Identifying Quality of Life Measures That Correlate With Quality of Family Relationships Measures in Homeless Persons With Mental Illness: Avenues for Exiting Homelessness?

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ABSTRACT

Family relationships are known to play a significant role in helping persons with mental health issues exit homelessness. This study aims to identify the independent quality of life factors that correlate with quality of family relationships. A cross-sectional design was used involving individuals enrolled in the At Home initiative for homeless persons with mental illness in five cities across Canada ($N = 2,255$). Linear regression analysis indicates that homeless persons' mental health, community integration, general health

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status, number of symptoms, and recovery are playing a role in a better quality of life in the family and therefore can help to exit homelessness.

Keywords: Homelessness, rehabilitation, mental disorders, family

RÉSUMÉ

Il est reconnu que de bonnes relations familiales aident les personnes ayant des troubles mentaux à sortir de l'itinérance. Les auteurs de cette étude visaient donc à définir les facteurs liés à la qualité de vie de ces personnes qui sont corrélés avec la qualité de leurs relations familiales. À partir de données portant sur des participants au programme Chez Soi (qui s'adresse aux personnes itinérantes atteintes de troubles mentaux) de cinq villes canadiennes (*N* = 2 255), les auteurs ont fait une analyse de régression linéaire. Il en ressort que l'intégration des personnes itinérantes dans la communauté, leur santé mentale, leur état de santé général, les symptômes qu'ils éprouvent et leur rétablissement sont significativement liés à la qualité de leur vie familiale, et qu'une meilleure qualité de vie familiale peut effectivement aider les personnes sans abri à sortir de l'itinérance.

Mots clés : Itinérance, réadaptation, troubles mentaux, famille

Homelessness is a major social problem around the world. It has been estimated that more than one billion individuals are homeless worldwide (Capdevila, 2005). Gaetz and Hub (2013) reported that more than 200,000 Canadians experience some level of homelessness every year and this number might very well be underestimated, given that many individuals who lose their home will go to live with family and friends and are, consequently, not included in emergency shelter data.

Compared to the early nineties, homeless adults today are reported to be older, in poorer health, have experienced longer periods of homelessness, are more likely to have schizophrenia, and have poorer social networks (Israel, Toro, & Ouellette, 2010). Single male adults between the ages of 25 and 55 represent nearly half of all individuals without stable housing in Canada, while youth homelessness represents up to 20% of the Canadian homeless population (Gaetz & Hub, 2013). Mental illness is also overrepresented in the homeless population compared to the general population (Hwang, 2001; Martens, 2000). For instance, up to 11% of individuals who are homeless have schizophrenia (Folsom & Jeste, 2002; Salkow & Fichter, 2003) compared to the worldwide prevalence of approximately 1% (Leucht, Burkard, Henderson, Maj, & Sartorius, 2007). Similarly, a recent meta-analysis (Fazel, Khosla, Doll, & Geddes, 2008) reported the pooled prevalence of psychotic illnesses among individuals who are homeless at nearly 13%, while in the general population the prevalence rate for all psychotic disorders, including schizophrenia, is roughly 3% (Perälä et al., 2007). Homeless individuals, including those with mental illnesses, also have a high prevalence of physical illnesses such as HIV infection, hepatitis, cardiovascular diseases, and diabetes (Hwang, 2001; Kushel, Perry, Bangsberg, Clark, & Moss, 2002) as well as higher levels of mortality (Hwang, Wilkins, Tjepkema, O'Campo, & Dunn, 2009). Finally, the level of substance use and abuse in homeless individuals is very high and represents a serious obstacle to treatment (Tompsett, Domoff, & Toro, 2013).

The physical and psychological illnesses and health risks associated with homelessness are now well known. A wide range of research publications such as those cited above paint a grim picture for this population.

However, far fewer studies focus on the health and quality of life of homeless persons. Hubley, Russell, Palepu, and Hwang (2014) have recently published the first review of the studies involving some measure of the subjective quality of life with a sample of individuals who are homeless. Although only a measure of health-related quality of life, many researchers used the SF-12 or SF-36 (Ware, Kosinski, & Keller, 1998) and reported lower scores on both the mental and physical subscales for individuals who are homeless compared with the general population (Kertesz et al., 2005; Larson, 2002; Riley et al., 2003). With a measure of satisfaction with life, which can be conceptualized as a general quality of life measure, individuals who are homeless seem to have scores suggesting low to moderate satisfaction with life (Camasso, 2003; Gilmer, Stefancic, Ettner, Manning, & Tsemberis, 2010).

While the quality of family relationships is an important dimension of subjective quality of life that can be a determinant factor helping individuals who are homeless get off the streets (Kurtz, Lindsey, Jarvis, & Nackerud, 2000; MacKnee & Mervyn, 2002; Mayock, Corr, & O'Sullivan, 2011; Milburn et al., 2009), very few researchers have studied this dimension specifically, particularly as it pertains to an adult population. A number of psychological theories have linked belongingness/relatedness to a variety of important outcomes including well-being, physical health, and cognitive functioning as well as to a sense of purpose in life (Baumeister & Leary, 1995; Deci & Ryan, 2000). Therefore, for adults experiencing homelessness, it can be argued that having a sense of belonging to a social group such as one's family could contribute to successfully exiting homelessness.

The present study seeks to identify the specific factors associated with subjective quality of life that correlate with quality family relationships for homeless persons with mental illness in Canada. Knowledge of existing correlates will contribute to our understanding of homelessness and will inform the development of clinical practices aimed at enhancing the quality of life and the quality of family relationships for the individuals experiencing homelessness and mental illness.

Available baseline measures describing the quality of family relationships and independent measures of health-related quality of life were analyzed. These data represented the profiles of homeless persons with mental illness who were participants in the At Home/Chez Soi (AH/CS) project; a Canada-wide Pathways to Housing/Housing First (HF) program (Tsemberis, 1999) and who were also enrolled in a randomized control trial to measure the effectiveness of this innovative approach to addressing homelessness in Canada.

Pathways to Housing HF programs (Tsemberis, 1999) represent a departure from traditional Treatment First approaches where individuals are required to progress through a series of steps from emergency shelters to traditional housing before they are granted access to supportive housing, In contrast, Housing First programs offer supportive health and social services as well as immediate access to independent permanent housing regardless of treatment compliance and not contingent on sobriety (Stefancic & Tsemberis, 2007). The present study gathered baseline data from homeless persons enrolled in the At Home/Chez Soi initiative who were also participants in an extensive research trial of this Canadian Housing First program.

METHOD

Procedure

Data were gathered from the baseline assessment measures of homeless persons from across Canada participating in the At Home/Chez Soi (AH/CS) initiative and in a large, 5-site randomized controlled trial testing the efficacy of this Canadian Pathways to Housing HF program (Tsemberis, 1999). Participants in the AH/CS project were required to meet the following eligibility criteria: 18 years or older (the legal age in Canada), demonstrate absolute homelessness or precarious housing, and demonstrate that they experience a severe mental disorder with or without a substance use problem (Goering et al., 2011). Participants could not take part in the project if they were already receiving assertive community treatment (ACT) or intensive case management (ICM). Participants were also stratified as "high needs" or "moderate needs" based on the level of mental health services they required. A written informed consent was obtained from the participant after the procedure(s) of the randomized controlled trial and the AH/CS project had been fully explained. Further details of the protocols and procedures of this trial are described extensively elsewhere (Goering et al., 2011).

Participants

Table 1 presents the socio-demographic data describing the study sample. Participants were recruited from five major Canadian cities: Toronto (Ontario; 26%, $n = 575$), Vancouver (BC; 22%, $n = 497$), Montreal (Quebec; 21%, $n = 468$), Winnipeg (Manitoba; 23%, $n = 513$), and Moncton (New Brunswick; 9%, $n = 201$). A total of 2,255 individuals were interviewed to participate in the research trial. More than a third (41%, $n = 928$) of the participants were classified as "high needs" by the research team while more than half (59%, $n = 1,326$) were classified as "moderate needs."

The average age of the baseline sample was 40.90 ± 11.22 (min. = 18, max. = 74) and 68% ($n = 1,524$) were men. The majority of participants were of Canadian origin (82%, $n = 1,836$). In terms of ethnicity, 49% were Caucasian, 22% ($n = 485$) were Aboriginal, and 11% ($n = 249$) were African American. English was the first language for 61% ($n = 1,377$) of participants and French was the first language for 19% ($n = 424$).

A total of 56% ($n = 1,257$) of participants had not completed high school. The majority (71%, $n = 1,587$) were single/never married and 26% ($n = 584$) were separated, divorced, or widowed. The large majority of participants (93%, $n = 2,090$) were unemployed. Mental illness was the most often cited reason for not being currently employed (42%, $n = 946$) followed by physical illness (12%, $n = 266$) and by a mix of mental and physical illness (14%, $n = 311$). Welfare was the main source of income for about half the sample (48%, $n = 1,092$) and a third were receiving some disability payments (35%, $n = 791$).

Measures

Quality of the relationships with family. The family subscale from the Quality of Life Index (Lançon et al., 2000; Lehman, 1996) was used to assess the quality of the relationships participants have with their families. This subscale is composed of four items beginning with How do you feel about:

1. your family in general?
2. how often do you have contact with your family?

Table 1

Socio-demographic description of participants.

Sample size	$n = 2,255$
City	
Toronto	24%, $n = 575$
Vancouver	22%, $n = 497$
Montreal	21%, $n = 468$
Winnipeg	23%, $n = 513$
Moncton	9%, $n = 201$
High needs	41%, $n = 928$
Age	40.90 ± 11.22
Males	68%, $n = 656$
Canadian	82%, $n = 1,836$
Ethnicity	
Caucasian	49%, $n = 485$
Aboriginal	22%, $n = 485$
African American	11%, $n = 249$
First language	
English	61%, $n = 1,377$
French	19%, $n = 424$
High school not completed	56%, $n = 1,257$
Marital status	
single/never married	71%, $n = 1,587$
separated, divorced or widowed	26%, $n = 584$
Unemployed	93%, $n = 2,090$
Reason for being unemployed	
mental illness	42%, $n = 946$
physical illness	12%, $n = 266$
mix of mental and physical illness	14%, $n = 311$
Source of income	
welfare	48%, $n = 1,092$
disability payments	35%, $n = 791$

3. the way you and your family act toward each other? and

4. the way things are in general between you and your family?

These items are answered on a 7-point Likert scale ranging from (1) "terrible" to (7) "delighted." The index of internal consistency was high with a Cronbach's alpha of .87. A derived Quality of Life—Family Subscale variable was created by averaging the scores obtained on the four items and could vary from 1 to 7, with 7 indicating a better relationship with family.

Psychological and physical variables. The data included for analysis in the current study represent baseline measures generated through the Housing First/Chez Soi program and serve as indicators for the psychological and physical adjustment of the homeless population interviewed.

First, participants completed the Colorado Symptom Index (CSI; Boothroyd & Chen, 2008; Conrad et al., 2001) which is a 14-item measure designed to assess the presence and frequency of mental illness symptoms in individuals who are homeless ($\alpha = .88$). The total score was obtained from the sum of the 14 items. A higher score indicates a higher level of symptoms.

Second, they completed the Community Integration Scale (CIS) which is a measure assessing the physical integration (e.g., "I participated in a community event," 7 items, $\alpha = .61$) and the psychological integration with a community (e.g., "I interact with the people who live near me," 4 items, $\alpha = .75$). Total scores were obtained from the sum of the items. The physical integration scale could range from 0 to 7 and the psychological integration scale could range from 4 to 20, with higher scores indicating better integration.

Third, the interviewers completed the four subscales of Multnomah Community Ability Scale (MCAS; Barker, Barron, McFarland, & Bigelow, 1994), Health (5 items, $\alpha = .39$), Adaptation (3 items, $\alpha = .61$), Social skills (5 items, $\alpha = .76$), Behavior (4 items, $\alpha = .58$)). The total score could range from 17 and 85 with higher scores indicating higher functioning.

Fourth, participants completed the Global Assessment of Individual Need—Substance Problem Scale (GAIN-SPS; 5 items, $\alpha = .89$; Dennis, Chan, & Funk, 2006). This measure could vary from 1 to 5, with higher scores indicating higher levels of substance use in the past year (e.g., How many days in the past 30 have you experienced alcohol problems?).

Fifth, participants completed the Recovery Assessment Scale (RAS; Corrigan, Salzer, Ralph, Sangster, & Keck, 2004), which is a scale of 22 items assessing personal confidence and hope, willingness to ask for help, goal and success orientation, reliance on others, and an independence from symptoms ($\alpha = .90$). The total score could range from 22 to 110 with higher scores indicating better recovery assessment.

Sixth, participants completed the SF-12 (Larson, 2002; Ware, Kosinski, & Keller, 1996), which is composed of 12 items forming two subscales: aggregated physical health (6 items, $\alpha = .79$) and aggregated psychological health (6 items, $\alpha = .78$). Higher scores on the SF-12 physical and the SF-12 psychological subscales indicate better physical and psychological health, respectively.

Finally, participants completed the EQ5D (Brooks, 1996; EuroQol, 1990), a measure to assess health status (5 items $\alpha = .67$; e.g., "I have no/some problems /am unable to perform my usual activities"). Higher scores on the EQ5D measure indicate better health status.

Data Analysis

The present study used a cross-sectional design using the baseline data gathered from the At Home/Chez Soi program summarized above. All statistical analyses were conducted with IBM SPSS Statistics, version 20 (IBM Corporation, Chicago, IL).

A linear regression analysis was conducted to identify the correlates between the above measures and participants' quality of the relationships with their family (i.e., the Quality of Life Index—Family Subscale,

which was the dependent variable). Independent variables were entered in the analysis in two blocks. First, block 1 contained control variables, specifically age, gender, and ethnicity. Block 1 variables were "forced entered" in the regression analysis. The second block of independent variables were then included in the regression analysis following the stepwise method. Thus, only the variables significantly related to the Quality of Life Index—Family Subscale were included in the final model (Step 3). Independent variables were the CSI measure, the physical and psychological subscales of the CIS measure, the total MCAS measure, the past-year GAIN-SPS in substance use symptoms, the RAS total score, the SF-12 physical and mental health subscales and finally the EQ5D index.

RESULTS

Table 2 shows the descriptive statistics of the four items and the total score of the Quality of Life Index; Table 3 shows the results of the linear regression analysis on the Quality of Life Index—Family Subscale. The final model (r^2) explains 21% of the variance of the dependant variable. This means that 21% of the variations in quality of life in the family are due to the variables in the model and 79% to variables not included in this model. According to Cohen (1988), our data seem to fit strongly with the variations in the Quality of Life subscale. The control variables (age, gender, and ethnicity) were found to be unrelated to the Quality of Life Index—Family Subscale (age) or weakly related (gender and ethnicity). Specifically, male participants report that they have better relationships with their family than female participants. Furthermore, African-American (3.92 ± 1.61) reported the best relationships with their family, followed by Asians (3.66 ± 1.76), Aboriginals (3.62 ± 1.58), and Caucasians (3.25 ± 1.61).

In the final model, five psychosocial variables were found to be significantly related to the quality of the relationships with family of the participants. First, the CSI score suggested that individuals who are homeless, and who report experiencing fewer and less frequent mental illness symptoms, also report a better quality of their relationships with family ($B = -.16$, $p = .001$). Second, the RAS scale indicated that higher personal confidence and hope, willingness to ask for help, goal and success orientation, reliance on others, and independence from symptoms were related to increased quality of the relationships participants reported to have with their family. ($B = .21$, $p = .001$). Third, the Sf-12 suggested that the better the participants' mental health, the better the relationships with their family ($B = .13$, $p = .001$). Fourth, the EQ-5D-Index score

Table 2

Results of the Paired-Sample *t*-Tests Conducted on the Entire Sample

	Mean	Standard Deviation
Q1. How do you feel about your family in general?	3.74	1.92
Q2. How do you feel about how often you have contact with your family?	3.25	1.87
Q3. How do you feel about the way you and your family act toward each other?	3.45	1.95
Q4. How do you feel about the way things are in general between you and your family?	3.35	1.89
Quality of life—Family subscale	3.44	1.62

Note: Item and derived variables could vary from 1 to 7, with 7 indicating better relationship with family.

Table 3

Results of the Linear Regression Analysis on the Quality of Life Index—Family Subscale (DV) at Baseline

	B	SE B	Beta
Step 1			
Constant	4.28	.20	
Age	-.005	.004	-.03
Gender	-.29	.08	-.09***
Ethnicity	-.09	.03	-.07**
Step 2			
Constant	6.37	.23	
Age	-.01	.003	-.06**
Gender	-.22	.07	-.07**
Ethnicity	-.10	.03	-.08**
CSI Total score, Baseline	-.05	.003	-.36***
Step 3			
Constant	3.26	.37	
Age	-.01	.003	-.04
Gender	-.23	.07	-.07**
Ethnicity	-.09	.03	-.07**
CSI Total score, Baseline	-.03	.003	-.26***
RAS total, Baseline	.03	.003	.25***
Step 4			
Constant	2.74	.38	
Age	-.01	.003	-.04
Gender	-.20	.07	-.06**
Ethnicity	-.08	.03	-.06**
CSI Total score, Baseline	-.03	.004	-.19***
RAS total, Baseline	.03	.003	.21***
SF-12, mental health, Baseline	.02	.004	.13***
Step 5			
Constant	2.24	.41	
Age	-.01	.003	-.03
Gender	-.18	.07	-.06**
Ethnicity	-.08	.03	-..06**
CSI Total score, Baseline	-.02	.004	-.16***
RAS total, Baseline	.02	.003	.20***
SF-12, mental health, Baseline	.02	.004	.12***
EQ5D-INdex, Baseline	.59	.19	.08**

	B	SE B	Beta
Table 3, continued			
Step 6			
Constant	2.22	.41	
Age	-.01	.003	-.03
Gender	-.19	.07	-.06**
Ethnicity	-.08	.03	-.06**
CSI Total score, Baseline	-.02	.004	-.16***
RAS total, Baseline	.03	.003	.21***
SF-12, mental health, Baseline	.02	.004	.12***
EQ5D-Index, Baseline	.60	.18	.08***
CIS physical subscale, Baseline	-.05	.02	-.05*

Note: $R^2 = 0.0$ for Step 1; $\Delta R^2 = 0.1$ for Step 2 (ps < .001); $\Delta R^2 = .19$ for Step 3 (ps < .001); $\Delta R^2 = .20$ for Step 4 (ps < .001); $\Delta R^2 = .21$ for Step 5 (ps < .001); $\Delta R^2 = .21$ for Step 6 (ps < .05);
* $p < .05$,
** $p < .01$,
*** $p < .001$

showed that better health status was significantly related to the quality of the relationships with family ($B = .08$, $p = .001$). Thus once again, the CIS physical subscale indicated that the less homeless individuals are physically integrated in the community (attending a movie, participating in outside sports or recreation, participating in community events), the better the quality of the relationships with their family ($B = -.05$, $p = .02$).

DISCUSSION

The purpose of the present study was to understand the correlates of the quality of the relationships that homeless individuals with mental health issues share with their family. This study used the baseline data from a large, multi-site, Canadian randomized controlled trial (Goering et al., 2011). Overall, the results suggest that a number of psychological factors such as mental health, community integration, and general health status as well as symptoms and recovery assessment measures are related to the quality of the relationships this population shares with their family.

In this study, it was decided to test these relations using the quality of relationships as a result of variations in other factors named before. The relationships in the family are surely more complex and dynamic than this simple directional model. In our previous qualitative study (Bonin et al., 2012), it appeared that the family could also be aggressive or put too much control on the homeless person with mental disorders. On the other hand, we found mental problems in some families where the help was bidirectional, especially between two homeless sisters. Also, Freesan (2008) described a circular model where the caregivers' burden is higher when the person with mental disorders presented with more problems, and showed this burden could cause or exacerbate mental problems and violence from their loved one. Pescosolido (1992) created

a model where the ties between these variables were bidirectional. The present analysis was done this way in order to identify factors associated with a better life for families and homeless persons.

It was not expected that the less homeless individuals are physically integrated in the community, the better the quality of the relationships with their family would be. However, (beta = -0,05), this tie is the weakest of the model and the other factors are really more related to relationships in the family. Results are similar to a Prince and Gerber study (2005), which highlighted the importance of the perceptions of social support that may be attributable, in part, to ACT services in the relationship between physical integration and subjective well-being. Emmerink and Roeg (2015) indicated that SQOL is negatively influenced by symptomatology (depressive symptoms) and social problems (living conditions), while having a partner, a good friend, and an overall lower problem severity positively influenced SQOL. But they concluded that only limited knowledge is currently available on the determinants of SQOL for people with (severe) mental health problems. Ruggeri and colleagues (2002) also said that the difference in results between studies might be explained by differences in the type of problems that clients experience in other life areas that have not been thoroughly examined.

Our social need to be connected to others is highly linked with our physical and psychological well-being (Deci & Ryan, 2000). Thus, the quality of the relationships homeless persons have with their families is an important factor to consider when assessing quality of life and exiting homelessness. On the one hand, family is often seen as a precipitating factor towards homelessness. Also, family violence is a common antecedent for institutional experiences that are highly prevalent among homeless persons. Among homeless youth and adults, there are high rates of involvement with the child welfare system or out-of-home placement during childhood. Milburn et al. (2009), found that adolescents who left home because of family violence have a 67% lower probability of exiting homelessness.

The quality of the relationships with one's family is an important topic in homeless youth research regarding exiting homeless. Families are known to help youth exit homelessness and gain stable housing (Kurtz et al., 2000; Mayock et al., 2011; Milburn et al., 2009). Using self-reports from 17 participants who successfully exited from the street, MacKnee and Mervyn, (2002) identified the following themes: (1) establishing supportive relationships, (2) discovering some measure of self-esteem, (3) accepting personal responsibility, (4) accomplishing mainstream lifestyle goals, and (5) changing perceptions. According to Milburn et al. (2009), engagement with pro-social peers, maternal social support, and continued school attendance all promoted exiting behaviours. Also, an increase in maternal support over time was associated with an increase in the odds of exiting homelessness at two years. In other homeless populations, relationships with families have been shown to improve after individuals secured stable housing (Blid & Gerdner, 2006; Gilmer et al., 2010).

IMPLICATION FOR CLINICAL PRACTICE

The results of this analysis suggest that the quality of family relationships reported by homeless persons with mental illness is positively correlated with their ratings pertaining to the following factors: personal confidence and hope, willingness to ask for help, having goals and being success-oriented, having the ability to rely on others, and having fewer symptoms of mental illness, better mental health, and better general

health. These results have important implications for clinical practice. For instance, families participating in a qualitative study (Bonin et al., 2013) reported the desire to help homeless family members. However, these families encountered important challenges including the presence of mental illness symptoms and/or substance use as well as the homeless relative's unwillingness to accept help. Conversely, homeless relatives who asked for help were perceived as unmotivated to help themselves or were reported to have requested help when it was too late, after family ties were already broken. Factors such as these were found to contribute to family disengagement and estrangement of the homeless relative. Taken together, the findings above serve to guide interventions that could conceivably be integrated within existing Housing First programs (Tsemberis, 1999; Tsemberis et al., 2003). In this way, efforts to sustain family involvement and to strengthen the quality of family relationships for homeless persons could play an important role in the complex process of achieving a stable exit from homelessness. The results of this analysis call for research focused on improving the quality of family relationships for homeless persons by offering broad-based interventions such as fostering personal confidence and hope, encouraging the willingness to ask for help early on, providing assistance with symptom management, and improving the general health of homeless persons with mental illness.

Strengths and Limitations

The data used in this study were gathered from the baseline data generated within a large multi-site Canadian randomized controlled trial of the CS/AH program. Although very informative regarding the correlates of the quality of the relationships with family of homeless individuals with mental health issues, it would be important to study the pattern of change in the relationships between homeless persons and their families over time. Future research would benefit from family-centred longitudinal design with multiple measurement points. Furthermore, it would be interesting for future research to gather baseline data regarding the existence of viable family connections, which, unfortunately, was not available in the present study. Similarly, it would be important for future research to replicate the present findings with other measures of quality of family relationships.

CONCLUSION

The present study identified the health factors that correlate with the quality of family relationships in a cohort of homeless persons with a mental illness. Many variables, including recovery assessment, mental health, community integration and symptoms were significantly correlated with the quality of family relationships. These results can serve to inform potential interventions with this population. Future research is required in order to better understand how existing relationships between homeless persons and their families can be strengthened and the potential impact over time that improved family relationships can have on helping relatives with mental illness exit homelessness.

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