of resources, poor mental and physical health, social isolation, poor coping skills, lack of meaningful activities). The lack of opportunity to develop a new daily routine from which to develop a sense of well-being and identity was particularly evident.[15] When a tolerable identity centers on the homeless lifestyle, the likelihood of the individual leaving the subculture becomes minimal.[33,34] Examination of the trajectories in our study revealed that progress in recovery reflected the stages of change model;[35] that is, change was gradual and cumulative, setbacks were

often sudden and devastating, and maintaining gains often meant being stuck on a plateau with few options for positive change.

Limitations

The themes and emotional tone of the narratives were very much affected by participants' recent circumstances. Several participants noted that if their interview had been one week earlier, their perspective would be different. Some participants had made great improvement during the course of the study, but had recently relapsed in to substance use and/or had lost their housing. These events tended to color their narratives in a very negative light; however, our analysis relied on narratives from two different time points and also incorporated field notes. Finally, classifying trajectories is challenging given the volatility and multidimensionality of people's lives.[21] We found that positive and negative trajectories were much easier to code than mixed or neutral.

Future Directions

Recovery is situated within shifting identities and social roles within individuals, sub-communities, the larger community, and society itself. Most mental health and housing research has focused on developing services to change individuals rather than potential changes to communities or broader society that would support and include marginalized individuals.[13,15] Access to safe, affordable housing; treatment for mental and substance use disorders; and opportunities for social connection and meaningful activities is critical to recovery from homelessness. Service providers and policy makers have the opportunity to facilitate recovery by ensuring services are not class-based. This includes expanding services for homeless individuals to communities outside of poor neighborhoods as well as mobile outreach and service delivery programs. Social action is

not just required to increase the participation of marginalized citizens but also to modify the power relationships between various social groups. (3,903 words)

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Author Contributions

MP drafted the manuscript, oversaw implementation of the interviews, and coded all the interviews. SR, LC and JS coded subsets of the interviews. SR transcribed all the interviews. JS was the principal investigator. All authors contributed to the final manuscript.

Competing Interests

The authors have no competing interests to declare.

Data Sharing

MP drafted the manuscript, oversaw implementation of the interviews, and coded all the interviews. SR, LC and JS coded subsets of the interviews. SR transcribed all the interviews. JS was the principal investigator. All authors contributed to the final manuscript.

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Table 1. Demographic characteristics at baseline for the original baseline sample (n=52) and those re-interviewed after 18-months (n=43)

	Baseline		18M follow-up	
	Mean (years)		Mean (years)	
Age (range, median)	42 (21-66, 42.5)		43 (21-66, 42.1)	
Lifetime duration homeless (range, median)	5.5 (0.2-33, 3)		5.9 (0.2-33, 4)	
	n	%	n	%
Gender				
Male	28	54	25	58
Female	21	40	16	37
Transgender	3	6	2	5
Race/Ethnicity				
White	31	60	26	61
Aboriginal	12	23	10	23
Mixed/Other	9	18	7	16
Housing Status				
Absolutely homeless	42	81	35	81
Precariously housed	10	19	8	19
Marital Status				
Single, never married	31	60	27	63
Divorced/separated/widowed	18	35	15	35
Married/common law/other	3	6	1	2
Have Children under 18 years	17	33	15	35
Education				
Grade 8 or less	10	20	10	23
Incomplete high school	21	40	20	47
Completed high school	21	40	13	30

Mental Disorders				
Psychotic Disorder	25	48	21	49
Major Depressive Episode	24	46	21	49
Mood Disorder with Psychotic Features	15	29	14	33
Post-Traumatic Stress Disorder	15	29	12	28
Panic Disorder	14	27	10	23
Manic or Hypomanic Episode	10	19	8	19
Substance Dependence	33	63	29	67
Alcohol Dependence	11	21	10	23

Table 2. Recovery trajectories over 18 months by study arm.

Study Arm	Trajectory Type			
	Positive	**Negative**	**Mixed**	**Neutral**
ACT (n=9)	6	0	3	0
CONG (n=10)	5[+]	0	3[#]	2^
HNTAU (n=7)	0	2	1	4
ICM (n=9)	6	0	3	0
MNTAU (n=8)	3	3	1	1
HF Total (n=28)	***17***	***0***	***9***	***2***
TAU Total (n=15)	***3***	***5***	***2***	***5***

[+] Two participants left the CONG residence within the first year and were living in supported housing elsewhere.
[#] Two of these participants left the CONG residence within the first year, one of whom was living in supported housing elsewhere and one of whom was living in an SRO.
^ One of these participants left the CONG residence within the first year and was living in an SRO.

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Trajectories of recovery among homeless adults with mental illness who participated in a randomized controlled trial of Housing First: A longitudinal, narrative analysis

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MANUSCRIPT COVER PAGE

TITLE. Trajectories of recovery among homeless adults with mental illness who participated in a randomized controlled trial of Housing First: A longitudinal, narrative analysis

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ABSTRACT

Objectives: This study used longitudinal, narrative data to identify trajectories of recovery among homeless adults with mental illness alongside the factors that contribute to positive, negative, mixed or neutral trajectories over time. We expected that participants who received Housing First (HF) would describe more positive trajectories of recovery than those who were assigned to Treatment as Usual (TAU; no housing or support provided through the study).

Design: Narrative interview data was collected from participants at baseline and 18 months after random assignment to HF or TAU.

Setting: Participants were sampled from the community in Vancouver, British Columbia.

Participants: Fifty-four participants were randomly and purposively selected from the larger trial; 52 were interviewed at baseline and 43 were re-interviewed 18 months after randomization.

Method: Semi-structured interviews were conducted at both time points. For each participant, paired baseline and follow-up narratives were classified as positive, negative, mixed, or neutral trajectories of recovery, and thematic analysis was used to identify the factors underlying different trajectories.

Results: Participants assigned to HF (n=28) were generally classified as positive or mixed trajectories; those assigned to TAU (n=15) were generally classified as neutral or negative trajectories. Positive trajectories were characterized by a range of benefits associated with good-quality, stable housing (e.g.,reduced substance use, greater social support), positive expressions of identity, and the willingness to self-reflect. Negative, neutral and mixed trajectories were characterized by hopelessness ("things will never get better") related to continued hardship (e.g., eviction, substance use problems), perceived failures, and loss.

Conclusions: HF is associated with positive trajectories of recovery among homeless adults with mental illness. Those who did not receive housing or support continued to struggle across a wide range of life domains. Findings are discussed with implications for addressing services and broader social change in order to benefit this marginalized population.

ARTICLE SUMMARY

Article focus

- Trajectories of recovery among homeless adults with mental illness over 18 months of participation in a randomized controlled trial where participants received Housing First (HF) with intensive support services or treatment as usual (TAU; no housing or supports through the study).
- Narrative interviews (n=43) were conducted at baseline and at 18 months follow-up and were classified as positive, negative, mixed or neutral trajectories of recovery.
- Thematic analysis was used to examine the factors that contribute to different trajectories of recovery.

Key messages

- Narratives from participants assigned to HF were predominantly classified as positive trajectories; no HF participants' narratives were classified as negative trajectories. Narratives from participants assigned to TAU were predominantly classified as negative or neutral trajectories.

- Positive trajectories were characterized by the "ontological security" of obtaining good-quality housing, and included reduced substance use, efforts to expand social supports, positive expressions of identity, and the willingness to self-reflect.
- Negative, neutral and mixed trajectories were characterized by hopelessness related to continued hardship including recent eviction, substance use problems, perceived failures, loss and social isolation.

Strengths and limitations of this study

- This study is the first to use longitudinal, narrative data from adults with mental illness who were randomly assigned to HF or TAU. Additional strengths include specific measures to enhance trustworthiness of the data.
- Despite using multiple, independent coders, classifying trajectories among such a marginalized population is challenging given the volatility in people's lives.

Introduction

The co-occurrence of homelessness and mental illness is associated with a range of health, social and systemic challenges that make goals of residential stability and recovery difficult.[1-3] As a result, many homeless individuals with mental illness appear to be caught in a "revolving door" of institutional care, shelter use, substandard accommodation, and living on the streets.[4-6] In an effort to interrupt this cycle, *Housing First* (HF) was developed to reach the "hardest to house."[3] HF provides immediate access to independent, market-lease apartments without requirements around sobriety or engagement in treatment. HF has also been offered in congregate settings where all or a majority of tenants are program participants.[7] In both settings, HF participants are provided access to treatment and services, but choose their level of participation. A growing body of research on HF has documented positive outcomes including residential stability,[8,9] quality of life,[10] community integration,[11] and client satisfaction.[12]

Over the past 20 years, qualitative studies have examined homeless people's subjective experience of life on the streets and in shelters,[13] mental illness,[14] substance use,[15,16] various health and social services,[17,18] and different types of housing.[8,19,20] However, few qualitative studies have followed homeless adults over time, before and after receiving supported housing[20] or have examined what factors influence different trajectories of recovery.[21] Prior research on supported housing has emphasized the importance of personal and external resources resulting from safe and secure housing[20]and challenges around social isolation, substance use, and stigma.[14,19] Several studies have reported that substance use disorders are predictive of lower housing stability regardless of residence type.[22,23] For the most part, prior research on trajectories

among a variety of marginalized populations has followed variable-centered (e.g., cluster analysis and other quantitative techniques) rather than person-centered strategies, thereby losing the focus on how multiple events, conditions and experiences contribute to an individual's perception and experience.[24] Moreover, few qualitative studies have been conducted alongside randomized controlled trials.[25,26]

The Vancouver At Home Study is part of a multi-site, mixed-methods randomized controlled trial to examine the effectiveness of HF interventions compared to existing services (Treatment as Usual; TAU) among homeless adults with mental illness.[26-28] The current study focuses on narrative data from the Vancouver site, which includes a high proportion of participants who met criteria for substance dependence, and is the only site that implemented HF in a congregate setting as well as in independent apartments. The current study uses thematic analysis to examine participant narratives before and 18 months after random assignment to HF or TAU (no housing or supports provided by the study) and seeks to identify positive, negative, mixed or neutral trajectories of recovery and the factors related to different trajectories.

Methods

Participants and Sampling

Eligibility criteria included legal adult status (over 19 years of age), presence of a current mental disorder based on a semi-structured interview, and being absolutely homeless or precariously housed.[27] Participants were recruited through referral from a variety of agencies that serve the homeless. All participants met with a trained research interviewer who explained procedures, confirmed study eligibility, and obtained informed consent. Eligible participants completed a series of baseline questionnaires,

and were differentiated into two groups, High Need (HN) or Moderate Need (MN), based on the complexity and severity of their needs.[27] HN participants were randomized to one of three study arms: (1) HF (independent apartments) with Assertive Community Treatment (ACT); (2) Congregate Housing with on-site support (CONG); and (3) Treatment as Usual (HNTAU) which provided no additional housing or support services beyond what was available in the community. MN participants were randomized to one of two study arms: (1) HF (independent apartments) with Intensive Case Management (ICM); and (2) MNTAU. Participants in the present study were both randomly and purposively selected from the larger study sample, in an effort to represent differences across gender, ethnicity, duration of homelessness, and degree of functional impairment. Within one month of enrollment in the larger study, selected participants were asked to participate in a "personal story interview." Participation was voluntary, and two out of 54 participants declined. The current study is based on narrative interviews from 43 participants who were interviewed within one month of recruitment and re-interviewed 18 months later. Reasons for loss to follow-up include: death (1), refused participation (1), incarcerated (2), moved out of town (1), and unable to locate (4). Baseline interviews (n=52) included 32 HF participants and 20 TAU participants; follow-up interviews (n=43) included 28 HF participants and 15 TAU participants.

Data Collection

Four research assistants and one peer interviewer conducted the narrative interviews. Interviews lasted from one to two hours and were conducted at a setting chosen by the participant, usually a community agency or the project field office. All participants gave informed consent and received $30 upon completion of each interview.

Institutional Research Ethics Board approval was obtained from Simon Fraser University and the University of British Columbia.

Using a semi-structured interview format, participants worked with interviewers at baseline to co-construct a personal story highlighting (a) their pathway into homelessness; (b) experiences of being homeless or inadequately housed; (c) experiences around first learning they had a mental illness and obtaining help for their illness; and (d) key life events. The 18-month follow-up interview focused on changes since the first interview in the areas of typical day, housing, service use, experience of community, social ties, hopes for the future, and key life events. Interviews were audio recorded and transcribed verbatim.

Data Analysis

Each participant's baseline and 18-month follow-up interviews were compared and the overall trajectory was categorized as 'positive,' 'negative,' 'mixed' or 'neutral.' Categorizations were based on 22 domains including housing stability, typical day, mental and physical health, substance use, criminal justice activity, social interactions, hopes for the future, willingness to introspect, and interviewer observations. Each transcript was coded for positive, negative, mixed or no change on each domain. If the number of positive domains clearly outnumbered the negative, the trajectory was coded as "positive." Conversely, if the number of negative domains clearly outnumbered positive, the trajectory was coded as "negative." If the number of negative and positive domains were roughly equal, the trajectory was categorized as "mixed;" and if no clear change was observed over time in the majority of domains, the trajectory was categorized

as "neutral." Although we structured coding by using 22 domains, scientific/clinical judgment and discussion among coders and interviewers was a key part of the analytic process.[22] Approximately three-quarters of the interviews clearly fell into one category, while the remainder were more complex and required collaborative consensus.

Thematic analysis was used to examine the interview transcripts in relation to factors that contribute to positive, negative, or neutral trajectories. Our approach reflects ideas brought to the data set from the research questions and existing literature (i.e., deductive), as well as themes that emerge from the data (i.e., inductive).[29,30]According to this approach, emphasis is primarily on the content of the text (*what* is said) rather than on structural or discourse analysis (*how* it is said); however, we also considered the emotional tone of the interviews and field notes.

The interviewing team met four times during the early phase of thematic analysis to co-code and discuss emergent themes in the narratives. Initial codes and themes were based on interview questions; for example, the question "How have your relationships with people changed?" elicited the code 'developing trust' and a preliminary theme of 'wanting deeper social connections vs. isolating.' Subsequently, the first author independently coded all transcripts line-by-line, classified trajectories, and identified repeated or similar codes to build a set of overarching themes;[29,30] the second and third authors followed the same process for half of the transcripts. Thus, all transcripts were independently coded by at least two people. After a thorough review of the transcripts and field notes, conceptual impressions were integrated into key thematic areas. At this point, themes and initial interpretations were shared with field interviewers and any coding differences were resolved by group consensus. Five audio files from both the

baseline and follow-up interviews were reviewed by an external researcher who was familiar with the interview guide. The audio files were checked against their respective transcripts for accuracy and quality.

Results

Sample characteristics

Demographic characteristics at baseline for participants who completed both narrative interviews (baseline and 18 months) are presented in Table 1. No significant differences were observed among baseline demographic characteristics for the baseline and the follow-up samples. As noted in Table 1, the age of the follow-up sample ranged from 21 to 66 years (mean = 43 years) and included 25 men (58%), 16 women (37%), and 2 (5%) transgendered individuals. At baseline, the mean lifetime duration of homelessness was 6 years and 30% had completed high school. The most commonly identified mental disorders among the sample were Psychotic Disorder (49%), Major Depressive Episode (49%), and Substance Dependence (67%).

[Insert Table 1 about here]

Classification of trajectories

Narratives from HF participants (n=28) were predominantly classified as positive (n=17) or mixed (n=9) trajectories over the 18-month study period; two narratives were classified as neutral; and none were negative (see Table 2). Narratives from TAU participants (n=15) were typically classified as negative (n=5) or neutral (n=5) trajectories, with the remaining trajectories divided between the positive and mixed

categories. Of note, only two TAU participants obtained good-quality housing during the study, and both participants' narratives were classified as positive.

[Insert Table 2 about here]

Key themes: positive trajectories

Two related but distinct themes primarily contributed to positive trajectories: (1) housing as a stable foundation for change across a variety of domains; and (2) the expression of positive aspects of one's identity.

Theme 1: Housing as a secure and stable foundation. Positive trajectories were characterized by the benefits associated with good-quality, stable housing which affected many areas of people's lives (e.g., health, substance use, social ties, identity, financial, leisure time). These benefits reflected a sense of "ontological security"[31] that shifted the way people thought about themselves and others, and allowed them to take steps toward positive change. For example, since running away from home in adolescence, Alice had lived intermittently in shelters, hotels, and with acquaintances. She described longstanding fear and hypervigilance that had shifted to a growing sense of freedom and security since receiving stable housing: *"I was at the beach, and I was running towards the water, and I was jumping in. ... I was just jumping in the water. I took all my clothes off, and I had my bathing suit on, and I was like, 'Whoo-hoo!' And then I walked home in my bare feet, laid on the bed, and I was like, 'Ahh. Heaven.'"*

Several HF participants achieved a period of stable housing (typically for six to 12 months) but had since experienced eviction. The experience of losing housing contributed to different trajectories depending on the timing, context and interpretation of

the experience. Among positive trajectories, eviction was perceived as a turning point and a significant learning experience. Given the project's commitment to re-housing, many HF participants were able to learn from their mistakes, particularly around how to set boundaries, manage substance use, and challenge expectations around the inevitability of failure.

Theme 2: Expression of positive identity. Many housed participants struggled to let go of their homeless identity, especially those who had been homeless for long periods. Finding and exploring opportunities that promoted the development of a positive personal and social identity, independent of homelessness, were often present among positive trajectories. For example, one participant joined a community choir; another coached a softball team for homeless people; several others were training to become peer support workers. However, it was also important for many participants to maintain links with their old identities, neighbourhoods, and routines. Among positive trajectories, there appeared to be a gradual process of shifting towards new social roles, networks and routines. The expression of positive identity was related to a willingness to introspect and reflect on one's experience and lessons learned which was often present in positive trajectories. For example, after losing his job and marriage, Tom (positive trajectory) started using drugs and alcohol more heavily and developed intense paranoia and auditory hallucinations. For two years prior to the baseline interview, he cycled through shelters, transitional housing, and the corrections system. After 18 months of HF, his narrative reflected a willingness to introspect on his recovery to date and a stronger sense of self: *"I'm getting more solid in my thinking and in terms of what I want. Like a better relationship with my kids. ... I have everything I need right now and the choices are my*

own. I have to live with them, good or bad. So, there's a level of maturity that's happening."

Key themes: negative, neutral and mixed trajectories

Three major themes primarily contributed to negative, neutral and mixed trajectories: (1) feeling like things will never change, including continued poverty, instability, and substance use; (2) perceived failure and disappointment, resulting in a sense of learned helplessness; and (3) loss of one's health and loved ones.

Theme 1: Things will never change. Negative, neutral and mixed trajectories were typically characterized by increasing or continued hardship and instability across multiple domains, resulting in feelings of social devaluation, feeling trapped, and a profound lack of autonomy (as described in previous analysis of our baseline narratives).[32] In addition, the emotional tone of negative and neutral trajectories was often flat with little elaboration or detail provided around experiences. Negative and neutral trajectories, in particular, were often pervaded by a sense of resignation and hopelessness. For example, at baseline, Alex (negative trajectory) had been living on the streets and in rooming houses for 10 years. For short periods, he was able to obtain low-income housing; however, he described persistent depression and frequent substance use, which made it difficult for him to maintain housing. At follow-up, he described a series of negative interactions with the justice, health, and social housing systems, which left him feeling increasingly demoralized and suicidal: *"I got beat up at the hospital by two security guards. They treat you like an animal. The nurses assume that you're just high. …They discharged me to a hotel. I left the next day. It was noisy, bug-infested, full of drugs."* Alex admitted that his drug and alcohol use has increased, and he started selling

drugs: *"I'm just going in circles. It feels like I'm trapped. Down here, I'll always be an addict."*

Theme 2: Perceived failure and disappointment. Failed attempts at change across multiple life domains were prevalent in the narratives. Participants often made genuine efforts to create change, but encountered personal and/or systemic obstacles such that they did not follow through with the change. Recent or prolonged loss of housing and contact with family, often due to relapse into substance use, were the more common perceived failures. For example, Clara (mixed trajectory), a 54-year-old woman, had been living on the streets and in precarious housing situations for 20 years prior to receiving HF. She was stably housed for 18 months and had reconnected with her daughter. However, she was struggling with the effects of a recent concussion, a longstanding heroin addiction, and the loss of past opportunities. *"You know, people kept saying, "You're so lucky!" [to receive housing] Well, yeah, I'm lucky. But I'm stupid. I could have had something like this 20 years ago. I put myself where I am. Nobody put me here. You know? I know that. I don't like it, but [shrugs]."*

Theme 3: Loss of one's health and loved ones. Many participants experienced significant physical health problems in addition to mental illness. Limited mobility and physical pain were daily experiences for most participants. Deaths and ruptures in key attachment relationships, including trauma and abuse, were also very common and resulted in a profound sense of isolation for many participants. The physical and psychological pain associated with recent loss(es) colored participants' perceptions of change and well-being across a range of domains and seemed to confirm an expectation of failure and low self-worth. Many participants, but especially those with negative and

neutral trajectories, described being very socially isolated and disconnected from community. For example, James (neutral trajectory) is a 46-year-old man with a long history of homelessness, severe mental illness and substance use who was assigned to HNTAU. He described a struggle between wanting deeper social ties but also wanting to protect himself: *"I haven't really met people that were worth spending that type of energy on. I know that sounds a little cold, but people will – even unknowingly – suck the life out of you, you know? And I have to be really careful with my energy because I get very drained and I've spent a little bit more time understanding what stress can actually do, like mentally, physically and spiritually. And my life has been extremely stressful and traumatic. I don't want to go through that."*

Discussion

This study is the first to use longitudinal, narrative data from homeless adults with mental illness who were randomly assigned to HF or TAU (no housing or supports provided through the study) to examine trajectories of recovery, and is an important contribution to the growing literature on HF. Narratives from participants assigned to HF reflected positive, mixed or neutral trajectories over the 18-month study period; none were classified as negative. By contrast, positive trajectories were rare among TAU participants (three out of 15). In general, TAU narratives reflected negative or neutral trajectories; participants continued to experience numerous challenges related to housing, health, substance use, trauma, and marginalization that culminated in increasingly poor functioning and feelings of hopelessness.

Positive change was primarily related to obtaining good quality housing.[33] The sense of security and positive self-worth resulting from good-quality, stable housing allowed individuals to explore new daily routines, reduce substance use and antisocial behaviour, expand social roles and networks, and provided a safe space to reflect on one's experiences. The breadth of domains affected by stable housing supports the construct of ontological security - the psychosocial sense of safety and stability which often accompanies permanent housing.[31,34] Past research has shown that homeless adults with mental illness who receive HF manifest greater ontological security than those living in transitional housing. [31]Our findings support a life course approach to recovery from homelessness and mental illness which considers the complex effects of cumulative adversity. The safety, security and ideological construct of 'home' is a critical foundation upon which the recovery journey is based.[31]

Negative, neutral, and mixed trajectories were characterized by continued hardship and heavy substance use, perceived failures and disappointments, loss, and social isolation. These struggles resulted in a pervasive sense of social devaluation and helplessness, as described in previous analysis of the baseline interviews.[32] Trauma theory and research may provide a useful lens through which to view and understand the experience of and attempts to exit homelessness in at least three respects:[35] First, becoming homeless (and repeatedly thereafter) may itself produce symptoms of trauma. Second, the ongoing experience of homelessness (loss of safety, predictability, control) may erode coping abilities. Finally, homelessness may exacerbate trauma symptoms among people with preexisting histories of victimization. In our narratives, cumulative

trauma and adversity was often the common factor underlying barriers to recovery such as psychiatric symptoms, substance abuse, and social isolation.

Similar to prior qualitative research, mental illness was not a dominant theme in our narratives despite direct questions on the topic.[21,33] Psychiatric symptoms and related stigma were a source of distress and impairment for most participants; however, it was often hard to disentangle the effects of cumulative adversity, substance abuse and mental illness. Most participants had experienced repeated, longstanding trauma and marginalization, resulting in a level of disorganization that does not fit traditional diagnostic classification systems. For many participants, heavy substance use started in early adolescence and continued into adulthood as means of coping with trauma, homelessness, psychological distress, and as a way to "fit in." Participants with long histories of homelessness and substance dependence tended to be more entrenched in the homeless identity and subculture, and had more difficulty adjusting to housing.[21,33] A better understanding of the timing, sequence and context for changes in complex trajectories of recovery, including homelessness, mental illness, and substance use, is still needed.

Isolation was a barrier to recovery for many participants, including those who received HF. The structural and individual factors that contributed to homelessness (i.e., poverty and lack of resources, poor mental and physical health, poor coping skills, lack of meaningful activities) continued to impact all participants' daily lives.1 Henwood et al. suggest that past trauma may lead individuals to view the world as dangerous and unpredictable, thus leading some people to seek the perceived comfort of isolating in an

apartment.[34] This isolation could be a necessary consolidation phase before more substantial recovery can occur.[21] In our narratives, isolation was often a longstanding way of being; however, participants also had few opportunities to develop new daily routines from which to develop a sense of well-being and identity.[15] Some participants alluded to tradeoffs between the safety of cohesive social ties and the flexibility of weak ties. It should also be noted that social isolation is a broader societal issue that is widely prevalent. While isolation is clearly heightened among marginalized populations, it is interesting that very few participants in our study who received HF left to return to their old neighbourhoods.

Our 18-month follow-up period provided most participants with only initial opportunities for recovery. Many participants who demonstrated positive trajectories had experienced either an eviction or a planned move from their original housing placement. Improvements in domains such as substance use, mental illness, and social support were often very fragile. Our findings highlight the importance of supporting homeless people with mental disorders through stages of change that include relapse, eviction and re-housing. Oftentimes, in hindsight, these moves and the support received from service teams were significant turning points and learning experiences for participants. Narratives across all trajectory groups revealed that recovery and reclaiming stability in housing and health, among other domains, is very difficult work -- slips and relapses are common. Collectively, the narratives highlight the tremendous challenge for people to move indoors and into community after years and sometimes decades outside, and often longer as marginalized citizens.

For our participants, recovery requires attention to the consequences of cumulative adversity, particularly previous trauma, and the ongoing stressors of poverty and social isolation. Our findings revealed that progress in recovery reflected the stages of change model:[36] change was gradual and cumulative, setbacks were often sudden and devastating, and maintaining gains often meant being 'stuck' with few options for positive change. Rather than a clinical approach to recovery, a whole-person approach that takes into account experiences of cumulative trauma, marginalization, and individual beliefs and expectations around change is needed.[33]

Limitations

The narratives in this study were affected by participants' recent circumstances; however, our analysis relied on two different time points and also incorporated field notes. Classifying trajectories is challenging given the volatility and multidimensionality of people's lives.[21] Neutral and mixed trajectories were inherently more variable than positive and negative trajectories. For example, neutral trajectories could reflect a continued negative path or a continued pattern of positive and negative (mixed) experiences. Mixed trajectories were often reflective of a tumultuous pattern of positive and negative experiences that could not be clearly categorized as positive or negative. However, each category contained exemplar cases which were easier to code and other cases (about one-quarter) that were more complex. Coding complex cases requires a collaborative consensus-based approach.[24] Finally, given the qualitative and exploratory nature of this research, we caution against conclusions based on the type of HF received (independent vs. congregate housing) or comparisons of HF and TAU as the sample sizes within different housing types are small.

Future Directions

Future qualitative research should examine the trajectories and themes identified in our study in more detail and over longer periods of time. For example, we found the expansion or contraction of social roles greatly affected participants' identities, and positive shifts in identity were facilitated by HF. However, this shift appeared more difficult for those who were invested in a homeless lifestyle. The process of establishing a new sense of self and a sense of belonging among different requires more investigation.

Our analysis demonstrates that many homeless adults with mental illness who receive good quality, stable housing with intensive supports (Housing First) are able to make significant positive change over 18 months. The sense of security and confidence related to stable housing is critical for supporting recovery across a variety of life domains. However, systemic changes at broader socio-political levels are also need to address issues related to poverty and homelessness.[13,15] Social change is needed to create opportunities for marginalized people to be included in communities and to confront poverty and social inequity.[32]

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Author Contributions

MP drafted the manuscript, oversaw implementation of the interviews, and coded all the interviews. SR, LC and JS coded subsets of the interviews. SR transcribed all the interviews. JS was the principal investigator. All authors contributed to the final manuscript.

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Table 1. Demographic characteristics at baseline for the original baseline sample (n=52) and those re-interviewed after 18-months (n=43)

	Baseline		**18M follow-up**	
	Mean (years)		**Mean (years)**	
Age (range, median)	42 (21-66, 42.5)		43 (21-66, 42.1)	
Lifetime duration homeless (range, median)	5.5 (0.2-33, 3)		5.9 (0.2-33, 4)	
	n	%	n	%
Gender				
Male	28	54	25	58
Female	21	40	16	37
Transgender	3	6	2	5
Race/Ethnicity				
White	31	60	26	61
Aboriginal	12	23	10	23
Mixed/Other	9	18	7	16
Housing Status				
Absolutely homeless	42	81	35	81
Precariously housed	10	19	8	19
Marital Status				
Single, never married	31	60	27	63
Divorced/separated/widowed	18	35	15	35
Married/common law/other	3	6	1	2
Have Children under 18 years	17	33	15	35
Education				
Grade 8 or less	10	20	10	23
Incomplete high school	21	40	20	47
Completed high school	21	40	13	30

Mental Disorders				
Psychotic Disorder	25	48	21	49
Major Depressive Episode	24	46	21	49
Mood Disorder with Psychotic Features	15	29	14	33
Post-Traumatic Stress Disorder	15	29	12	28
Panic Disorder	14	27	10	23
Manic or Hypomanic Episode	10	19	8	19
Substance Dependence	33	63	29	67
Alcohol Dependence	11	21	10	23

Table 2. Recovery trajectories over 18 months by study arm.

Study Arm	Trajectory Type			
	Positive	**Negative**	**Mixed**	**Neutral**
ACT (n=9)	6	0	3	0
CONG (n=10)	5[+]	0	3[#]	2^
HNTAU (n=7)	0	2	1	4
ICM (n=9)	6	0	3	0
MNTAU (n=8)	3	3	1	1
HF Total (n=28)	***17***	***0***	***9***	***2***
TAU Total (n=15)	***3***	***5***	***2***	***5***

[+] Two participants left the CONG residence within the first year and were living in supported housing elsewhere.
[#] Two of these participants left the CONG residence within the first year, one of whom was living in supported housing elsewhere and one of whom was living in an SRO.
^ One of these participants left the CONG residence within the first year and was living in an SRO.

MANUSCRIPT COVER PAGE

TITLE. Trajectories of recovery among homeless adults with mental illness who participated in a randomized controlled trial of Housing First: A longitudinal, narrative analysis

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ABSTRACT

Objectives: This study used longitudinal, narrative data to identify trajectories of recovery among homeless adults with mental illness alongside the factors that contribute to positive, negative, mixed or neutral trajectories over time. We expected that participants who received Housing First (HF) would describe more positive trajectories of recovery than those who were assigned to Treatment as Usual (TAU; no housing or support provided through the study).

Design: Narrative interview data was collected from participants at baseline and 18 months after random assignment to HF or TAU.

Setting: Participants were sampled from the community in Vancouver, British Columbia.

Participants: Fifty-four participants were randomly and purposively selected from the larger trial; 52 were interviewed at baseline and 43 were re-interviewed 18 months after randomization.

Method: Semi-structured interviews were conducted at both time points. For each participant, paired baseline and follow-up narratives were classified as positive, negative, mixed, or neutral trajectories of recovery, and thematic analysis was used to identify the factors underlying different trajectories.

Results: Participants assigned to HF (n=28) were generally classified as positive or mixed trajectories; those assigned to TAU (n=15) were generally classified as neutral or negative trajectories. Positive trajectories were characterized by a range of benefits associated with good-quality, stable housing (e.g.,reduced substance use, greater social support), positive expressions of identity, and the willingness to self-reflect. Negative, neutral and mixed trajectories were characterized by hopelessness ("things will never get better") related to continued hardship (e.g., eviction, substance use problems), perceived failures, and loss.

Conclusions: HF is associated with positive trajectories of recovery among homeless adults with mental illness. Those who did not receive housing or support continued to struggle across a wide range of life domains. Findings are discussed with implications for addressing services and broader social change in order to benefit this marginalized population.

ARTICLE SUMMARY

Article focus

- Trajectories of recovery among homeless adults with mental illness over 18 months of participation in a randomized controlled trial where participants received Housing First (HF) with intensive support services or treatment as usual (TAU; no housing or supports through the study).
- Narrative interviews (n=43) were conducted at baseline and at 18 months follow-up and were classified as positive, negative, mixed or neutral trajectories of recovery.
- Thematic analysis was used to examine the factors that contribute to different trajectories of recovery.

Key messages

- Narratives from participants assigned to HF were predominantly classified as positive trajectories; no HF participants' narratives were classified as negative trajectories. Narratives from participants assigned to TAU were predominantly classified as negative or neutral trajectories.

- Positive trajectories were characterized by the "ontological security" of obtaining good-quality housing, and included reduced substance use, efforts to expand social supports, positive expressions of identity, and the willingness to self-reflect.
- Negative, neutral and mixed trajectories were characterized by hopelessness related to continued hardship including recent eviction, substance use problems, perceived failures, loss and social isolation.

Strengths and limitations of this study

- This study is the first to use longitudinal, narrative data from adults with mental illness who were randomly assigned to HF or TAU. Additional strengths include specific measures to enhance trustworthiness of the data.
- Despite using multiple, independent coders, classifying trajectories among such a marginalized population is challenging given the volatility in people's lives.

Introduction

The co-occurrence of homelessness and mental illness is associated with a range of health, social and systemic challenges that make goals of residential stability and recovery difficult.[1-3] As a result, many homeless individuals with mental illness appear to be caught in a "revolving door" of institutional care, shelter use, substandard accommodation, and living on the streets.[4-6] In an effort to interrupt this cycle, *Housing First* (HF) was developed to reach the "hardest to house."[3] HF provides immediate access to independent, market-lease apartments without requirements around sobriety or engagement in treatment. HF has also been offered in congregate settings where all or a majority of tenants are program participants.[7] In both settings, HF participants are provided access to treatment and services, but choose their level of participation. A growing body of research on HF has documented positive outcomes including residential stability,[8,9] quality of life,[10] community integration,[11] and client satisfaction.[12]

Over the past 20 years, qualitative studies have examined homeless people's subjective experience of life on the streets and in shelters,[13] mental illness,[14] substance use,[15,16] various health and social services,[17,18] and different types of housing.[8,19,20] However, few qualitative studies have followed homeless adults over time, before and after receiving supported housing[20] or have examined what factors influence different trajectories of recovery.[21] Prior research on supported housing has emphasized the importance of personal and external resources resulting from safe and secure housing[20]and challenges around social isolation, substance use, and stigma.[14,19] Several studies have reported that substance use disorders are predictive of lower housing stability regardless of residence type.[22,23] For the most part, prior research on trajectories

among a variety of marginalized populations has followed variable-centered (e.g., cluster analysis and other quantitative techniques) rather than person-centered strategies, thereby losing the focus on how multiple events, conditions and experiences contribute to an individual's perception and experience.[24] Moreover, few qualitative studies have been conducted alongside randomized controlled trials.[25,26]

The Vancouver At Home Study is part of a multi-site, mixed-methods randomized controlled trial to examine the effectiveness of HF interventions compared to existing services (Treatment as Usual; TAU) among homeless adults with mental illness.[26-28] The current study focuses on narrative data from the Vancouver site, which includes a high proportion of participants who met criteria for substance dependence, and is the only site that implemented HF in a congregate setting as well as in independent apartments. The current study uses thematic analysis to examine participant narratives before and 18 months after random assignment to HF or TAU (no housing or supports provided by the study) and seeks to identify positive, negative, mixed or neutral trajectories of recovery and the factors related to different trajectories.

Methods

Participants and Sampling

Eligibility criteria included legal adult status (over 19 years of age), presence of a current mental disorder based on a semi-structured interview, and being absolutely homeless or precariously housed.[27] Participants were recruited through referral from a variety of agencies that serve the homeless. All participants met with a trained research interviewer who explained procedures, confirmed study eligibility, and obtained informed consent. Eligible participants completed a series of baseline questionnaires,

and were differentiated into two groups, High Need (HN) or Moderate Need (MN), based on the complexity and severity of their needs.[27] HN participants were randomized to one of three study arms: (1) HF (independent apartments) with Assertive Community Treatment (ACT); (2) Congregate Housing with on-site support (CONG); and (3) Treatment as Usual (HNTAU) which provided no additional housing or support services beyond what was available in the community. MN participants were randomized to one of two study arms: (1) HF (independent apartments) with Intensive Case Management (ICM); and (2) MNTAU. Participants in the present study were both randomly and purposively selected from the larger study sample, in an effort to represent differences across gender, ethnicity, duration of homelessness, and degree of functional impairment. Within one month of enrollment in the larger study, selected participants were asked to participate in a "personal story interview." Participation was voluntary, and two out of 54 participants declined. The current study is based on narrative interviews from 43 participants who were interviewed within one month of recruitment and re-interviewed 18 months later. Reasons for loss to follow-up include: death (1), refused participation (1), incarcerated (2), moved out of town (1), and unable to locate (4). Baseline interviews (n=52) included 32 HF participants and 20 TAU participants; follow-up interviews (n=43) included 28 HF participants and 15 TAU participants.

Data Collection

Four research assistants and one peer interviewer conducted the narrative interviews. Interviews lasted from one to two hours and were conducted at a setting chosen by the participant, usually a community agency or the project field office. All participants gave informed consent and received $30 upon completion of each interview.

Institutional Research Ethics Board approval was obtained from Simon Fraser University and the University of British Columbia.

Using a semi-structured interview format, participants worked with interviewers at baseline to co-construct a personal story highlighting (a) their pathway into homelessness; (b) experiences of being homeless or inadequately housed; (c) experiences around first learning they had a mental illness and obtaining help for their illness; and (d) key life events. The 18-month follow-up interview focused on changes since the first interview in the areas of typical day, housing, service use, experience of community, social ties, hopes for the future, and key life events. Interviews were audio recorded and transcribed verbatim.

Data Analysis

Each participant's baseline and 18-month follow-up interviews were compared and the overall trajectory was categorized as 'positive,' 'negative,' 'mixed' or 'neutral.' Categorizations were based on 22 domains including housing stability, typical day, mental and physical health, substance use, criminal justice activity, social interactions, hopes for the future, willingness to introspect, and interviewer observations. Each transcript was coded for positive, negative, mixed or no change on each domain. If the number of positive domains clearly outnumbered the negative, the trajectory was coded as "positive." Conversely, if the number of negative domains clearly outnumbered positive, the trajectory was coded as "negative." If the number of negative and positive domains were roughly equal, the trajectory was categorized as "mixed;" and if no clear change was observed over time in the majority of domains, the trajectory was categorized

as "neutral." Although we structured coding by using 22 domains, scientific/clinical judgment and discussion among coders and interviewers was a key part of the analytic process.[22] Approximately three-quarters of the interviews clearly fell into one category, while the remainder were more complex and required collaborative consensus.

Thematic analysis was used to examine the interview transcripts in relation to factors that contribute to positive, negative, or neutral trajectories. Our approach reflects ideas brought to the data set from the research questions and existing literature (i.e., deductive), as well as themes that emerge from the data (i.e., inductive).[29,30]According to this approach, emphasis is primarily on the content of the text (*what* is said) rather than on structural or discourse analysis (*how* it is said); however, we also considered the emotional tone of the interviews and field notes.

The interviewing team met four times during the early phase of thematic analysis to co-code and discuss emergent themes in the narratives. Initial codes and themes were based on interview questions; for example, the question "How have your relationships with people changed?" elicited the code 'developing trust' and a preliminary theme of 'wanting deeper social connections vs. isolating.' Subsequently, the first author independently coded all transcripts line-by-line, classified trajectories, and identified repeated or similar codes to build a set of overarching themes;[29,30] the second and third authors followed the same process for half of the transcripts. Thus, all transcripts were independently coded by at least two people. After a thorough review of the transcripts and field notes, conceptual impressions were integrated into key thematic areas. At this point, themes and initial interpretations were shared with field interviewers and any coding differences were resolved by group consensus. Five audio files from both the

baseline and follow-up interviews were reviewed by an external researcher who was familiar with the interview guide. The audio files were checked against their respective transcripts for accuracy and quality.

Results

Sample characteristics

Demographic characteristics at baseline for participants who completed both narrative interviews (baseline and 18 months) are presented in Table 1. No significant differences were observed among baseline demographic characteristics for the baseline and the follow-up samples. As noted in Table 1, the age of the follow-up sample ranged from 21 to 66 years (mean = 43 years) and included 25 men (58%), 16 women (37%), and 2 (5%) transgendered individuals. At baseline, the mean lifetime duration of homelessness was 6 years and 30% had completed high school. The most commonly identified mental disorders among the sample were Psychotic Disorder (49%), Major Depressive Episode (49%), and Substance Dependence (67%).

[Insert Table 1 about here]

Classification of trajectories

Narratives from HF participants (n=28) were predominantly classified as positive (n=17) or mixed (n=9) trajectories over the 18-month study period; two narratives were classified as neutral; and none were negative (see Table 2). Narratives from TAU participants (n=15) were typically classified as negative (n=5) or neutral (n=5) trajectories, with the remaining trajectories divided between the positive and mixed

categories. Of note, only two TAU participants obtained good-quality housing during the study, and both participants' narratives were classified as positive.

[Insert Table 2 about here]

Key themes: positive trajectories

Two related but distinct themes primarily contributed to positive trajectories: (1) housing as a stable foundation for change across a variety of domains; and (2) the expression of positive aspects of one's identity.

Theme 1: Housing as a secure and stable foundation. Positive trajectories were characterized by the benefits associated with good-quality, stable housing which affected many areas of people's lives (e.g., health, substance use, social ties, identity, financial, leisure time). These benefits reflected a sense of "ontological security"[31] that shifted the way people thought about themselves and others, and allowed them to take steps toward positive change. For example, since running away from home in adolescence, Alice had lived intermittently in shelters, hotels, and with acquaintances. She described longstanding fear and hypervigilance that had shifted to a growing sense of freedom and security since receiving stable housing: *"I was at the beach, and I was running towards the water, and I was jumping in. ... I was just jumping in the water. I took all my clothes off, and I had my bathing suit on, and I was like, 'Whoo-hoo!' And then I walked home in my bare feet, laid on the bed, and I was like, 'Ahh. Heaven.'"*

Several HF participants achieved a period of stable housing (typically for six to 12 months) but had since experienced eviction. The experience of losing housing contributed to different trajectories depending on the timing, context and interpretation of

the experience. Among positive trajectories, eviction was perceived as a turning point and a significant learning experience. Given the project's commitment to re-housing, many HF participants were able to learn from their mistakes, particularly around how to set boundaries, manage substance use, and challenge expectations around the inevitability of failure.

Theme 2: Expression of positive identity. Many housed participants struggled to let go of their homeless identity, especially those who had been homeless for long periods. Finding and exploring opportunities that promoted the development of a positive personal and social identity, independent of homelessness, were often present among positive trajectories. For example, one participant joined a community choir; another coached a softball team for homeless people; several others were training to become peer support workers. However, it was also important for many participants to maintain links with their old identities, neighbourhoods, and routines. Among positive trajectories, there appeared to be a gradual process of shifting towards new social roles, networks and routines. The expression of positive identity was related to a willingness to introspect and reflect on one's experience and lessons learned which was often present in positive trajectories. For example, after losing his job and marriage, Tom (positive trajectory) started using drugs and alcohol more heavily and developed intense paranoia and auditory hallucinations. For two years prior to the baseline interview, he cycled through shelters, transitional housing, and the corrections system. After 18 months of HF, his narrative reflected a willingness to introspect on his recovery to date and a stronger sense of self: *"I'm getting more solid in my thinking and in terms of what I want. Like a better relationship with my kids. ... I have everything I need right now and the choices are my*

own. I have to live with them, good or bad. So, there's a level of maturity that's happening."

Key themes: negative, neutral and mixed trajectories

Three major themes primarily contributed to negative, neutral and mixed trajectories: (1) feeling like things will never change, including continued poverty, instability, and substance use; (2) perceived failure and disappointment, resulting in a sense of learned helplessness; and (3) loss of one's health and loved ones.

Theme 1: Things will never change. Negative, neutral and mixed trajectories were typically characterized by increasing or continued hardship and instability across multiple domains, resulting in feelings of social devaluation, feeling trapped, and a profound lack of autonomy (as described in previous analysis of our baseline narratives).[32] In addition, the emotional tone of negative and neutral trajectories was often flat with little elaboration or detail provided around experiences. Negative and neutral trajectories, in particular, were often pervaded by a sense of resignation and hopelessness. For example, at baseline, Alex (negative trajectory) had been living on the streets and in rooming houses for 10 years. For short periods, he was able to obtain low-income housing; however, he described persistent depression and frequent substance use, which made it difficult for him to maintain housing. At follow-up, he described a series of negative interactions with the justice, health, and social housing systems, which left him feeling increasingly demoralized and suicidal: *"I got beat up at the hospital by two security guards. They treat you like an animal. The nurses assume that you're just high. …They discharged me to a hotel. I left the next day. It was noisy, bug-infested, full of*

drugs." Alex admitted that his drug and alcohol use has increased, and he started selling drugs: *"I'm just going in circles. It feels like I'm trapped. Down here, I'll always be an addict."*

Theme 2: Perceived failure and disappointment. Failed attempts at change across multiple life domains were prevalent in the narratives. Participants often made genuine efforts to create change, but encountered personal and/or systemic obstacles such that they did not follow through with the change. Recent or prolonged loss of housing and contact with family**,** often due to relapse into substance use, were the more common perceived failures. For example, Clara (mixed trajectory), a 54-year-old woman, had been living on the streets and in precarious housing situations for 20 years prior to receiving HF. She was stably housed for 18 months and had reconnected with her daughter. However, she was struggling with the effects of a recent concussion, a longstanding heroin addiction, and the loss of past opportunities. *"You know, people kept saying, "You're so lucky!" [to receive housing] Well, yeah, I'm lucky. But I'm stupid. I could have had something like this 20 years ago. I put myself where I am. Nobody put me here. You know? I know that. I don't like it, but [shrugs]."*

*Theme 3: Loss of one's health and loved ones***.** Many participants experienced significant physical health problems in addition to mental illness. Limited mobility and physical pain were daily experiences for most participants. Deaths and ruptures in key attachment relationships, including trauma and abuse, were also very common and resulted in a profound sense of isolation for many participants. The physical and psychological pain associated with recent loss(es) colored participants' perceptions of change and well-being across a range of domains and seemed to confirm an expectation

of failure and low self-worth. Many participants, but especially those with negative and neutral trajectories, described being very socially isolated and disconnected from community. For example, James (neutral trajectory) is a 46-year-old man with a long history of homelessness, severe mental illness and substance use who was assigned to HNTAU. He described a struggle between wanting deeper social ties but also wanting to protect himself: *"I haven't really met people that were worth spending that type of energy on. I know that sounds a little cold, but people will – even unknowingly – suck the life out of you, you know? And I have to be really careful with my energy because I get very drained and I've spent a little bit more time understanding what stress can actually do, like mentally, physically and spiritually. And my life has been extremely stressful and traumatic. I don't want to go through that."*

Discussion

This study is the first to use longitudinal, narrative data from homeless adults with mental illness who were randomly assigned to HF or TAU (no housing or supports provided through the study) to examine trajectories of recovery, and is an important contribution to the growing literature on HF. Narratives from participants assigned to HF reflected positive, mixed or neutral trajectories over the 18-month study period; none were classified as negative. By contrast, positive trajectories were rare among TAU participants (three out of 15). In general, TAU narratives reflected negative or neutral trajectories; participants continued to experience numerous challenges related to housing,

health, substance use, trauma, and marginalization that culminated in increasingly poor functioning and feelings of hopelessness.

Positive change was primarily related to obtaining good quality housing.[33] The sense of security and positive self-worth resulting from good-quality, stable housing allowed individuals to explore new daily routines, reduce substance use and antisocial behaviour, expand social roles and networks, and provided a safe space to reflect on one's experiences. The breadth of domains affected by stable housing supports the construct of ontological security - the psychosocial sense of safety and stability which often accompanies permanent housing.[31,34] Past research has shown that homeless adults with mental illness who receive HF manifest greater ontological security than those living in transitional housing. [31]Our findings support a life course approach to recovery from homelessness and mental illness which considers the complex effects of cumulative adversity. The safety, security and ideological construct of 'home' is a critical foundation upon which the recovery journey is based.[31]

Negative, neutral, and mixed trajectories were characterized by continued hardship and heavy substance use, perceived failures and disappointments, loss , and social isolation. These struggles resulted in a pervasive sense of social devaluation and helplessness, as described in previous analysis of the baseline interviews.[32] Trauma theory and research may provide a useful lens through which to view and understand the experience of and attempts to exit homelessness in at least three respects:[35] First, becoming homeless (and repeatedly thereafter) may itself produce symptoms of trauma. Second, the ongoing experience of homelessness (loss of safety, predictability, control) may erode coping abilities. Finally, homelessness may exacerbate trauma symptoms

among people with preexisting histories of victimization. In our narratives, cumulative trauma and adversity was often the common factor underlying barriers to recovery such as psychiatric symptoms, substance abuse, and social isolation.

Similar to prior qualitative research, mental illness was not a dominant theme in our narratives despite direct questions on the topic.[21,33] Psychiatric symptoms and related stigma were a source of distress and impairment for most participants; however, it was often hard to disentangle the effects of cumulative adversity, substance abuse and mental illness. Most participants had experienced repeated, longstanding trauma and marginalization, resulting in a level of disorganization that does not fit traditional diagnostic classification systems. For many participants, heavy substance use started in early adolescence and continued into adulthood as means of coping with trauma, homelessness, psychological distress, and as a way to "fit in." Participants with long histories of homelessness and substance dependence tended to be more entrenched in the homeless identity and subculture, and had more difficulty adjusting to housing.[21,33] A better understanding of the timing, sequence and context for changes in complex trajectories of recovery, including homelessness, mental illness, and substance use, is still needed.

Isolation was a barrier to recovery for many participants, including those who received HF. The structural and individual factors that contributed to homelessness (i.e., poverty and lack of resources, poor mental and physical health, poor coping skills, lack of meaningful activities) continued to impact all participants' daily lives.1 Henwood et al. suggest that past trauma may lead individuals to view the world as dangerous and

unpredictable, thus leading some people to seek the perceived comfort of isolating in an apartment.[34] This isolation could be a necessary consolidation phase before more substantial recovery can occur.[21] In our narratives, isolation was often a longstanding way of being; however, participants also had few opportunities to develop new daily routines from which to develop a sense of well-being and identity.[15] Some participants alluded to tradeoffs between the safety of cohesive social ties and the flexibility of weak ties. It should also be noted that social isolation is a broader societal issue that is widely prevalent. While isolation is clearly heightened among marginalized populations, it is interesting that very few participants in our study who received HF left to return to their old neighbourhoods.

Our 18-month follow-up period provided most participants with only initial opportunities for recovery. Many participants who demonstrated positive trajectories had experienced either an eviction or a planned move from their original housing placement. Improvements in domains such as substance use, mental illness, and social support were often very fragile. Our findings highlight the importance of supporting homeless people with mental disorders through stages of change that include relapse, eviction and re-housing. Oftentimes, in hindsight, these moves and the support received from service teams were significant turning points and learning experiences for participants. Narratives across all trajectory groups revealed that recovery and reclaiming stability in housing and health, among other domains, is very difficult work -- slips and relapses are common. Collectively, the narratives highlight the tremendous challenge for people to

move indoors and into community after years and sometimes decades outside, and often longer as marginalized citizens.

For our participants, recovery requires attention to the consequences of cumulative adversity, particularly previous trauma, and the ongoing stressors of poverty and social isolation. Our findings revealed that progress in recovery reflected the stages of change model:[36] change was gradual and cumulative, setbacks were often sudden and devastating, and maintaining gains often meant being 'stuck' with few options for positive change. Rather than a clinical approach to recovery, a whole-person approach that takes into account experiences of cumulative trauma, marginalization, and individual beliefs and expectations around change is needed.[33]

Limitations

The narratives in this study were affected by participants' recent circumstances; however, our analysis relied on two different time points and also incorporated field notes. Classifying trajectories is challenging given the volatility and multidimensionality of people's lives.[21] Neutral and mixed trajectories were inherently more variable than positive and negative trajectories. For example, neutral trajectories could reflect a continued negative path or a continued pattern of positive and negative (mixed) experiences. Mixed trajectories were often reflective of a tumultuous pattern of positive and negative experiences that could not be clearly categorized as positive or negative. However, each category contained exemplar cases which were easier to code and other cases (about one-quarter) that were more complex. Coding complex cases requires a collaborative consensus-based approach.[24] Finally, given the qualitative and exploratory

nature of this research, we caution against conclusions based on the type of HF received (independent vs. congregate housing) or comparisons of HF and TAU as the sample sizes within different housing types are small.

Future Directions

Future qualitative research should examine the trajectories and themes identified in our study in more detail and over longer periods of time. For example, we found the expansion or contraction of social roles greatly affected participants' identities, and positive shifts in identity were facilitated by HF. However, this shift appeared more difficult for those who were invested in a homeless lifestyle. The process of establishing a new sense of self and a sense of belonging among different requires more investigation.

Our analysis demonstrates that many homeless adults with mental illness who receive good quality, stable housing with intensive supports (Housing First) are able to make significant positive change over 18 months. The sense of security and confidence related to stable housing is critical for supporting recovery across a variety of life domains. However, systemic changes at broader socio-political levels are also need to address issues related to poverty and homelessness.[13,15] Social change is needed to create opportunities for marginalized people to be included in communities and to confront poverty and social inequity.[32]

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Author Contributions

MP drafted the manuscript, oversaw implementation of the interviews, and coded all the interviews. SR, LC and JS coded subsets of the interviews. SR transcribed all the interviews. JS was the principal investigator. All authors contributed to the final manuscript.

Data sharing

Qualitative data can be accessed by contacting the Principal Investigator, Dr. Julian Somers at jsomers@sfu.ca

Competing Interests

None

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Table 1. Demographic characteristics at baseline for the original baseline sample (n=52) and those re-interviewed after 18-months (n=43)

	Baseline		**18M follow-up**	
	Mean (years)		**Mean (years)**	
Age (range, median)	42 (21-66, 42.5)		43 (21-66, 42.1)	
Lifetime duration homeless (range, median)	5.5 (0.2-33, 3)		5.9 (0.2-33, 4)	
	n	%	n	%
Gender				
Male	28	54	25	58
Female	21	40	16	37
Transgender	3	6	2	5
Race/Ethnicity				
White	31	60	26	61
Aboriginal	12	23	10	23
Mixed/Other	9	18	7	16
Housing Status				
Absolutely homeless	42	81	35	81
Precariously housed	10	19	8	19
Marital Status				
Single, never married	31	60	27	63
Divorced/separated/widowed	18	35	15	35
Married/common law/other	3	6	1	2
Have Children under 18 years	17	33	15	35
Education				
Grade 8 or less	10	20	10	23
Incomplete high school	21	40	20	47
Completed high school	21	40	13	30

Mental Disorders				
Psychotic Disorder	25	48	21	49
Major Depressive Episode	24	46	21	49
Mood Disorder with Psychotic Features	15	29	14	33
Post-Traumatic Stress Disorder	15	29	12	28
Panic Disorder	14	27	10	23
Manic or Hypomanic Episode	10	19	8	19
Substance Dependence	33	63	29	67
Alcohol Dependence	11	21	10	23

Table 2. Recovery trajectories over 18 months by study arm.

Study Arm	Trajectory Type			
	Positive	**Negative**	**Mixed**	**Neutral**
ACT (n=9)	6	0	3	0
CONG (n=10)	5[+]	0	3[#]	2^
HNTAU (n=7)	0	2	1	4
ICM (n=9)	6	0	3	0
MNTAU (n=8)	3	3	1	1
HF Total (n=28)	***17***	***0***	***9***	***2***
TAU Total (n=15)	***3***	***5***	***2***	***5***

[+] Two participants left the CONG residence within the first year and were living in supported housing elsewhere.
[#] Two of these participants left the CONG residence within the first year, one of whom was living in supported housing elsewhere and one of whom was living in an SRO.
^ One of these participants left the CONG residence within the first year and was living in an SRO.