

Original Research

Employment and Income of People Who Experience Mental Illness and Homelessness in a Large Canadian Sample

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Key Words: homelessness, mental illness, employment rate

Received June 2014, revised, and accepted October 2014.

Celebrating 60 years
Nous célébrons 60 ans

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

Methods: Participants ($n = 2085$) from the 5 sites of the At Home/Chez Soi study were asked about their income, employment, and desire for work during the pre-baseline period. The proportion of participants employed, receiving government support, and relying on income from other activities were compared across sites, as were total income and income from different sources. Generalized linear models were used to identify participant characteristics associated with total income.

Results: Unemployment ranged from 93% to 98% across 5 sites. The per cent of participants who wanted to work ranged from 61% to 83%. Participants relied predominantly on government assistance, with 29.5% relying exclusively on welfare, and 46.2% receiving disability benefits. Twenty-eight per cent of participants received neither social assistance nor disability income. Among the 2085 participants, 6.8% reported income from panhandling, 2.1% from sex trade, and 1.2% from selling drugs. Regression models showed that income differed significantly among sites and age groups, and was significantly lower for people with psychotic illnesses.

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



Emploi et revenu des personnes sans abri souffrant de maladie mentale dans un vaste échantillon canadien

Objectifs : La recherche suggère que les personnes sans abri souffrant de maladie mentale peuvent éprouver des difficultés à obtenir un emploi et des prestations d'invalidité. Notre étude offre une description détaillée des sources de revenu et des taux d'emploi dans un vaste échantillon canadien.

Méthodes : Les participants ($n = 2085$) de 5 sites de l'étude At Home/Chez Soi ont été interrogés au sujet de leur revenu, leur emploi, et leur désir de travailler durant la période d'avant-départ de l'étude. La proportion des participants employés, recevant un soutien du gouvernement, et s'appuyant sur le revenu d'autres activités a été comparée entre les sites, tout comme le revenu total et le revenu de différentes sources. Des modèles linéaires généralisés ont servi à identifier les caractéristiques des participants associées au revenu total.

Résultats : Le chômage se situait de 93 % à 98 % dans les 5 sites. Le pourcentage de participants qui voulaient travailler allait de 61 % à 83 %. Les participants se fiaient principalement sur l'aide du gouvernement, 29,5 % vivant exclusivement de l'aide sociale, et 46,2 % recevant des prestations d'invalidité. Vingt-huit pour cent des participants ne

recevaient ni aide sociale ni prestations d'invalidité. Parmi les 2085 participants, 6,8 % ont déclaré un revenu de mendicité, 2,1 % du commerce du sexe, et 1,2 % de la vente de drogues. Des modèles de régression ont montré que le revenu différait significativement entre les sites et les groupes d'âge, et qu'il était significativement plus faible chez les personnes souffrant de maladies psychotiques.

Conclusion : Ces résultats suggèrent que les personnes sans abri souffrant de maladie mentale sont principalement sans emploi, malgré qu'elles expriment un désir de travailler. Au Canada, ce groupe vit principalement de l'aide sociale, mais a accès aux prestations d'invalidité et à l'assurance-emploi. Ces résultats soulignent l'importance de mettre au point des interventions efficaces pour soutenir les visées d'emploi et faciliter l'accès aux prestations.

Employment and steady income are important contributors to physical and mental health. Apart from contributing to material benefits, stable employment has important implications for social inclusion and recovery for people who are, or have recently been, homeless and have a mental illness.¹⁻⁴ Employment also reduces reliance on emergency shelters, and can facilitate exit from homelessness.^{1,5} Income support can reduce the prevalence of risky and costly behaviours in this population.^{6,7} Research suggests that homeless people with mental illness may have difficulty accessing disability benefits^{8,9} and that their rate of unemployment exceeds 80%,¹⁰⁻¹² reducing their options for subsistence. Additionally, the highly visible act of panhandling is the focus of much public attention and has a negative impact on society's opinion of this vulnerable segment of society.¹³ Understanding the extent to which this segment of society depends on various sources of income has important benefits for policy makers and can guide the implementation of targeted interventions, such as evidence-based supported employment and benefits counselling. Small-scale surveys have been conducted,^{13,14} but information about the current situation remains limited. Our study seeks to provide a comprehensive description of the various sources of income and employment activities reported by homeless people who also have a mental illness.

Methods

Setting

The At Home/Chez Soi demonstration and research project¹⁵ tested the effect of a Housing First intervention for people with mental illness experiencing homelessness¹⁶⁻¹⁸ in 5 Canadian cities: Moncton, Montreal, Toronto, Winnipeg, and Vancouver. Participants randomized to the experimental condition received assistance finding and maintaining permanent housing of their choice. They also received services from a clinical team delivering intensive case management or assertive community treatment. Others continued to receive usually available services.

Abbreviations

DHHS	Demographics, Housing, Vocational and Service Use History
MBM	Market Basket Measure
VTLFB	Vocational Time-Line Follow-Back

Clinical Implications

- Professionals working with homeless people with mental illness should include employment goals in their assessments.
- Many homeless people with mental illness, particularly those with psychotic illness, need help in accessing the benefits to which they are entitled.

Limitations

- Income data and the desire for work were self-reported and may be susceptible to social desirability bias.
- Income data during the first month of the study, when about one-half of participants had begun to receive Housing First services, are used as a proxy for income prior to study start.

Participants

All participants recruited to the At Home/Chez Soi project, whether randomized to the intervention or the control groups, were included in our study. Participants met the following inclusion criteria: 18 years of age or older, legal status in Canada (entitling them to access benefits), presence of a mental illness (for example, psychotic disorder, major depressive disorder, mood disorder with psychotic features, mania or hypomania, posttraumatic stress disorder, and panic disorder), and being either in a current state of absolute homelessness or precariously housed with at least 2 separate instances of absolute homelessness in the past year. Absolute homelessness was defined as living on the street without shelter or making use of emergency shelters.¹⁵

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

Procedure

Interviewers obtained demographic information before the randomization of participants. The DHHS questionnaire, developed for the At Home/Chez Soi study, collects information on sex, age, ethnicity, education, employment, reasons for not working, and other background variables. The Mini International Neuropsychiatric Interview 6.0¹⁹ and clinical file review were used to assess the psychiatric diagnosis at enrolment.

Interviews, conducted 3 months after enrolment in the study, used the VTLFB questionnaire to retrospectively assess employment histories and income sources. Interviewers used calendars during the interviews to facilitate recall and to reconstruct the timeline.

Measure

Our study relies on participant characteristics and current employment status data from the DHHS, and income data from the VTLFB corresponding to the month following enrolment. Participants who did not have a job, worked in informal or nonlegal jobs, or volunteered were considered unemployed. Participants included in the remaining category worked at regular jobs, were students, or were retired. Age was categorized into groups to reflect different service use populations (young adults 18 to 24, 25 to 39, 40 to 54, and 55 and older). Homelessness was considered chronic if a participant had a single period of homelessness longer than 12 months and spent more than a total of 36 months homeless during their lives. Sensitivity analyses were conducted to determine the effect of varying the length of homelessness. Varying the definition to include a single uninterrupted period longer than 12 months or a lifetime total of more than 12 months did not alter the interpretation of regression coefficients. Education was split at 12 years. Diagnosis was dichotomized based on presence of psychosis, a choice made because people with psychotic disorders may have lower levels of functioning and greater difficulty with obtaining employment.^{8,20} A variable indicating whether a participant had been arrested at least once in the past 6 months was included to represent contact with the justice system.

Analysis

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

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

Table 1 Sample characteristics

Characteristic	Measure
Age, years, mean (SD)	40.9 (11.2)
Male, %	67.3
Years education, mean (SD)	10.8 (3.1)
Worked at least 1 year in the past, %	66.0
Arrested at least once in past 6 months, %	36.3
Unemployed, %	95.9
Length of homelessness in months, median (IQR)	36 (12 to 80)
Diagnosis, %	
Psychotic disorder	44.0
Major depressive disorder	33.6
Mania or hypomania	13.6
Mood disorder with psychotic features	4.3
Posttraumatic stress disorder	2.5
Panic disorder	2.0
Per cent of adult-life homeless, %	
<1.0	6.1
1.0 to 2.9	11.5
3.0 to 7.9	16.1
8.0 to 19.9	22.7
20.0 to 40.0	19.2
>40.0	24.3
Would like paid employment in their community, %	
Moncton	81.6
Montreal	70.7
Toronto	64.3
Vancouver	82.3
Winnipeg	76.7

and greater ability to maintain a modest standard of living. Conversely, a ratio gap closer to one indicates less ability to maintain a basic standard of living.

A generalized linear model, with a normal distribution and identity-link function, was used to determine which demographic variables were associated with total income.²¹ A site variable was included to determine the effect of different metropolitan areas. Analyses were conducted using Stata 13.²² Ethics approval was obtained from local ethics review boards at each of the 5 sites as well as nationally (11 institutions in total, mostly universities and university-affiliated teaching hospitals).

Results

Sample characteristics are reported in Table 1. The sample consisted of 2085 people who had data available for the purposes of this study. None of these variables differed significantly across sites and diagnostic category. Mental illness diagnoses did not differ significantly between

Table 2 Monthly income by source

Income sources <i>n</i> = 2085	Percentage who report income from source, %	Median ^a	IQR	Percentage who get 95% of income from source, %	Average per cent of total income from source, %
Total income		713.00	498 to 907		
Regular work	1.97	640.00	400 to 1276	0.77	70.8
Social assistance, mean (SD)	69.75	421.72	(262.09)	29.48	67.0
Disability income, mean (SD)	46.16	521.97	(267.91)	13.37	65.6
Panhandling	6.81	200.00	60 to 450	0.67	36.9
Casual and informal work, mean (SD)	7.96	128.00	60 to 300	0.62	29.5
Pension or EI	5.80	624.00	450 to 991	3.07	10.6
Sex trade	2.06	500.00	200 to 900	0.19	49.6
Activities associated with illicit drugs	1.15	400.00	90 to 1212	0.29	51.8
Thefts	0.58	1200.00	68 to 4000	0.05	60.9
Family support	3.26	100.00	55 to 275	0.43	33.8
PNA	3.26	120.00	90 to 120	2.25	73.4
Other	6.76	120.00	50 to 360	1.49	43.1

^a Values represent the median for people reporting income from that source.
EI = employment insurance; PNA = personal needs assistance

sites. Participants' past length of homelessness differed significantly between sites (Pearson $\chi^2 = 81.9$, $df = 81.9$, $P < 0.001$).

The overall rate of unemployment at baseline was 96%, but differed significantly across sites, ranging from 93% in Moncton to 98% in Montreal (Fisher exact test $P = 0.01$). The per cent of people who would like paid employment in the community is listed in Table 1, and differed significantly between sites (Pearson $\chi^2 = 57.2$, $df = 4$, $P < 0.001$).

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

Income is detailed in Table 2. The distribution of total income was skewed to the right, with a median of \$713 per month and an interquartile range of \$498 to \$907. Respondents obtained their income from a wide range of sources. Sixteen participants reported relying predominantly on income from regular work, and 41 reported that, on average, 71% of their total income came from regular work. Among the 2085 participants, 29.5% relied predominantly on government assistance programs, and 69.7% reported that, on average, 67% of their total income came from welfare. Social assistance revenues differed significantly between sites ($F = 68.75$, $df = 4/1984$, $P < 0.001$). This was due to the differences in allocating benefits. In Moncton, Winnipeg, and Vancouver, participants received a basic

social assistance, which was then supplemented if they were entitled to disability benefits under the local regulations. In Toronto, the participants received either social assistance or disability benefits, in both cases determined on a case-by-case basis. In Montreal, the social assistance amounts could be increased if the person had a disability that prevented them from working, but participants were not reliably able to describe the exact amount of this increase, a finding previously reported in the literature.²³ About one-half (46.1%) of the participants reported receiving disability benefits, which represented 66% of their total income. Very few participants reported income from illegal activities, such as prostitution or selling drugs or stolen items.

Very few participants reported incomes above the low-income threshold derived from Statistics Canada's MBM. Table 3 lists these low-income thresholds by city, the distribution of participants' income, and the gap ratio. Comparisons showed that, at all sites, most participants subsisted on income that was \$200 to \$1000 below the low-income threshold.

For participants who were employed in regular work, the per cent of participants above the low-income threshold increased to 11.11%, a statistically significant difference, compared with those who were unemployed (Fisher exact test $P = 0.02$).

Generalized linear model estimates are presented in Table 4. The regression coefficients are interpreted as the monetary difference between the category and the reference group. Several variables were statistically significant predictors of total income, including age, site, and the presence of a psychotic illness. Compared with the participants from Moncton, total income was significantly greater in

Table 3 Relation of monthly income to Market Basket Measure (MBM)

City	MBM, Can\$	Total income, median (IQR)	Above MBM	\$0 to \$200 below MBM	\$201 to \$1000 below MBM	>\$1000 below MBM	Low-income gap ratio, ^a median (IQR)
Moncton <i>n</i> = 155	1430.92	537 (537 to 670)	3.2	1.9	87.1	7.8	0.62 (0.55 to 0.62)
Montreal <i>n</i> = 449	1381.08	887 (712 to 899)	6.0	2.7	85.5	5.8	0.37 (0.35 to 0.51)
Toronto <i>n</i> = 537	1596.38	600 (500 to 943)	4.3	2.6	42.5	50.6	0.63 (0.44 to 0.72)
Vancouver <i>n</i> = 455	1569.29	900 (645 to 1040)	7.0	3.1	70.3	19.6	0.43 (0.38 to 0.61)
Winnipeg <i>n</i> = 489	1400.58	400 (222 to 586)	3.1	3.1	40.1	53.7	0.71 (0.61 to 0.84)

^a Ratio calculation: (MBM – total income)/MBM, calculated only for people who are below MBM

Table 4 Predictors of total income

Predictor	Coefficient ^a	Robust SE	z	P	95% CI
Research site, Moncton as reference					
Montreal	274.63	39.45	6.96	<0.001	197.32 to 351.95
Toronto	109.57	39.77	2.76	0.006	31.63 to 187.51
Vancouver	316.41	40.89	7.74	<0.001	236.27 to 396.56
Winnipeg	-147.43	33.36	-4.42	<0.001	-212.82 to -82.05
Age, years, 18 to 24 as reference					
25 to 39	53.15	52.95	1.00	0.32	-50.63 to 156.94
40 to 54	108.44	54.76	1.98	0.048	1.10 to 215.78
≥55	123.28	67.87	1.82	0.07	-9.74 to 256.30
Men	-40.84	33.63	-1.21	0.22	-106.76 to 25.08
Psychotic illness	-59.92	28.68	-2.09	0.04	-116.13 to -3.71
Chronic homelessness	27.89	38.33	0.73	0.47	-47.23 to 103.01
High school education	8.25	28.16	0.29	0.77	-46.95 to 63.44
Arrested, past 6 months	56.34	31.72	1.78	0.08	-5.83 to 118.52

^a Coefficients are interpreted as the monetary difference between the category and the reference group.

Montreal, Toronto, and Vancouver, and significantly lower in Winnipeg. Participants with psychotic illness tended to report obtaining less income than other participants ($-\$59.92$, 95% CI $-\$116.13$ to $-\$3.71$, $P = 0.04$). Similar regression models predicting the receipt of disability benefits (results not shown) demonstrated that participants with psychotic illnesses received $\$35.97$ less per month, on average, than participants with nonpsychotic illnesses (95% CI $-\$61.33$ to $-\$10.60$, $P = 0.005$).

Discussion

In Canada, an important portion of the income of people who are homeless and have a mental illness comes from social assistance and disability benefits. Among the 2085 participants, 1220 reported relying predominantly on 1 of these 2 sources, but tended to have more than 1 source of income. Other sources of income were infrequently reported by participants in this study. This is consistent with previous

research on the sources of income of homeless people with mental illness in a large metropolitan city.¹³ The total sum of their monthly income was considerably below the low-income threshold derived from Statistics Canada's MBM (average $\$1484.73$ a month). One-quarter (26.4%) of the sample reported a total income that was more than $\$1000$ below the low-income threshold. Only 5% of the entire sample reported income above the low-income threshold. These figures suggest that they live in considerable poverty, despite obtaining government assistance. Additionally, the income reported by the participants is lower than that reported by stably housed people with disabilities receiving social assistance.²⁴ Participants who were employed tended to report more income and were more frequently above the low-income threshold.

The level of unemployment documented in our study, 96%, is in excess of prior estimates ranging from 80% to 90%.^{10–12} Additionally, the proportion of study participants

who expressed a desire for paid employment in the community was lower at all sites than a previous US estimate. The American National Coalition for the Homeless, in a 2009 report on homelessness and employment, indicated that 86% of a sample of 182 homeless men and women had expressed a desire to work.¹⁰ It may be hypothesized that this was due to higher levels of social supports available in Canada, compared with the United States. However, if this were the case, one would expect the proportion who expressed a desire to work to be directly related to the gap between income and the MBM; in cities where the gap between actual income and the MBM is greatest, we would expect to see the greatest desire for work because of a greater financial need. As a comparison of tables 1 and 2 shows, this is not the case: there was no association between the 2, and cities with smaller gaps did not have lower levels of desire for employment. The preference for employment in the community depended on something other than the local amounts of disability or social benefits, or the total income available to this group. Further qualitative research may be well suited to determining in which respect city population characteristics account for varying levels of the desire for work.

Previous research has suggested that accessing disability benefits may be problematic for homeless people with mental illness.⁸ Findings from our study suggest that disability benefits represent an important source of income for nearly one-half of respondents. Nonetheless, participants with psychotic illnesses had monthly incomes lower by about \$60 (roughly 10% of the average total median income) than those of participants with nonpsychotic illnesses, and income for both groups remains lower than that reported for stably housed people with disabilities receiving social assistance.²⁴ Dennis et al⁸ postulated that the reason access to disability benefits was harder for people with mental illness related to the transient nature of mental illness and the difficulty of establishing a diagnosis. While our study design does not allow a test of this hypothesis, we can support the finding that people with psychotic illnesses tended to receive less income from disability benefits, suggesting that they experienced barriers to accessing this type of social support, compared with participants with nonpsychotic illnesses.

In all sites, a majority (ranging from 64% in Toronto to 82% in Moncton) expressed a desire to work. Previous research has suggested that this population has trouble obtaining employment,²⁵ in part because of barriers inherent to living on the streets or in shelters.²⁶ In our study, 46% of participants stated that mental illness was the reason why they were unemployed. The fear of losing benefits, contrary to previous research in the United States,²⁷ accounts for less than 1%. Few studies exist to inform service providers about effective interventions to help homeless people with mental illness attain their employment goals. Evidence-based supported employment has been shown to be effective at helping stably housed people with mental illness gain competitive work internationally²⁸ and in Canadian

settings,²⁹ but fewer studies have looked at its effectiveness when offered to homeless people with mental illness.^{30–33} More research is needed to clarify how the effectiveness of such interventions can be maximized by pairing supported housing and supported employment services.

Several limitations should be noted. Coordinating the 5 data collection teams to assure a perfectly standardized collection process was difficult. This was especially relevant to the use of Other categories. Discrepancies in this regard may have influenced the way interviewers probed for additional information, especially information about illegal activities. Second, data on earnings were collected in detail only at the 3-month interview. As a consequence, we used data from the first month as a proxy for income at baseline. This is reasonable because clinical teams assigned to Housing First participants would have been unable, in such a short time, to affect any change in participants' benefits, or, in all likelihood, to help any get a job, and there was no change in the situation of treatment-as-usual participants. Third, conclusions are based on self-reported data, a method that could be problematic for identifying the source, but not necessarily the amount, of the income received from government support.²³ Administrative data would provide the most consistently accurate amounts of social assistance and disability benefits. However, data sharing restrictions across provinces make the pooling of such data at the participant level impossible, and participants frequently presented to interviewers documents (for example, social assistance assessment letters and direct-deposit bank stubs) to ensure the information they were providing was accurate. No available administrative data could be obtained on other types of income. Social desirability may have increased the number of people who expressed a desire for employment and decreased the number of people reporting income from illegal activities. Determining the exact influence of this effect is beyond the ability of the data. Finally, the sample of participants includes only homeless people with one of several specific mental illness diagnoses. Previous studies indicate that about 2% to 42% of homeless people have a psychotic illness,³⁴ therefore, our results might have been somewhat different had our study been carried out on a broader homeless population, who may only have received basic social assistance.

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

of interventions to support employment and facilitate access to benefits. Further research should determine how service providers may best help people attain their goals of employment.

Acknowledgements

This research has been made possible through a financial contribution from Health Canada via the Mental Health Commission of Canada (MHCC). The authors, writing for the At Home/Chez Soi investigators, thank Jayne Barker (2008–2011), PhD, Cameron Keller (2011–2012), and Catharine Hume (2012–present) MHCC At Home/Chez Soi National Project Leads, Paula Goering, PhD, the National Research Lead, the National Research Team, the 5 site research teams, the Site Coordinators, and the numerous service and housing providers, as well as people with lived experience, who have contributed to this project and the research. The views expressed herein solely represent those of the authors.

The authors have no disclaimers or conflicts of interest to declare.

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