A Mixed Methods Analysis of Community Integration Among Vulnerably Housed and Homeless Individuals

John Ecker

Thesis submitted to the

Faculty of Graduate and Postdoctoral Studies

in partial fulfillment of the requirements

for the Doctorate in Philosophy degree in Experimental Psychology

School of Psychology

Faculty of Social Sciences

University of Ottawa

ABSTRACT

This thesis presents four distinct studies of psychological and social integration of homeless and vulnerably housed individuals. The first study presents a predictive model of psychological integration, defined as a sense of belonging and membership to one's community. The second study presents a predictive model of social integration, defined as how an individual engages with others in the community. The third study presents a mixed methods comparative analysis of homeless and vulnerably housed individuals with "high" and "low" levels of psychological and social integration. The fourth study presents a reflexive analysis of conducting interviews with homeless and vulnerably housed individuals.

Data for this research comes from a two-year longitudinal study conducted in Ottawa, Ontario. Participants were men and women, over the age of 18 (Baseline: N = 397; Follow-up 1: N = 341; Follow-up 2: N = 320) who were either homeless or vulnerably housed at the study's outset. Quantitative data analyses occurred at Follow-up 1 and 2 and utilized hierarchical multiple regression. Qualitative data analyses used a general inductive approach utilizing a First Cycle and Second Cycle coding method (Saldana, 2009).

Social support was a significant predictor of both psychological integration and social integration. Individuals with high levels of social support had high levels of psychological and social integration. Social support proved to be the only predictor to be significantly associated with social integration at both Follow-up 1 and 2. Psychological integration was positively associated with several variables at Follow-up 1 and 2: increased age, living in high quality housing, and residing in a neighbourhood that is

perceived as having a positive impact. The mixed methods analysis uncovered several salient themes that affected psychological and social integration, including substance use in one's housing and neighbourhood, neighbourhood safety and location, and housing quality. The reflexive component of the thesis highlighted the importance of location when conducting interviews and the power dynamics of the interview process. The results are discussed in terms of implications for service delivery and policy.

ACKNOWLEDGMENTS

I would like to give as many thanks as possible to my advisor, Dr. Tim Aubry. His unwavering support throughout my graduate studies was essential for the completion of this thesis. I have learned so much from him over these past six years and will hold close the values of community-based research he has imparted on me.

I thank my committee members, Dr. Susan Farrell, Dr. Fran Klodawsky, and Dr. John Sylvestre, for their timely and thoughtful feedback. You have all been a pleasure to work with. I would also like to thank my external committee member, Dr. Philip Yanos, for providing helpful commentary during my defence.

This thesis would not have been possible without the hard work and determination of the various members of the HHiT team. In particular, the coordinator for the Ottawa site, Liz Hay, demonstrated that persistence pays off. To the interviewers, particularly Lesley Fleming, Elyse Sévigny, and Val Hum, your dedication was unparalleled. And to all of the work-study students who were involved, particularly Julia Mooney and Pascale Belzile, I thank you for your hard work.

Thank you to the University of Ottawa, the Ministry of Training, Colleges, and Universities, and the Social Sciences and Humanities Research Council for their generous funding packages throughout my graduate studies.

To all my family and friends, thank you for the love and encouragement you have provided me over the years. To my family, thank you for the tremendous amount of support you have given me. To my friends, thank you for nights at Babylon, hours on the tennis court, and red, red, red, red wine.

Last and most importantly, I thank the participants of the HHiT study. You took the time to share your stories and provided us with a wealth of knowledge. I thank you for inviting me into your homes or agreeing to meet me at 34 Stewart. These experiences shaped the development of my skills as a community-based researcher. I hope the results from this thesis serve to impact the lives of all the individuals we surveyed, through improved service planning and policy.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Structure and Scope of Thesis

The face of Canada's housing policy has changed dramatically across a relatively short period of time (Gaetz, 2010). Having once had a strong commitment on the part of the federal government to creating affordable housing for low-income individuals, Canada now has no national housing strategy. This abrupt change in federal policy has caused a decrease in the stock of affordable and stable housing options for low-income individuals, which has resulted in a growing number of individuals who are homeless or at-risk of becoming homeless (Gaetz, 2010). This is troubling, as homelessness has a well-established association with several negative outcomes, including poorer mental and physical health (Hwang, 2001).

The circumstances for those low-income or homeless individuals who are able to obtain housing may not necessarily improve, as much of the housing that is available to them is in disrepair or in poor quality. Individuals living in these housing circumstances can be defined as "vulnerably housed". Vulnerable housing in this thesis is based on the criteria developed by the Canadian Mortgage and Housing Corporation (CMHC). It refers to individuals living in housing that that falls below adequacy, affordability, and suitability standards (CMHC, 2010). This involves having housing that requires major repairs (adequacy), paying more than 30% of one's income on housing (affordability), and not having enough bedrooms for the size and makeup of one's household (suitability).[1]

[1] It should be noted that the CMHC excludes 15-29 year olds attending school full-time in this core housing need definition, as they are considered to be in a "transitional stage" of their lives.

Since we spend more time in our homes than any other environment (Evans, Chan, Wells, & Saltzman, 2000) and housing is the single largest expense in the budgets of most individuals (Quigley & Raphael, 2004), the effects of having housing problems are an important issue to consider. Poor housing quality contributes to a variety of negative health outcomes, including respiratory diseases and psychological dysfunction (Bashir, 2002). When housing standards are improved, research has demonstrated that this can lead to decreases in psychological distress (Evans et al., 2000; Wells & Harris, 2007) and improvements in psychological health (Evans et al., 2000).

The neighbourhood location of low-income housing stock has also been established as a salient factor in the lives of low-income residents. Fauth, Leventhal, and Brooks-Gunn (2004) found that adults who had moved from high-poverty to low-poverty neighbourhoods were less likely to perceive their neighbourhoods as a dangerous place to be and had fewer diagnosed health problems than adults who remained in the low-poverty neighbourhood. There were also improvements in employment rates among those who moved to low-poverty neighbourhoods.

Compounding the effects of housing and neighbourhood quality is the elevated risk faced by low-income individuals of losing their housing. There have been several studies that have assessed the risk factors for becoming homeless. These studies have found that a return to homelessness from being housed is associated with one's gender and work history (Piliavin, Wright, Mare, & Westerfelt, 1996), and socioeconomic difficulty, mental health problems, and addiction problems (Shelton, Taylor, Bonner, &

van den Bree, 2009). It is also known that homelessness and housing are fluid states for low-income individuals.

What has been less substantiated in the empirical literature is how individuals living in vulnerable housing situations experience community. Community integration extends beyond the physical placement of individuals in their communities and considers how individuals participate and socialize within these communities (Wong & Solomon, 2002). For individuals with insecure housing, community integration can be difficult since they may move through several neighbourhood locations and social connections may be short-lived. The question that arises from this discussion is what facilitates or hinders an attachment to one's community for individuals in a state of housing flux and whose housing and neighbourhood quality may be of a diminished state?

This thesis examines the community integration of individuals who are homeless and vulnerably housed using data from the *Health and Housing in Transition (HHiT)*. The HHiT study is a multi-site (Ottawa, Toronto, and Vancouver), longitudinal project following approximately 1200 homeless and vulnerably housed individuals. The current research focuses exclusively on the Ottawa data, which was conducted by researchers at the Centre for Research on Educational and Community Services at the University of Ottawa and Carleton University. The sample includes men and women over the age of 18 who were recruited from homeless shelters, meal programs, and rooming houses or similar type of marginal housing. Three hundred and ninety-seven individuals were included in the final sample.

The thesis is presented as a series of four manuscripts. The first manuscript is quantitative and examines predictors of psychological integration. Psychological integration is described as one's psychological sense of community, in which an individual feels a belonging and connection to their community (McMillan & Chavis, 1984; Sarason, 1974; Wong & Solomon, 2002). The second manuscript is also quantitative and examines predictors of social integration. Social integration is defined as one's interactions with members of the community and the size, diversity, and positive support of one's social network (Unger & Wandersman, 1985; Wong & Solomon, 2002). The third manuscript is a mixed methods analysis and attempts to extend the findings from the quantitative studies as to what is related to psychological and social integration. The mixed methods analysis is also intended to identify any other contributing factors to community integration that the quantitative studies did not examine. The fourth manuscript is a reflexive piece on the impact of physical locations on the interview process.

Contribution to the Literature

Although community integration of marginalized populations is an important benchmark within the foundation of community psychology, there remains a gap in the knowledge of the community experiences of individuals who are vulnerably housed or in housing transitions. This is an important group to study, as it is not known whether these individuals form attachments to their neighbourhoods and communities in the same way that other community residents do. As well, many individuals in these housing circumstances may have mental and physical health issues and/or substance abuse problems that could compromise their integration into the community. Further, even if stable housing is acquired, individuals with histories of homelessness and mental health issues can feel socially isolated and lonely upon being housed (Yanos, Barrow, & Tsemberis, 2004).

Due to the influence of deinstitutionalization and the push towards community care, the majority of community integration studies have focused on individuals with serious and persistent mental illness. The residential circumstances of these individuals vary, but often include congregate housing with live-in support or independent supported housing. Although these studies have shed light on the benefits of community integration, there have been two notable omissions within the literature: 1) the aforementioned neglect of vulnerably housed individuals not living in housing programs; and 2) the neighbourhood, housing, and individual factors that contribute to successful community integration (Wong & Solomon, 2002).

The objective of the current study is to determine which factors predict community integration for individuals who have experienced housing transitions,

including those that are vulnerably housed or homeless. Two specific elements of community integration, psychological and social integration, will be the variables on which the research will focus. It was decided to not include a measure of physical integration, as community integration has often been narrowly defined in terms of just the physical presence of individuals within the community (Aubry & Myner, 1996). By extending the definition to how individuals experience community and interact with others and develop relationships, a richer and more meaningful analysis will occur. The predictive model will help to determiner factors associated with community integration, which will help to inform program and policy initiatives aimed at vulnerably housed individuals.

The set of variables predicting these two types of integration will address the research gap identified by Wong and Solomon (2002) and include neighbourhood, housing, and individual variables. By incorporating variables that extend beyond the individual level, this project stays true to the community psychology value of approaching social issues from an ecological approach (Brofenbrenner, 1979). Incorporating neighbourhood level variables that extend beyond participation in neighbourhood activities also provide new insights, as these variables have been largely ignored (Farrell, Aubry, & Coloumbe, 2004).

It was decided to have a set of variables dedicated solely to housing, such as housing quality, length of stay, and housing type, as these variables have previously been shown to have an influence on a variety of outcomes, including community integration (e.g., Nemiroff, Aubry, & Klodawsky, 2011). As well, since home ownership

is a possibility for a slim minority of vulnerably housed individuals, the experiences of a group of predominantly renters will provide new insights.

To further justify the inclusion of housing variables, dramatic changes have occurred in the housing market in which a decline in affordable housing stock and rising costs of housing have reduced access to decent housing for all people with limited incomes (Gaetz, 2010). With limited support from governmental housing policies, wait lists for affordable housing far outreach the limited supply. The acquisition of housing does not necessarily guarantee improved functioning and well-being though, as low-income housing units can often be in disrepair and individuals may not be given choice in the location of their housing. As well, the financial stressors involved with keeping the housing arrangement has been rated as one of the greatest barriers to successful community integration by people with severe and persistent mental illness (Mallik, Reeves, & Dellario, 1998).

The community sample being used within the study is a unique contribution, as the majority of studies investigating psychological and social integration have sampled from housing programs for people with severe and persistent mental illness (e.g. Gulcur, Tsemberis, Stefancic & Greenwood, 2007; Wong & Solomon, 2002; Yanos, Barrow, & Tsemberis, 2004; Yanos, Felton, Tsemberis & Frye, 2007). There has been research that has looked at psychological sense of community among low-income individuals, but these studies have focused solely on psychological integration and not on social integration (e.g. Brodsky, O'Campo & Aronson, 1999). Sampling people in vulnerable housing is a further unique contribution to the literature, as there has been a paucity of research on this specific population.

Methodologically, the use of mixed methods within this study will provide a comprehensive picture of the community integration experiences of vulnerably housed individuals. The use of scientifically validated subjective measures and objective neighbourhood-level indicators will allow for a rich investigation as to how internal and external factors contribute to community integration. The qualitative analysis will serve to both validate quantitative findings and provide insights not captured by the survey measures. In once again keeping with community psychology values, including a qualitative component will allow for the voices of vulnerably housed people to be heard and provide a significant contribution to the implications of this research.

Finally, the use of longitudinal data within this project will help contribute to a growing body of research extending beyond cross-sectional accounts of the lives of the homeless and vulnerably housed. The longitudinal data is especially important as housing is often a fluid state, with individuals entering in and out of homelessness and vulnerable housing. In addition, only a small number of longitudinal studies on homelessness and housing have been conducted in Canada. By providing this Canadian context, it will strengthen the policy applications of this research.

CHAPTER 1

Defining Community Integration

Community integration is a concept that extends beyond its literal definition of integrating one's self into one's community. The term is multi-faceted and to fully understand its meaning, it is helpful to consider what is meant by "community" and "integration" separately. Therefore, the following sections will provide individualized definitions of "community" and "integration", before moving on to a comprehensive discussion on community integration as a whole.

Community

Sarason (1974), in his work on psychological sense of community, defined community as "a readily available, mutually supportive network of relationships on which one could depend" (p.1). These networks can be developed in several different environments based upon locality or organization (Dalton, Elias, & Wandersman, 2001). The traditional concept of community is based upon locality. It includes one's physical residence in neighbourhoods, towns, or cities. These relationships are based upon proximity and not necessarily choice. The second, and broader, type of community is relational in nature. This includes interpersonal relationships that are not limited by geographic location, such as religious groups, student clubs, workplaces, or Internet discussion groups. Although different levels of community exist, much of the literature on community integration defines community in terms of its locality. Involvement in the more relational types of community has been conceptualized more as a form of social support. This thesis will generally conceptualize community in terms of locality.

It was thought that a strong sense of community, regardless of community type, could counteract the alienation and loneliness that resulted from the increasing individualism found in Western societies (Sarason, 1974). This premise is particularly important in the field of community psychology, as the discipline arose out of concerns of the social disintegration that occurred after World War II (Wiesenfeld, 1996). It was thought the best environment for promoting individual and social change was the community.

What is perhaps limiting in this definition is its rootedness in Westernized values. Wiesenfeld (1996) challenges this Westernized influence, particularly the homogeneity found in many of the definitions of community. She writes that definitions of community imply a notion of "*we*" - a group of individuals who are distinguishable from "*others*". This eliminates any diversity that may exist among the community members. Wiesenfeld (1996) argues that respecting this diversity would allow for the recognition that a person can temporarily set him or herself apart from the community, such as being a student, an employee, a family member, etc.

Wong, Sands, and Solomon (2010) address Wiesenfeld's criticism by stepping beyond theoretical conceptualization and taking the discussion to a more applied level. The authors purposefully sampled individuals with memberships in relational types of community, opposed to locality based. They sampled marginalized members of society, including individuals with psychiatric disabilities from low-status minority groups (e.g., ethnic/racial and sexual minorities and individuals living in congregate or supported housing). All those sampled were involved in some form of support group for individuals with psychiatric disabilities. Participants most frequently mentioned four types of

community based upon: a) cultural identity; b) shared mental or physical illness experience; c) shared faith; and d) neighbourhood.

Common themes to emerge among the four classifications included togetherness and community acceptance. Togetherness included feelings of membership, a way to make a contribution, and a means to reciprocity. Community acceptance included certain settings where the participants felt comfortable, a place of worship for example. Coupled with community acceptance were feelings of community rejection. Some participants noted difficulties in finding community outside of the "psychiatric community" or similar group. Wong and her colleagues conclude that the recognition of the multiple identities that individuals with psychiatric disabilities possess is critical to their conceptualization of community and to their community integration.

Integration

It is also important to define what is meant by "integration". Flynn and Aubry (1999) trace its roots to Normalization and Social Role Valorization (SRV) theories and specifically, work with individuals with developmental disabilities. Though integration of individuals with disabling conditions has long been a social policy goal, its definition has lacked clarity. Wolfensberger and Thomas (1983), two of the foremost experts on integration, define it as "the open participation of people with other people in culturally normative amounts, settings, and activities" (p. 18). In their conceptualization of integration, Wolfensberger and Thomas (1983) place special emphasis on the difference between inclusion and integration. They argue that inclusion does not involve the critical elements of integration, which includes valued participation with valued people in valued activities that take place in valued settings (Wolfensberger,

1998a). They also state that integration involves voluntary participation in valued activities, opposed to inclusion which may involve involuntary participation (Wolfensberger, 1998b).

Community Integration

Community integration therefore involves valued and voluntary participation in neighbourhood and organizational settings. As previously mentioned, it also involves multiple components. Beginning with Normalization and SRV theory, Wolfensberger (1972) states that community integration involves two parts: physical and social integration. Physical integration includes the literal physical placement of an individual within the community and the setting in which they reside. This includes involvement in "ordinary" settings, activities, and contexts within the presence of "ordinary", non-devalued individuals (Wolfensberger & Thomas, 1989). Physical integration serves as a precursor to social integration; however, it was thought to be of far less importance in the goal toward full integration.

The more salient piece of community integration is social integration. Social integration involves the interaction of devalued individuals with valued individuals in the community. These interactions are culturally normative and take place in valued settings and context (Wolfensberger & Thomas, 1989). Devalued people would therefore be able to work, be educated, and engage in social activities with their valued peers (Wolfensberger, 1998a). For social integration to occur there needs to be efforts made by the devalued individual and available social and community supports.

Segal and Aviram (1978) developed a dichotomous interpretation of community integration similar to Wolfensberger (1972). Their work focused on individuals with

psychiatric disabilities living in residential care facilities. They labelled “internal integration” as an individual’s involvement within the residential care facility. Their second type of integration, “external integration”, is similar to Wolfensberger’s concepts of physical and social integration. External integration was thought to involve five different levels – presence, access, participation, production, and consumption. Presence includes the amount of time spent in the community. Access involves the availability and access to goods, services, and social contacts. Participation is the involvement in activities with others. Production is described as whether individuals are involved in income-producing employment. Lastly, consumption is defined as the management of finances and expenditures. Social integration was a sum of these five independent parts.

Aubry and Myner (1996) and Wong and Solomon (2002) enhance Wolfensberger’s and Segal and Aviram’s conceptualization of community integration and add a third component – psychological integration. Psychological integration is premised upon the concept of “sense of community” and the work of McMillan and Chavis (1986). McMillan and Chavis define sense of community as “a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (1986, p.9). It includes four essential pieces: membership, influence, integration and fulfillment of needs, and shared emotional connection.

McColl et al. (1998) also produced a tri-dimensional conceptualization of community integration, but they include new elements. The authors argue that a consensual definition of community integration is lacking within the literature. They see

this as problematic, as without a definition it is difficult to establish whether individuals have achieved community integration or the actions required to achieve it. McColl et al. (1998) do note that some commonalities have emerged, including relationships with others, independence in one's living situation and activities to fill one's time. From this, the authors propose a three-part model of community integration: independent living, occupation, and social support.

To justify their proposed model, the authors conducted qualitative interviews with individuals who had suffered a brain injury and were returning to the community from a rehabilitation facility. From these interviews, nine components of integration emerged. These nine were then compartmentalized into the original model, with "general integration" being added as a fourth component to the model. General integration included conformity (e.g., fitting in), acceptance (e.g., being yourself), and orientation (e.g., being physically aware of one's location). Independent living included independence and one's living situation (e.g., living outside an institution). Occupation included productivity (e.g., education, employment, and volunteering) and leisure. Finally, social support included the themes of close relationships and diffuse relationships (e.g., everyday interactions with a wide range of individuals).

The revised, four part model that McColl et al. (1998) propose easily maps onto the tri-dimensional concept of community integration proposed thus far (e.g., physical, psychological, and social). General integration contains elements that are similar to psychological integration. Independent living is includes similarities to physical integration. Social support and occupation can both be linked with social integration.

From this, it appears that there is some consensus with regards to community integration, even among different populations.

Examining social integration exclusively, Ware, Hooper, Tugenberg, Dickey, & Fisher (2007) examined social integration using a capabilities approach framework. This framework focuses on human agency or what people can do and be for themselves (Ware et al., 2007). It takes a developmental approach and recognizes that opportunities for development are contingent upon what is offered by the social environment. Using qualitative interviews and ethnographic data, the authors attempted to define social integration and its processes among psychiatrically disabled individuals. Their results centered on social integration as a process where connectedness and citizenship are developed in the community. Connectedness was defined as having reciprocal interpersonal relationships. Several competencies were uncovered as necessary for maintaining connectedness. These includes effective communication skills (social competency), trust (moral competency), empathy, and commitment (emotional competency). Citizenship involved the full rights and responsibilities for individuals with psychiatric disabilities.

Ware et al.'s work contains similarities to what other authors proposed regarding social integration. At the core, it involves forming and maintaining meaningful social bonds with members of the community, who are both psychiatrically impaired and non-psychiatrically impaired. What Ware et al.'s work pushes forward, is the call for societal barriers to be diminished so psychiatrically disabled individuals can foster the skills required for social integration.

Tsai and Rosenheck (2012) sought to identify the main factors related to social integration among a sample of formerly chronically homeless adults who were provided housing across several sites in the United States. They assessed social integration through a 57-item survey of participant-reported items related to social integration. Through a maximum likelihood factor analysis, six factors of social integration emerged – housing, community participation, civic activities, religious faith, social support, and treatment support.

Focusing on psychological integration, Nowell and Boyd (2010) critically reviewed the definition and measurement of psychological sense of community. They argue that the term lacks clarity regarding its definition and measurement. Despite this, the authors propose that much of the discourse on psychological sense of community is based upon human needs theory. This theory posits that the community is a resource for meeting the needs of individuals, both physiologically and psychologically. Involvement in the community would therefore be based on the expectation that the community will meet one's needs. When needs are met, community members will be more likely to engage in important social outcomes like promoting/attending community events and maintaining residence for longer periods of time. The authors also bring forward a second theoretical expansion of psychological sense of community, focusing on its value-based elements. In this regard, psychological sense of community involves an interaction between one's perception of the community and one's expectation of the relationship he/she should have with the community. This expectation is based upon one's personal belief system (e.g., values, standards of conduct). These two different models (needs-based and values-based) still require empirical validation, but the

authors articulate that their work will help to expand the conceptualization of psychological sense of community from its current rigidity and narrowness.

These conceptual expansions of community integration are important developments. The research literature has generally used much narrower versions and focused on the physical presence of individuals within the community and their use of community resources (Flynn & Aubry, 1999). This limits the full intentions of community integration and what it means to be an active and meaningful member of one's community. It is also evident that community integration has been studied and applied to a wide range of populations (e.g., people with developmental disabilities, people with psychiatric disabilities, people with brain injuries, and the general population). Although each of these populations brings about unique considerations, all are based upon similar theoretical conceptions. As the scope of this thesis involves individuals that have histories of homelessness or who may be at risk of homelessness, the literature review will focus primarily on this population.

CHAPTER 2

Community Integration Research

Studies of community integration were of particular importance during the post-deinstitutionalization era. This era involved the relocation of individuals with severe and persistent mental illness from medical institutions and asylums to the community. One of the primary goals of this process was to have former patients become fully integrated members of society (Segal & Aviram, 1978). Unfortunately, the lofty goals of deinstitutionalization were not met with the development of needed services and supports in the community (Bassuk & Lamb, 1986). Due to this, a large number of patients were forced to live a life on the street. These shortcomings made research on community integration imperative, as determining the factors of successful community integration for individuals with psychiatric disabilities could help to inform policy and improve the lives of those individuals with marginal lives in the community. The following section summarizes the empirical literature on community integration. It is divided into sections based upon the sample being used. Before proceeding, a brief synopsis of the different types of housing arrangements is presented.

Definition of Housing Models

Housing for individuals with a psychiatric disability has centered around three evolving forms – custodial housing, supportive housing, and supported housing (Nelson, 2010). Custodial housing includes types of board-and-care facilities and residential programming. In this type of housing, the resident is viewed as a patient and the staff has complete control over the environment. Supportive housing developed as a form of congregate housing. Included in this type of housing are group homes, halfway houses,

and clustered apartments. An individual in this living arrangement is viewed as more of a resident, rather than a patient. The staff of these residences still has substantial control of the environment, but the residents may have a say in household decisions. In theory, the residents of such types of housing were to follow a continuum model, in that they would progress to less and less restrictive housing as their functioning improved. This model had its challenges, as individuals were expected to move from settings where they had developed beneficial social relationships. Challenges also arose when individuals moved into independent apartments without financial or rehabilitative support.

Due to these issues and the continued lack of individual choice found in supportive housing, a new model of supported housing emerged. Under this model, individuals were given choice in where they lived and assumed the role of a tenant/citizen as opposed to a patient (Carling, 1995). Support is delivered off-site and individuals have choice in the frequency and intensity of services. An example of one type of supported housing is the “Pathways Housing First” model. Developed in New York City by the Pathways to Housing program, the model places individuals directly into housing without the treatment stipulations found in other models (Tsemberis, 1999).

Residential Program Studies

Segal and Aviram (1978) conducted the first study on community integration of people with psychiatric disabilities and perhaps one of the most influential. The authors sampled psychiatrically disabled residents of sheltered-care facilities in California. They developed a scale that measured social integration and factor analyzed the responses from the residents. From their analyses, they formed a seven-factor solution: attending

to oneself (e.g., involvement outside of the facility); access to community resources; access to basic or personal resources; access and participation with family members; access and participation with friends; social interaction through community groups; and use of community facilities.

Based upon the scores on this scale, the residents were placed onto a continuum of integration. The least integrated group included individuals with no independent access to community or basic resources and no social contacts outside of the facility. The next grouping involved individuals with access to community and basic resources, but minimal contact with friends or family and no community involvement. This group constituted the largest percentage of sheltered care facility residents. The fifth and final group, the most socially integrated group, had the lowest percentage of residents, with only 1% falling into this category. This group included individuals who accessed community resources, participated in community events, and experienced frequent social contacts. From these results, it appears that having a strong social support network is essential to community participation and integration.

The study also investigated the factors that contributed to the varying levels of community integration among the participants. Three levels of analysis were considered: neighbourhood, facility, and individual. It was found that having meaningful contact with neighbours was the most important facilitator for social integration. Factors that impeded social integration included neighbour complaints against the residential facility, increased distance from community agencies, and being rurally located. When considering facility characteristics, it was found that having a supportive facility that promoted social contact within the community increased social integration. A supportive

environment included one that promoted involvement, autonomy, skills training, communication, and staff and resident support. Lastly, individual characteristics that improved social integration included having a lower level of psychiatric symptoms, a higher level of psychosocial ability, choice in living in the residential facility, higher income and financial control, being younger, and being more social.

Trute and Segal (1976), using the social integration scale developed by Segal and Aviram (1978), investigated neighbourhood predictors of social integration for individuals with psychiatric disabilities residing in sheltered-care facilities. They used a cross-national sample (California, U.S. and Saskatchewan, Canada) and compared urban versus rural settings. They found that in urban settings, higher levels of social integration were found in neighbourhoods with a higher proportion of females, a greater proportion of older (65 years of age and older) and younger (age 15-24) individuals, a greater proportion of renters, and denser households (6 or more individuals in one dwelling). Neighbourhoods with a lower proportion of middle-aged individuals (age 35-54) and low-income households were also associated with higher levels of social integration. Rurally, neighbourhoods with fewer young adults (age 15-24) and fewer married couples were predictive of higher social integration. An increased proportion of rented dwellings, more non-family members in households, and more youth (age 15 and under) were also significant predictors.

The authors concluded that highly organized neighbourhoods with strong social cohesion might not necessarily facilitate community integration for sheltered-care residents. It appears that neighbourhoods with a “supportive environment” conducive to facilitating integration are those that are neither highly organized nor highly disorganized

but rather fall in-between. The ideal neighbourhood may be one where individuals with psychiatric disabilities can make social contacts and be less visible as a neighbourhood "outsider", but also be removed from a deviant population that limits their community contact.

Segal, Baumohl, and Moyles (1980) further explored the effects of neighbourhood characteristics on the social integration of sheltered-care facility residents. They developed typologies of neighbourhoods where these sheltered-care facilities exist. After controlling for individual resident characteristics, such as level of psychopathology, age, sex, and current participation in treatment, it was found that ratings of social integration for facility residents was highest within liberal, non-traditional neighbourhoods. This type of neighbourhood was characterized as politically liberal, racially diverse, of mixed-income, with a high proportion of renters, and having a relatively high crime rate. Conservative, middle-class neighbourhoods were found to have the lowest levels of social integration. This type of neighbourhood was characterized by an almost exclusively white population, high income households, a high proportion of families, and a low proportion of renters.

The study also looked at neighbourhood "restrictiveness" (e.g., the extent to which the community discouraged the participation of sheltered-care facility residents in community events). Restrictiveness was found to be the most influential factor in reducing the integration of sheltered-care residents within conservative, middle-class neighbourhoods. Interestingly, restrictiveness was positively associated with increased social integration within liberal, non-traditional neighbourhoods. However, the restrictiveness ratings were much lower for the liberal neighbourhood than the

conservative neighbourhood. It was thought that restrictiveness in liberal neighbourhoods served as a way to put pressure on sheltered-care facilities to provide good programming that promoted social integration.

Kruzich (1985) continued this line of research on the social integration of former state hospital patients in residential facilities. In examining community and facility variables, Kruzich (1985) reported that living in a moderately sized city (population of 10,000 – 100,000), residing in a facility that was respectful, residing in a congregate care facility, and having high levels of social skills training were positively related to social integration.

Comparisons of the Different Housing Types

As previously mentioned, housing programs for vulnerable populations changed from models that put individuals in the role of patient or client to models that considered individuals as a resident or as a tenant. As these modifications were occurring, research was conducted to assess if these changing policies benefitted residents. Nelson, Hall, Squires, and Walsh-Bowers (1992) conducted a study with individuals living in three different types of housing locations: board-and-care homes, group homes, and supportive apartments. They found that when comparing group homes and supportive apartments to board-and-care homes, community integration scores were significantly higher for the former two locations. No differences emerged between group homes and supportive apartments. When looking at the three groups as a whole, higher levels of community integration were predicted by receiving higher levels of unsupportive social and emotional support from others and by providing higher levels of emotional support to others. In similar counterintuitive results as the “restrictiveness”

findings of Segal et al. (1980), Nelson et al. (1992) state that being integrated into the community involves engaging in both supportive and unsupportive social interactions with other members of the community. Unsupportive interactions can be viewed as an ordinary part of community living.

Dilks and Shattock (1996) investigated the community contact of a small group of individuals living in three different types of housing. The participants were all psychiatric rehabilitation patients and either lived in supportive housing in the community, a hostel-hospital type of housing in the community, or housing located on hospital grounds. The total number of community contacts did not differ between the three groups, but the community-based participants had more trips to local shops than the hospital participants. When considering social contacts, the hospital group was more likely to make community trips accompanied by a friend than the two other groups; however, these social contacts included other hospital residents and not necessarily individuals who live in the community. The level of disability of the participants did not yield any significant effects on the amount of community contact.

Yanos et al. (2004) explored whether participants of a Housing First model differed in their community integration experiences compared to participants of staffed residential settings. Using qualitative methods, they asked participants about their transition into being housed. The majority from each housing group reported having a positive reaction to being housed and no problems fitting in with their communities; however, there was an increased percentage of individuals in independent housing who described some problems fitting in. These participants stated that it was difficult to live by themselves and some felt socially isolated. The participants noted that in their

previous living arrangements (e.g., shelters, institutions, the street), they developed friendships.

For those who felt that they “fit in” their neighbourhoods, demographic variables played a significant part. Some participants expressed that there was a “match” between their own race/ethnicity and the neighbourhood’s. Conversely, for some individuals who felt that they did not “fit in” with their neighbourhoods, race/ethnicity or language mismatch was given as an explanation for these difficulties. Other reasons for not feeling like they “fit in”, included the crime and drug activity in their neighbourhoods and differences in attitudes/behaviours. Quantitative results from the same study provided confirmatory evidence for the negative effect of neighbourhood crime. A significant positive correlation emerged between having a sense of safety in one’s neighbourhood and “fitting in” with the neighbourhood.

Gulcur, Tsemberis, Stefancic, and Greenwood (2007) conducted their study with consumers living in supported housing and consumers residing in a continuum model of housing (e.g., treatment and sobriety contingent housing). The authors did not use standardized community integration measures and instead chose measures that they thought best encompassed the three facets of community integration. Factor analysis of their selected variables resulted in a four-factor, opposed to three (e.g., physical, psychological, and social integration), solution. The fourth factor to emerge was independence/self-actualization. This factor was based upon an individual’s activities of daily living (e.g., doing laundry or going shopping) and his or her level of self-actualization, as based upon Maslow’s five-level hierarchy of needs (e.g., survival, safety and security, social relationships, self-esteem, and self-actualization) .

Their results demonstrated that several variables significantly predicted the four facets of community integration. Significant predictors of psychological integration included being recruited from a hospital and experiencing perceived choice in housing. A higher level of psychopathology was found to negatively associate with psychological integration. Physical integration was predicted by being involved in substance use treatment. Social integration was predicted by having a higher level of psychopathology at baseline and residing in supported housing. Higher levels of independence / self-actualization was predicted by higher levels of psychopathology at baseline. The influence of psychopathology on higher levels of integration appear to be counter-intuitive, but the authors state that individuals with higher levels of psychological disability may be more likely to need and attract the support of others than those with lower levels of psychopathology. Therefore, individuals with higher levels of psychopathology may be more satisfied with these sought out social interactions.

Similar to Gulcur et al. (2007), Yanos, Felton, Tsemberis, and Frye (2007) examined factors extending beyond the individual that could affect community integration. They used a mixed methods approach and sampled individuals who were formerly homeless, but who have been stably housed for more than one year. Individuals were living in either supported- independent housing or congregate housing. Based upon their quantitative analyses, they found that physical, psychological, and social integration levels did not differ between the two housing groups. When looking at the sample as a whole, there were positive associations between experiencing a higher level of perceived social cohesion and greater psychological integration, but a negative association between being in a neighbourhood with a higher proportion of foreign-born

individuals and experiencing greater psychological integration. There were no significant associations with physical or social integration.

Their qualitative findings placed individuals into four groups that described the setting where they felt their meaningful activities took place in. These settings included neighbourhood/employment, one's residential building, one's apartment or room, and a null category for those who had no meaningful activity. This last category, the null group, had the greatest proportion of individuals. When looking at the group composition, it was found that housing type had a significant association on group membership. Those with meaningful activities in their neighbourhood/employment or apartment were primarily living in independent apartments.

Using these groupings and comparing them on their community integration, it was found that individuals with meaningful activity in their building or neighbourhood/employment had significantly higher psychological integration scores compared to participants with no meaningful activity. In terms of social integration, those with meaningful activity in their neighbourhood/employment had higher ratings than individuals with no meaningful activity.

Patterson, Moniruzzaman, and Somers (2014) examined community integration among individuals living in Vancouver with high and moderate needs enrolled in a Housing First program compared to homeless individuals receiving standard care. They found that moderate needs individuals enrolled in Housing First had significant improvements in psychological integration across a 12-month period compared to the individuals with moderate needs receiving standard care. No differences were reported among individuals with high needs enrolled in Housing First and individuals with high

needs receiving standard care. When considering specific elements of psychological integration, individuals receiving supported housing services were more likely to feel at home where they live and feel that they belong there than individuals receiving standard community care. However, supported housing residents living in independent apartments were no more likely to know the people that lived near them compared to the standard care group (Patterson et al., 2014).

Supportive and Supported Housing Studies With No Comparison Group

Some studies focused exclusively on supportive and supported housing residents without comparative groups. Kennedy (1989) studied community integration and well-being among individuals living in three different settings: supervised community residences, supportive apartment programs, and welfare or Single Room Occupancy (SRO) hotels. The groups were then collapsed together for the analysis. Results showed that community integration was associated with having emotional support (e.g., having someone to tell one's personal problems to) and social competence (e.g., adequate verbal skills, daily activity skills, and appropriate appearance). There was also a positive relationship between community integration and well-being.

Townley and Kloos (2011) examined psychological sense of community among supported housing residents with serious mental illness. They focused on two explanatory sets of variables: neighbourhood experiences (e.g., neighbourhood relations, neighbourhood safety, and neighbourhood satisfaction) and individual factors unique to individuals with serious mental illness (e.g., housing type, mental illness diagnosis, and neighbourhood tolerance for mental illness). For neighbourhood

experience variables, neighbour relations had the largest effect on sense of community, followed by satisfaction with neighbourhood and neighbourhood safety. For individual factors unique to individuals with serious mental illness, higher levels of neighbourhood tolerance of mental illness had the strongest relationship with having a greater sense of community, followed by living in a congregate setting as opposed to non-congregate housing. When the two sets of variables were analyzed together, it was found that the neighbourhood-level variables accounted for the bulk of the influence on sense of community.

Interestingly, one study found no significant association of individual, clinical, and service level variables with changes in psychological integration from baseline to six month for individuals enrolled in supported housing (Stergiopoulos et al., 2014); however, Stergiopoulos et al. (2014) did find that being housed compared to homeless resulted in an improvement in psychological integration after six months in supported housing.

Tsai, Mares, and Rosenheck (2012) focused exclusively on social integration of formerly chronically homeless individuals enrolled in supported housing programs. They found no significant changes in social integration after six and twelve months of involvement in the program. The authors conclude that social integration is an area where chronically homeless adults struggle, even after being housed.

Three studies considered both staff and resident/tenant data regarding community integration. Mallik, Reeves, and Dellario (1998) investigated barriers to community integration for people with psychiatric disabilities in rehabilitation programs. The authors specifically looked at barriers related to skills, environmental supports, and

community resources. The three greatest barriers to community integration as rated by the program participants were lack of financial resources, lack of employment resources (e.g., employment opportunities), and lack of vocational skills (e.g., skills required to function in the workplace). Program staff were more likely to view personal variables and personal skills as significant barriers to community integration for the participants, in contrast to the environmental variables, such as access to adequate financial and employment resources in the community, mentioned by the program participants themselves.

Wong, Metzendorf, and Min (2006) investigated the social interactional aspect of community integration (termed “social integration” for the purposes of the current review) between mental health consumers and their neighbours in the community. This qualitative analysis acquired the perspectives of mental health consumers in three community residential programs and the staff members providing services to these consumers in separate focus groups. Consumer data revealed three themes regarding their interactions with neighbours. The first involved both positive and negative experiences in their encounters with community residents. A good neighbour was described as respectful and who “looked out” for each other. A bad neighbour was someone who was noisy, intrusive, and aggressive. The second theme to emerge was experiences of social rejection and labelling. Social rejection often occurred in circumstances with greater numbers of mental health consumers present. The third theme to emerge was feeling part of the community. In general, consumers reported being satisfied with living in the community. Some consumers reported differences between themselves and community members based upon mental health status, age,

family status, nationality, and income. Although differences were reported, many consumers felt that their diverse neighbourhoods were beneficial. Patience was also mentioned, as some consumers thought that with time and exposure, they would gain greater acceptance in the community.

Service providers spoke of the different roles they play in promoting community integration. Staff viewed community integration as a process that involved the development of social skills and skills to be independent. The second theme discussed how consumers could limit their own integration due to self-stigma and pre-housing mindsets. Staff attributed the hesitancy of some consumers to engage in social relationships to suspicions about neighbours' knowledge about consumers' mental health issues and consumers' hypersensitivity about how they were perceived in public. For example, some consumers attributed receiving poor treatment in the community associated with their identity as a mental health consumer. It was also noted that it is difficult for some consumers to switch mindsets from an institutional or homeless orientation to a community member orientation. Lastly, staff stated that it is important for consumers to have a "safety net" where they can discuss their community experiences with other consumers, as a form of peer support.

Expanding on their previous conceptual work, Ware, Hopper, Tugenberg, Dickey, and Fisher (2008), examined what factors are needed for social integration, particularly connectedness and citizenship, with input from both staff and consumers. Their results highlighted six capacities that were deemed necessary for social integration. These were: responsibility (e.g., respect for others); accountability (e.g., acknowledging

consequences for actions); imagination; empathy; judgment; and advocacy (e.g., ability to form articulate arguments).

Supportive/Supported Housing Residents Compared to Community Members

Besides comparing individuals living in supported or supportive housing to other housing models, it also important to consider how they compare to community members. Aubry and Myner (1996) compared the experiences of community among residents of housing programs for individuals with psychiatric disabilities and their neighbours. The group of individuals with psychiatric disabilities was selected from community mental health-housing programs (including board-and-care residences and supportive housing) located in residential neighbourhoods. They were matched in pairs with a group of neighbours living on the same block. The authors report significant differences between the two groups on a combination of community integration and quality of life measures. Analyses found that community residents reported higher levels of social integration than psychiatrically disabled individuals did. No differences emerged with regards to psychological or physical integration. Looking at specific elements of social integration, pronounced differences emerged with activities involving closer forms of social contact with neighbours. A somewhat surprising finding was the similar rates of psychological integration between the two groups. The authors surmise that the living arrangements of both groups may have contributed to this finding. Individuals with psychiatric disabilities were for the most part living in congregate settings and may define their sense of community based on attachments to other residents. On the other hand, community members may base their attachments differently in terms of their relationships with neighbours.

Yanos, Stefancic, and Tsemberis (2011) conducted a study similar to Aubry and Myner (1996) and compared the psychological integration of individuals in supported housing with other community members. Results demonstrated no significant differences between the two groups. There were also no differences in terms of perceptions of neighbourhood social capital (i.e., having a “close knit” neighbourhood), community efficacy (i.e. neighbours working together to “get things done”), or neighbourhood quality. When considering just the supported housing residents, several neighbourhood level variables were associated with higher levels of psychological integration. These included higher levels of perceived neighbourhood quality, perceived social capital, perceived community efficacy, and a higher proportion of the neighbourhood population that were immigrants. A negative relationship emerged between neighbourhood disadvantage (i.e., the median income of the neighbourhood, the proportion of households receiving public assistance, the proportion of households at or below the poverty line, proportion of high school educated individuals in the neighbourhood, and proportion of unemployed persons in the neighbourhood) and psychological integration, with greater neighbourhood disadvantage predicting lower psychological integration.

For community members, similar results emerged. Higher levels of psychological integration was related to reporting greater perceived neighbourhood quality, perceived social capital, and perceived community efficacy. Two new positive relationships also emerged, with older age and a higher level of psychiatric symptom severity being associated with greater psychological integration. Neighbourhood disadvantage and the concentration of immigrants in the neighbourhood population make-up were not

significant. These results demonstrate that individuals living in supported housing can achieve comparable rates of psychological integration as other community members. The results also indicate that neighbourhood-level factors may be particularly salient variables in promoting psychological integration.

Furthering their previous work, Yanos, Stefancic, and Tsemberis (2012) compared the physical and social integration of individuals in supported housing to individuals living in the same community. The authors found that supported housing residents had significantly lower social integration than the community residents did. For supported housing residents, increases in social integration was associated with higher education levels, longer lengths of stay in one's residence, increased psychopathology, increased depressive symptoms, and increased physical integration. For community members, social integration was significantly associated to increased physical integration.

Individuals with Psychiatric Disabilities Not in Housing Programs

In qualitative work with individuals with mental illness who lived in rural communities in Norway, Ekeland and Bergem (2006) looked at how the implementation of integration and normalization policies affected these individuals' identities. The participants stated that they did not participate in any of the social and cultural events that their communities offered and lived in relative social isolation. For those who had been born and raised in the community they were currently residing in, there was a strong sense of belonging to the community and this served as an important aspect of their identity. Being accepted for who they are was more important for respondents than being "integrated" or "normalized". For example, those who accepted their role as

a mental health patient had easier access to services, fewer conflicts with their surroundings, and had an easier time being part of a community with other mental health patients. These individuals were integrated into the community as members of a marginalized group. Individuals who were trying to integrate into the "general" community and revoke their identity as a mental health patient were found to be more sensitive to stigma, especially the label of "mental patient". These individuals opposed this label and felt marginalized.

The relation of the perceived stigma of having a mental illness and community integration was also examined in a study by Prince and Prince (2002). The authors focused on individuals receiving services from Assertive Community Treatment (ACT) teams. Their participants scored relatively low on physical and social integration measures. Moderate scores were recorded for psychological integration. When considering the relationship between the different components of integration and stigma, lower levels of social and psychological integration were inversely associated to higher levels of perceived stigma. Physical integration did not have a significant relationship to perceived stigma. The authors also conducted regression analyses to predict each component of community integration. They found that a higher psychosocial functioning level and greater perceived social support were predictive of higher levels of physical integration. Higher levels of psychosocial functioning and perceived social support and lower perceived stigma were significant predictors of higher levels of psychological integration. No significant predictors emerged for social integration.

Baumgartner and Herman (2012) examined the physical and social integration of formerly homeless individuals with severe mental illness after discharge from the hospital. Individuals were assigned to either a critical time intervention or a treatment as usual condition post-hospital discharge. The authors found no effect for treatment on either physical or social integration. For all participants, the average social integration score was 2.6 (out of 6) and almost half of participants scored two or less. Two variables significantly correlated with social integration. Being female was associated with higher social integration scores. Lower social integration scores were associated with having more severe symptoms on the negative and general symptom scores on the Positive and Negative Symptom Scale.

Manuel, Hinterland, Conover, and Herman (2012) also focused on hospital discharges, but they focused exclusively on females with severe mental illness. They asked their participants to describe their adjustment to the community after psychiatric hospitalization. Barriers to community integration stated by their participants included a fear of insufficient treatment support post-discharge from the hospital, social isolation, the self-perceived stigma of having a mental illness, and a lack of resources to meet daily needs. Facilitators of community integration included becoming orientated to the neighbourhood prior to moving there, greater access to treatment support with flexibility, and greater connection to social supports.

Individuals Not Targeted As Having Psychiatric Disabilities

Brodsky (1996) contributes a different approach to the community integration literature. Focusing exclusively on psychological sense of community, she argues that the concept has been approached solely in terms of its positive effects on relationships

within the community. What the literature neglects to consider is those individuals with no sense of community or a negative sense of community. By conducting qualitative interviews with low-income women in “risky” neighbourhoods, she explored this idea of negative psychological sense of community further. The women stated that one of the barriers to community membership is the lack of physical and emotional safety in their neighbourhoods. Some participants purposefully created a divide between themselves and the community, using “us” versus “them” speak. This divide was created primarily as a means to keep their children safe from negative influences.

The women did not form strong bonds within their community, as they viewed their values as different from other community members. Even though a disconnect to their communities was present, many of the women were involved in some form of community association, particularly ones that involved their children. Brodsky (1996) concludes that her participants’ views on their communities are consistent with a negative psychological sense of community and that it serves as a positive way to deal with the potentially negative effects of their community; however, a negative psychological sense of community can be limiting, since the withdrawal from the community can limit one’s exposure to the positive support that can be found in the community.

Furthering her own work, Brodsky, O’Campo, and Aronson (1999) examined the individual- and community-level variables associated with psychological sense of community for individuals living in low-income, inner-city neighbourhoods. At the individual level, two variables were predictive of psychological sense of community, but in different directions. Increased age was related to a positive sense of community, as

older adults were found to have stronger feelings of commitment to their neighbourhoods. For those households with children, a negative association with community integration emerged. This finding is similar to Brodsky (1996), who found that mothers in poor, urban areas were more likely to disengage from their neighbourhoods as a means to protect their children from neighbourhood risks.

Community involvement variables were also found to have associations with psychological sense of community. In terms of positive associations with psychological sense of community, significant variables included regular attendance to places of worship, involvement in neighbourhood organizations, living in neighbourhoods with higher voter registration, and living in neighbourhoods with higher rates of community involvement. Community involvement variables that had an inverse relation with psychological sense of community included having greater concerns about the worsening condition of the neighbourhood. Several community-level socioeconomic variables were inversely associated with psychological sense of community. These included a larger average household size, a higher neighbourhood population density, a higher percentage of residents not in the labour force, and a higher per capita income. Variables with a positive association included a higher percentage of owner-occupied housing in the neighbourhood.

Looking exclusively at formerly homeless women, Nemiroff, Aubry, and Klodawsky (2011) investigated the influence of housing, employment, social support and personal characteristics on psychological integration. Taken as a whole, these variables accounted for a significant amount of variability in psychological integration. Significant individual predictors of psychological integration included having dependent

children, having higher quality housing, spending a shorter period in one's current housing, and having more interactions with neighbours. Overall levels of psychological integration were moderate, indicating that even though the majority of participants were housed, they did feel strongly attached to their neighbourhood.

Summary of Research on Community Integration

The community integration of vulnerable populations, such as those with psychiatric disabilities, has been well established within the literature. Results demonstrate that community integration is affected by a multitude of factors, including those at the individual-, housing-, and neighbourhood-level. For those studies that included neighbourhood variables, it appears that they had a strong relationship with community integration in comparison to other variables (e.g., Brodsky et al., 1999; Segal & Aviram, 1978; Townley & Kloos, 2011). Physical and psychological integration appear to be somewhat more realisable goals for individuals with a psychiatric disability than social integration (e.g., Aubry & Myner, 1996). In terms of housing type, although supported housing is thought to normalize individuals into the community and create a sense of belonging (Yanos et al., 2004), it appears that independent living can lead to isolation and withdrawal from the community. What is less substantiated within the literature is the community integration experiences of individuals in low-income housing.

CHAPTER 3

Vulnerable Housing and Housing Transitions

The answer to homelessness is seemingly easy: housing. And some policy and research initiatives stop right there since housing an individual is deemed a success. Unfortunately, there is less emphasis on the quality of housing and neighbourhoods that many formerly homeless individuals are forced to live in. Housing and neighbourhood conditions are important factors to consider, as for people who experience episodic periods of homelessness the issue is not only getting housing, but also staying housed (Anucha, 2010). This may be difficult, as housing options for low-income individuals are limited and often involve shared accommodations, such as rooming houses or single-room occupancy hotels.

The type of housing one resides in is important since some housing types have been associated with negative mental health outcomes. In their review of the literature, Evans, Wells, and Moch (2003) found that living in multi-dwelling housing and in high-rise apartments was associated with more adverse psychological health compared to those in single detached homes. Similarly, poor housing quality, including structural deficiencies, pest infestations, dampness, and mold, was negatively correlated with psychological well-being (Evans et al., 2003). Poor quality housing has also been related to negative social outcomes. Wells and Harris (2007) found that poor housing quality can lead individuals to withdraw from social encounters, possibly because they are embarrassed of their housing. This withdrawal may lead to greater psychological distress.

Exits from homelessness

Despite the abundance of literature on individuals who are homeless, there appears to be a gap for those homeless individuals who attain some form of housing that is not associated with an intervention, such as supported or supportive housing. An important first step in assessing vulnerable housing is to consider the factors that may have led individuals to this circumstance. One way to do this is to look at studies that have assessed exits from homelessness.

In their study of risk factors for long-term homelessness, Caton et al. (2005) used longitudinal data across an 18-month period. Reasons for becoming homeless among their sample included interpersonal problems, economic problems, and evictions. Approximately 80% of participants returned to housing in the community during their follow-up period. Among this group, the most common type of living arrangement was with family or friends. Those who returned to living in their own apartments had the longest median number of days homeless during the study period. Durations of homelessness were shorter for those aged 18-29, currently or previously employed, having family support, having stronger coping abilities, and having no arrest history.

Zlotnick, Robertson, and Lahiff (1999) examined the residential stability among homeless adults. Their results showed that close to 80 percent of their sample exited homelessness at least once into a residential setting and that the majority of these exits occurred within the three months after the initial interview. Upon examining sex differences, it was found that women with children exited earliest, followed by single women and single men. A much smaller number, only 15 percent, remained in their housing throughout the follow-up period. Those that were able to achieve stable

housing were less likely to use substances or have a major mental disorder and less likely to have long histories of homelessness. Upon further analyses, stable housing was also associated with consistent income assistance and access to government subsidized housing. On the other hand, unstable housing was associated with being female, using substances, and being involved in informal employment (e.g., panhandling).

Similar to Zlotnick et al. (1999), Dworsky and Piliavin (2000) report that individuals were more likely to exit from homelessness if they were employed, had access to a social service worker, or did not meet criteria for a major mental illness. Those individuals who lived in private residences were also more likely to remain stably housed than those who moved into other housing situations (e.g., motel, SRO). As well, those with no prior homeless history and those receiving subsidized housing were more likely to remain stably housed.

Three studies focused on social support/service usage and its relation to exiting homelessness. Furthering their own work, Zlotnick, Tam, and Robertson (2003) specifically focused on disaffiliation and its linkage to exiting homelessness. Disaffiliation included removal from three sources of social support: family and friends, treatment, and contact with services. Their results demonstrated that the odds of exiting homelessness were higher for women, for those residing with friends and relatives, and for those with social service contacts. Among those individuals with substance use problems, females were more likely to exit homelessness. The authors surmise that social support variables had no influence for those who were abusing

substances because they were not in recovery, as opposed to those seeking social support or treatment.

Similarly, in a sample of formerly homeless individuals who had been stably housed for 24 consecutive months, it was found that improvements in relationships with significant others, changing internal motivation and personal responsibility for improving their lives, and accessing needed services all helped to empower individuals to exit homelessness (Thompson, Pollio, Eyrich, Bradbury, & North, 2004). Lastly, Pollio, North, Thompson, Paquin, and Spitznagel (1997), in their comparison of individuals with psychiatric disabilities who are stably housed or unstably housed, found a significantly larger proportion of housed clients were female and were users of social services

For individuals involved with ACT services, Kreindler and Coodin (2010) report that housing instability decreased dramatically after six months of involvement. Housing instability was predicted by substance abuse problems, being younger, and being female. Significant housing characteristics for remaining in housing included living in independent housing and living in a neighbourhood with an increased average income. Interestingly, substance abuse was negatively associated with being in independent housing. Approximately 90% of room-and-board residents and all hotel room residents had substance abuse problems.

Based on this review, it appears that homeless exits are heavily contingent upon specific variables. These include substance use, employment, mental health status, social support, and access to social services. Mixed results emerged regarding sex, as some studies found that females were more likely to remain housed, while others found the opposite. Perhaps most relevant to the current analysis is the influence of housing

type. Living in subsidized housing was related to having longer housing tenures. This result indicates that those in non-subsidized housing accommodations are placed at a higher risk for returns to homelessness.

SRO/Rooming Houses/Vulnerable Housing

It has been determined that housing type is an important factor in housing stability, specifically living in vulnerable housing. But what does vulnerable housing, such as a single room occupancy hotel (SRO) or a rooming house, look like? Arrigo (1994) defines a SRO as an apartment-style building where tenants occupy their own sitting/sleeping room. Each unit includes several basic amenities, such as a sink and bed. There are also common areas shared by residents, like the kitchen and a lounge. They have served as an important source of affordable housing for low-income individuals (Crystal &Beck, 1992). Their quality can range from poor physical and social environments to decent housing (Hwang, Martin, Tolomiczenko, & Hulchanski, 2003). As with affordable housing trends, the number of SRO units in metropolitan areas has dramatically declined over the years, primarily due to gentrification and urban renewal (Linhorst, 1991).

Some residents living in SRO units may be described as “hard to house” (Gurstein & Small, 2005). This distinction involves people who have difficulty maintaining stable housing due to particular behaviours that are exhibited. These behaviours, coupled with poor social skills, make it difficult for housing providers and other tenants to contend with them. Alongside these behaviours, hard to house individuals often have multiple physical and mental health issues and substance misuse.

Wingate-Lewinson, Gary Hopps, and Reeves (2010) posit that individuals living in certain types of vulnerable housing are in a state of “liminal” living. The term liminal was first used in anthropological study to indicate a state of “in between”. It is a transitional phase where a person is moving from one social category and becomes stuck in an intermediary stage before crossing over into another category. Wingate-Lewinson et al. (2010) apply this theory to people living in hotels as long-term housing solutions. These individuals are not fully housed, nor or are they homeless. They are instead stuck in between the two categories. Results from their study of long-stay hotel residents found that residents had a hard time exiting their current situations. All of the respondents wanted to get permanent housing, but had to wait due to financial constraints. The longer the participants stayed in the hotel, the greater the emotional strain came to be. Residents felt guilt, depression, embarrassment, and shame for staying in the hotel for prolonged periods. The participants also feared lengthy stays in the hotel would result in complacency and prevent them from searching for other housing.

Although limited, there has been some research into the lives of individuals living in vulnerable housing. In their study of rooming house residents, Hwang et al. (2003) found that residents age 35 and over had significantly worse overall physical and mental health in comparison to the general population. Residents were also more likely to report certain chronic health conditions than the general public and other low-income individuals. Demographically, approximately one-third of the residents were employed and 15% had a university education. These numbers indicate that some rooming house residents were the “working poor” and not just the unemployed and disabled.

Demographic statistics also demonstrated that one quarter of residents had been homeless within the last five years. This statistic is illustrative of the housing fluidity that some individuals may experience. In terms of housing quality, non-profit rooming houses were rated as being more physically attractive. This was significant because individuals with the poorest health tended to live in rooming houses in the worst physical condition.

Mifflin and Wilton (2005) interviewed rooming house residents in Hamilton, Ontario. Most respondents did not have favourable opinions of their living situation. The main concerns centered on the physical condition of rooming houses, sharing with other tenants, safety and security, and substance use of other tenants. The small size of their rooms impeded some individuals from entertaining guests, limiting social interactions. Other individuals preferred to socialize outside of their rooming houses. Some positive elements of rooming houses were discussed, including the proximity to services, downtown retailing, and public transit. The affordability of rooming houses was also listed as a beneficial feature.

Crystal and Beck (1992) focused on elderly individuals living in SROs. It was found that SRO residents were spending approximately 44% of their income on housing. The participants had lived in the neighbourhood for a lengthy period of time, with the average being 20 years. When asked about the most important features of a residence, 98% stated having a room of one's own and 97% stated a safe building. Other important features included having one's own bathroom (78%) and kitchen (68%) and having one's own apartment (71%). When asked what they would do if they were forced to move from their SRO, one-third responded that they did not know. Lastly, in

terms of social contact, close to half of the respondents stated that they never visited with family and never visited with friends in the building. Close to one-third never visited with friends outside of the building. Results demonstrate that elderly SRO residents valued having their own room more so than having their own apartment, were somewhat socially isolated, and many did not have contingency plans if their current housing situation fell through.

Elias and Inui (1993) report on housing transitions among a group of older adult homeless males. They found that participants had difficulty finding employment that paid enough to rent an adequate place. The only housing available was dangerous, often situated in low-end hotels. Their drinking behaviours often dictated their movement from the streets to shelters to SRO hotels. Binge drinking resulted from social isolation that occurred as a result of living in vulnerable housing, which led to the men losing their employment and housing. This led to re-entrance into the shelter system. The shelter met the social needs of many of the participants, where vulnerable housing could not.

Anucha (2010) conducted qualitative interviews with individuals living in shared accommodation, community housing residences. Each of the participants was at risk of eviction from their housing. The majority of eviction notices were for issues with rent payment, with the remaining issues being behaviour-related. In terms of their current housing, all participants stated that their current residences were housing, but not homes. Conflicts in their housing were said to arise over such issues as hygiene, guest visits, theft, and noise. These tensions were inflated because most of the residents did not leave the residence, as they were unemployed and lacked finances. The mental

health of the other tenants was mentioned repeatedly by the participants as something that was difficult to live with. The quality of the housing also impeded the participants from inviting friends over, which made it difficult to build relationships with potentially supportive people.

Upon facing eviction, the participants spoke of the thin line between stability and instability. During the follow-up interviews, those who did not end up getting evicted spoke of the importance of advocacy from their support workers and help with navigating the welfare system. Others mentioned getting off drugs, socializing outside of the building, finding employment, and attending school as major determinants for not being evicted. When asked what would improve their lives and help them stay housed, all participants stated that subsidized individual apartments would be the ideal. The participant responses highlight the need for good quality and affordable housing as a solution to homelessness, not just any type of housing.

Summary

Individuals living in rooming houses, SROs and other vulnerable states of housing experience challenges and benefits from their living situations. These types of housing offer economically viable living arrangements and may be located in areas with adequate amounts of resources. These housing types can also impose negative impacts such as disruptive residents, poor housing quality, and social isolation. Tenants of rooming houses were found to have poorer physical health than the general population and many SRO residents may be defined as “hard to house.” It is clear that more research is required on these types of living arrangements and on their residents.

CHAPTER 4

Proposed Model of Psychological and Social Integration

The tested models of psychological and social integration are based upon the work of Aubry and Myner (1996), Wong and Solomon (2002), and Yanos et al. (2007). Aubry and Myner (1996) and Wong and Solomon (2002) each propose multi-dimensional representations of community integration (e.g., physical integration, psychological integration, and social integration). Wong and Solomon (2002) and Yanos et al. (2007) both advocate the use of multilevel correlates when assessing psychological integration. The current study modifies the work of the aforementioned authors and tailors it to a homeless and vulnerably housed population. The proposed predictors (individual, housing, and neighbourhood-level) of psychological and social integration are based on previous research and discussed in detail below. Figures 1 and 2 present the models and the specific variables found within each level of predictor. The proposed predictors (individual, housing, and neighbourhood-level) of these different types of community integration have received support within the literature and are discussed below.

Predictors

Individual

As previously stated, community integration has been associated with being employed (Yanos et al., 2007), being female (Baumgartner & Herman, 2012), being older (Brodsky et al., 1999), being younger (Segal & Aviram, 1978), having high levels of social support (Prince & Prince, 2002; Segal & Aviram, 1978), higher income and financial control (Segal & Aviram, 1978), and higher education levels (Yanos et al.,

2012). Psychopathology has an interesting relationship with social integration. Segal and Aviram (1978) found that decreased levels of psychopathology was positively related to social integration, whereas Gulcur et al. (2007) and Yanos et al. (2012) found increased levels of psychopathology were related to social integration.

Two variables that have received less attention in the integration literature are substance use and physical health. Issues in these areas are frequently present among homeless and vulnerably housed individuals and therefore may influence community integration. Individuals with substance abuse problems are more likely to experience periods of housing instability than those individuals without substance abuse problems (Kreindler & Coodin, 2010; Zlotnick et al., 1999). Furthermore, "hard to house" individuals living in marginal housing settings often have substance abuse problems (Gurstein & Small, 2005). In terms of physical health, rooming house residents have been found to have poorer physical health, including increased occurrences of certain chronic conditions, in comparison to the general population and other low-income individuals (Hwang et al., 2003).

Based upon this literature, eight individual-level variables will be included in the heuristic model that will be tested: a) age; b) gender; c) social support; d) employment; e) mental health functioning; f) physical health functioning; g) drug use; and h) alcohol use.

Housing

The type of housing that an individual resides in can have great impacts on their feelings of community integration. It has been found that having high quality housing (Nemiroff et al., 2011), increased length of stay in one's apartment (Yanos et al., 2012),

and having choice in deciding where to live (Gulcur et al., 2007) are related to increases in community integration. Outside of the integration literature, housing issues, such as poor quality, have been linked to poor psychological well-being (Evans et al., 2003) and to negative social outcomes (Wells & Harris, 2007). In terms of exiting homelessness, increased lengths of stay in housing have been linked with having shorter periods of homelessness in one's lifetime (Dworsky & Piliavin, 2000; Zlotnick et al., 1999) and living in independent housing rather than congregate settings (Dworsky & Piliavin, 2000; Kreindler & Coodin, 2010).

Based upon this the literature, four housing variables will be included in the model tested in the thesis: a) housing status at present (homeless or housed); b) length of stay in current residence; c) number of homeless episodes; and d) a subjective housing satisfaction index.

Neighbourhood

Perhaps the most common predictors of community integration have involved neighbourhood level variables. As highlighted in the above literature review, several facilitators and barriers to community integration exist. These include neighbourhood disadvantage (e.g., high rates of unemployment) (Brodsky et al., 1999; Yanos et al., 2011), immigrant concentration (Yanos et al., 2007; Yanos et al., 2011), a greater proportion of renters (Trute & Segal, 1976), a lower proportion of low-income individuals (Trute & Segal, 1976), racial diversity, (Segal et al., 1980), home ownership (Brodsky et al., 1999), and satisfaction with the neighbourhood (Townley & Kloos, 2011). Other variables that have been found to have an influence in non-homeless samples include residential stability (Farrell et al., 2004) and apartment type (e.g., high-rise compared to

low-rise) (Weening, Schmidt, & Midden, 1990). For the current study, eight variables were selected for the analysis based on previous research and include: a) percentage of unemployed individuals; b) percentage of low-income households; c) percentage of residents that have moved in the past year (residential stability); d) percentage of households requiring major repairs; e) percentage of recent immigrants in the neighbourhood; f) percentage of high-rise apartments; g) percentage of individuals without high school educations; and h) the subjective impact of the participants' neighbourhood.

Hypotheses

Hypotheses for the two quantitative studies in the thesis are presented according to the three levels of predictor variables (individual, housing, and neighbourhood) and are as follows:

1) Being employed, having higher levels of social support, not having problematic substance use problems, not having alcohol use problems, and having higher levels of physical and mental health functioning will be related to a participant experiencing higher levels of psychological and social integration in his or her community.
2) Being housed with a longer length of stay in that housing, experiencing fewer homeless episodes, and having a higher level of satisfaction with one's housing will be related to a participant experiencing higher levels of psychological and social integration in his or her community.
3) Living in a neighbourhood that has residential stability, a greater proportion of home owners, fewer high-rise apartments, an average immigrant

concentration, fewer buildings that require repairs and satisfaction with the impact of one's neighbourhood and not living in a socioeconomically disadvantaged (e.g., neighbourhood with high unemployment and low-income rates, and high rates of individuals without high school educations) area will be related to a participant experiencing higher levels of psychological and social integration in his or her community.

4) As the robustness of neighbourhood influences on psychological and social integration is well established in the literature, it is hypothesized that neighbourhood level variables will have the most powerful associations with feeling psychologically and socially integrated in one's community.

Figure 1. Model of Psychological Integration

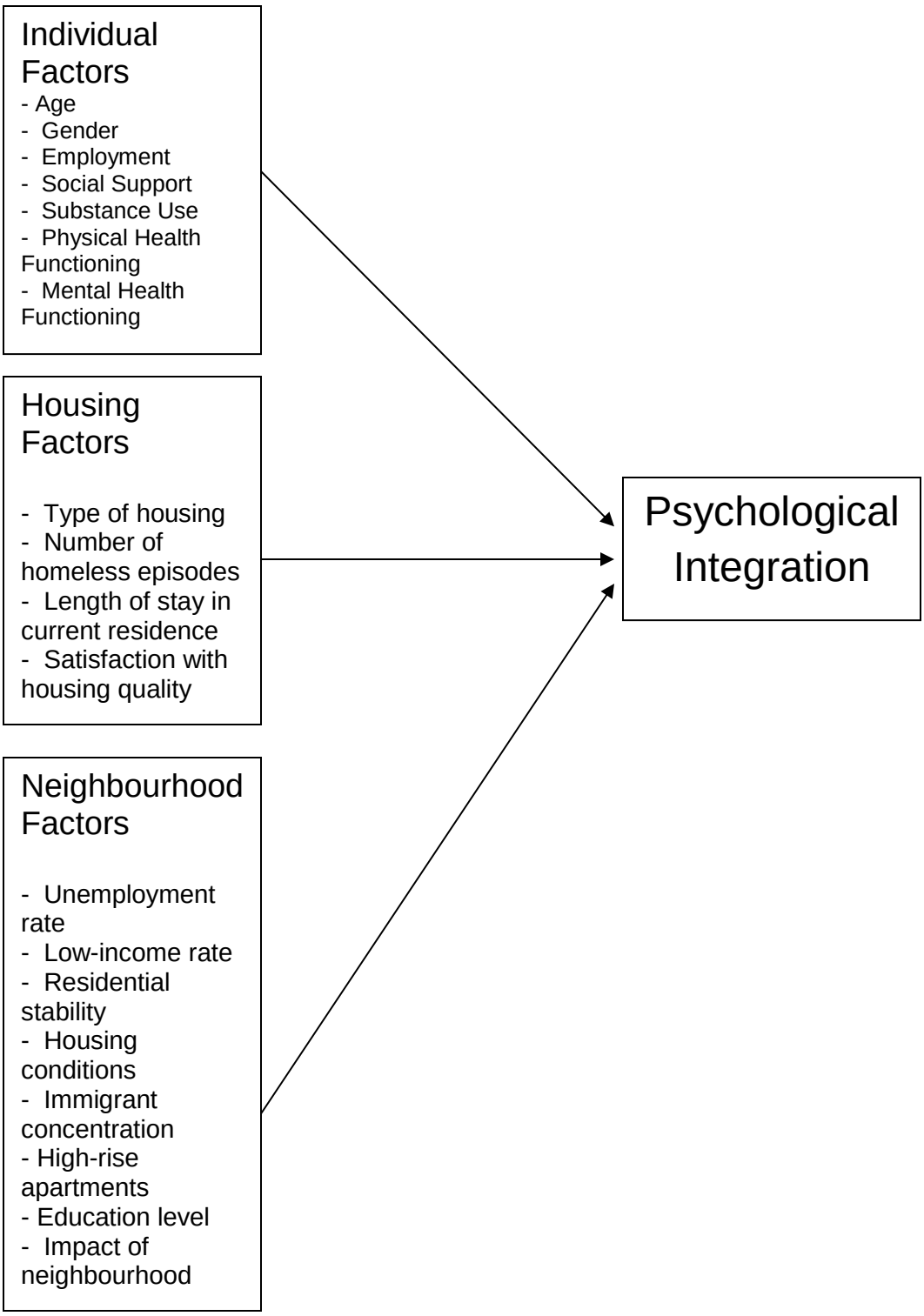
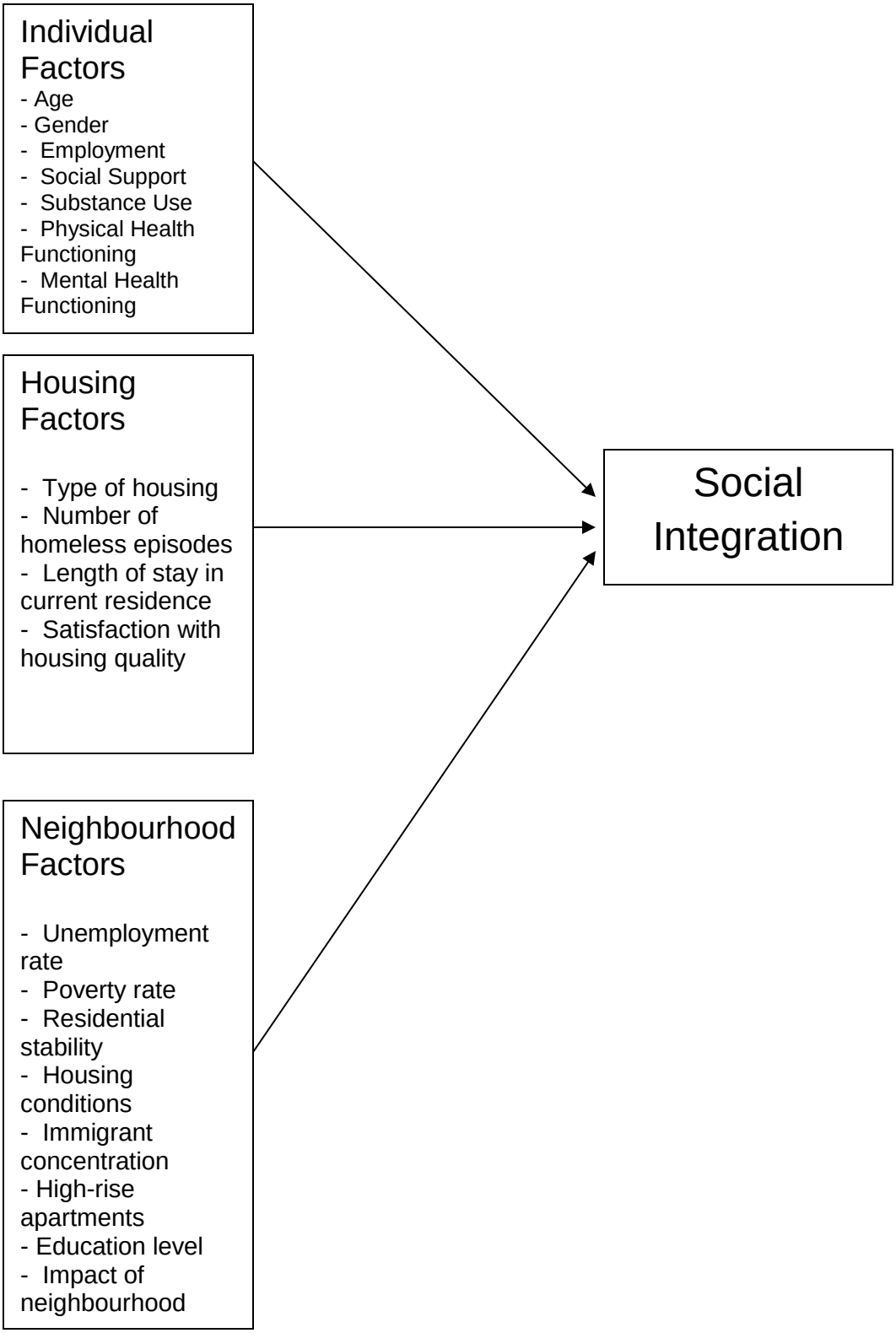


Figure 2. Model of Social Integration



CHAPTER 5

Overview of Current Research

Data for this research comes from the *Health and Housing in Transition* (HHiT) *Study*, a longitudinal study conducted by researchers at the University of Ottawa, St.-Michael's Hospital, and the University of British Columbia. It is a multi-site study involving homeless and vulnerably housed individuals in Ottawa, Toronto, and Vancouver. The Ottawa site is co-ordinated by the Centre for Research on Educational and Community Services at the University of Ottawa. The methodology used in the HHiT study was approved by the Research Ethics Board at the University of Ottawa. The objective of the study is three-fold. The first is to record the housing transitions of participants, specifically homeless individuals who obtained housing and vulnerably housed individuals who lost their housing. The second is to identify the risk factors for housing loses and the resources for obtaining housing. The third is to determine whether housing transitions are associated with changes in physical and mental health functioning. The objectives of the current analysis differ from the objectives of the main study in that community integration is the primary outcome being examined.

I joined the data collection team at the beginning of Follow-up 2 and have since continued on to Follow-up 3 and Follow-up 4. My roles have included interviewer, data entry operator, trainer for new data entry operators, and data cleaner. As a data cleaner, I was responsible for rectifying any inconsistencies found in the databases post-data entry.

In the proceeding section, the HHiT study is described. A more detailed description of the measures and analysis plans are provided in each manuscript.

Participants and Procedure

Data collection for the HHiT study took place in five phases (baseline, Follow-up 1, Follow-up 2, Follow-up 3, and Follow-up 4), from 2008 to 2013. Data from baseline to Follow-up 2 is used for the current analysis. At baseline, participants (*N* = 397) completed in-depth, in-person interviews. Follow-up 1 (*N* = 341) and Follow-up 2 (*N* = 321) interviews were completed primarily in person, with some interviews being conducted via telephone for those individuals no longer living in the Ottawa area. Interviews were conducted by trained research assistants who were students in Psychology or Social Work, or who had experience in interviewing and/or working with individuals who are homeless. Baseline interviews lasted, on average, 68 minutes and ranged from 35 to 180 minutes. Follow-up 1 interviews lasted, on average, 65 minutes and ranged from 23 to 153 minutes. Follow-up 2 interviews lasted, on average, 53 minutes and ranged from 25 to 149 minutes. The majority of interviews across all three time points were conducted in English, with the remainder completed in French.

All participants were over the age of 18 and did not live with a partner or dependent child. An individual was defined as homeless if he or she: (1) lived in a shelter, public place, vehicle, abandoned building, or someone else's place and (2) did not have his or her own place (e.g., house, apartment, or room). An individual was defined as vulnerably housed if he or she: (1) lived in a socially marginalized type of housing (SRO room or rooming house); (2) met the Canadian Mortgage Housing Corporation (CMHC) criteria for "core housing Need" on the basis of having housing costs greater than 30% of their monthly income; (3) had moved at least twice in the past

12 months; or (4) had moved less than twice in the past 12 months, but experienced homelessness in that time.

The sampling plan for individuals who were homeless involved two mutually exclusive groups. The first group included individuals who used homeless shelters and the second group included individuals who were homeless and used meal programs but not shelters. For meal program users, eligibility for recruitment was contingent upon the individual not staying in a shelter in the last 7 days. Potential participants were screened using a brief interview. Individuals who did not meet eligibility requirements received a small honorarium (e.g., public transit ticket) for their time. In Ottawa, all four of the city's four shelters for single persons were used as sampling sites. The number of meal programs was randomly selected based upon the proportion of individuals who are served meals each week. Therefore, out of the twelve meal programs in the city, two were selected for recruitment. The proportion of participants recruited from meal programs was to equal the proportion of adults who are homeless in each city who sleep on the street. The second stage of sampling involved the random selection of individuals in these two settings. Individuals were selected by their bed number or position in the meal line based upon a random numbers list generated by SPSS software.

The sampling plan for participants who were vulnerably housed was based upon official lists of licensed rooming houses garnered from city records and a list of unlicensed rooming houses. Unlicensed sites were identified based upon several resources, including: municipal licenses, building inspection, and public health units that investigate unlicensed/substandard rooming houses; community-based tenant

advocacy and anti-poverty groups; municipal working groups focused on rooming house issues; and health and social service providers that serve the population. Once an official and unofficial list of rooming houses was developed, rooming houses were randomly selected based upon the proportion of the maximum number of residents at each site. The second stage of sampling involved randomly selecting individuals based on their room number, as generated by a random numbers list on SPSS.

Once sampling parameters were established, the recruitment process began. Before participants were recruited, contact was made by phone and mail with managers and directors of the homeless shelters, meal programs, SRO hotels, and rooming houses that had been selected for sampling, in order to provide an outline of what the study entailed. Efforts were made to establish a good working relationship with site operators, through extensive contact efforts and consultations.

Recruited participants were approached by a study coordinator to explain the nature of the study and assess their eligibility and willingness to participate. In some cases, shelter or meal program staff made the initial approach to determine if the individual was willing to speak to the study coordinator. If the individual's capacity to give informed consent was uncertain, the study coordinator used a series of questions approved by the St. Michael's Hospital Research Ethics Board to assess capacity to consent. For those individuals with limited literacy, the research coordinator verbally reviewed the entire consent form in addition to providing a consent form written in plain language for the individual to read. Participants received honoraria of $20.00 for each of the interviews.

Interview Protocol

The interview protocols for the HHiT study comprised of previously validated instruments. Each measure was selected based upon its relevance to and previous success with individuals who are homeless and vulnerably housed, along with its psychometric properties and ease of administration. The protocol included both quantitative and qualitative components. Specific topics that were covered in the protocol included housing history, housing quality, housing impacts, physical health, mental health, substance use, use of health care, social service use, quality of life, social support, community integration, legal involvement, employment, income, and demographic characteristics. Specific measures used in the quantitative studies in this thesis are presented in chapters six and seven. The qualitative questions were interspersed throughout the protocol and participant answers were written down, verbatim, by the interviewer. All responses were entered into a qualitative data entry template in Microsoft Word. These questions are presented in chapter eight.

Chapter nine presents a reflexive investigation of the impact of physical location on the interview process and therefore an interview protocol was not used. The data was generated via my personal research diary and the entries were conducted at the third follow-up of the HHiT study. Without having strict limits as to what to journal, I decided to reflect upon: a) interview quality; b) assessment of the location; c) the impact of location on the quality and authenticity of the interview; d) the comfort of the interviewer or interviewee; and e) general comments. This manuscript is a departure in style from the other three manuscripts. The manuscript uses first person language and

presents personal opinions and observations based upon my experiences as an interviewer.

Neighbourhood Placement

The quantitative studies required that the participants be located within distinct neighbourhoods. This was accomplished by utilizing the address data provided by the participants in the housing history section of the protocol. These addresses were entered into Google Maps in order to identify location and then compared to online maps provided by the Ottawa Neighbourhood Study (ONS) to locate each participant in a neighbourhood. The placement in a neighbourhood allowed for objective neighbourhood indicators to be drawn from the ONS database. The ONS was initiated to better define the neighbourhoods in Ottawa and map social determinants of health indicators within each neighbourhood (Ottawa Neighbourhood Study, 2009). Neighbourhood boundaries were created using an iterative process, including real estate maps and city planning department knowledge. In total, 107 neighbourhoods were included. Objective indicators were created using 2006 Canadian Census data, DMTI Enhanced Points of Interest (software used for location-based services), City of Ottawa municipal data, and National Capital Commission data. For the current study, five variables were selected from the Ottawa Neighbourhood Study. Each of these variables were created using 2006 Canadian Census definitions.

Of the 341 respondents at FU1, 293 individuals were coded into a neighbourhood. Of the 48 individuals who could not be coded into a neighbourhood, four were a result of a missing address and 44 were a result of not living in Ottawa, being in hospital, or being in jail. Of the 321 respondents at FU2, 272 individuals were

coded into a neighbourhood. Of the 49 individuals who could not be coded into a neighbourhood, one was a result of a missing address and 48 were a result of the individual not living in Ottawa, being in hospital, or being in jail.

CHAPTER 6

Predictors of Psychological Integration

Contributions

The data for the study presented in the manuscript were collected as part of the *Health and Housing in Transition* (HHiT) study. Dr. Tim Aubry served as a co-Principal Investigator for the HHiT study and supervised the doctoral thesis research presented in this manuscript. Mr. John Ecker developed the research presented in this manuscript and helped to conduct interviews with the participants in the study, as well as conducting data entry, data cleaning, and data analysis.

Acknowledgements

Funding for the *Health and Housing in Transition* study was provided by the Canadian Institutes of Health Research (CIHR). John Ecker was supported by a grant from the Social Sciences and Humanities Research Council (SSHRC).

Individual, Housing, and Neighbourhood Level Predictors of Psychological Integration Among Vulnerably Housed and Homeless Individuals

John Ecker & Tim Aubry

University of Ottawa

Ottawa, Ontario, Canada

John Ecker, Doctoral Candidate in Experimental Psychology, University of Ottawa & Centre for Research on Educational and Community Services

Abstract

The current longitudinal study evaluated the individual, housing, and neighbourhood level predictors of feeling psychologically integrated within one's neighborhood among a population of homeless and vulnerably housed individuals. Participants were recruited at homeless shelters, meal programs, and rooming houses in Ottawa and participated in three in-person interviews, each approximately one year apart. Prospective and cross-sectional predictors of psychological integration at Follow-up 1 and Follow-up 2 were examined. There were 397 participants at baseline, 341 at Follow-up 1 and 320 at Follow-up 2. A hierarchical multiple regression uncovered several significant predictors of psychological integration. The most salient and common predictors were being older, having greater social support, living in high quality housing, and residing in a neighbourhood with a positive impact. Implications for service provision and policy advancements to increase psychological integration among homeless and vulnerably housed individuals are discussed.

Community integration is a benchmark within community psychology, originally thought to encompass two elements: physical integration (the literal physical placement of an individual within the community) and social integration (the interaction of devalued individuals with valued individuals in the community) (Wolfensberger, 1972). Aubry and Myner (1996) and Wong and Solomon (2002) added a third component – psychological integration. Psychological integration is premised upon the concept of "sense of community", defined as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillian & Chavis, 1986, p.9).

Research on psychological integration among homeless and vulnerably housed individuals often focuses on integration as an outcome of housing and support programs (e.g., Gulcur, Tsemberis, Stefancic, & Greenwood, 2007; Townley & Kloos, 2011; Yanos, Barrow, & Tsemberis, 2004). Housing and support programs can help newly re-housed individuals find belongingness in their communities. However, the experience of community integration for homeless and vulnerably housed individuals has been a widely neglected research area. Although homeless and vulnerably housed individuals lack permanent and stable housing and are at a constant risk of transiency, they are undoubtedly influenced by the communities they live in. The current study recognizes the exclusion of these groups and investigates psychological integration (based upon locality, specifically, neighbourhood location) among a non-clinical sample

of homeless and vulnerably housed[2] individuals. A model incorporating individual, housing, and neighbourhood-level variables on psychological integration is utilized.

Literature Review

Predictors of Psychological integration Among Formerly Homeless Individuals

Individual-level predictors. For individual-level factors, being employed or participating in meaningful activities within one's building or neighbourhood was associated with higher levels of psychological integration (Yanos, Felton, Tsemberis, & Frye, 2007) and lower levels of psychological integration were related to higher psychopathology (Gulcur et al., 2007). Interestingly, one study found no significant associations among individual, clinical, and service level variables and the amount of change in psychological integration from baseline to six months for formerly homeless individuals receiving supported housing (Stergiopoulos et al., 2014); however, participants who resided in independent housing had significant improvements in psychological integration after six months than participants not in independent housing. (Stergiopoulos et al., 2014).

Housing-level predictors. Housing-level variables have been investigated to a lesser extent. When considering specific elements of psychological integration, formerly homeless individuals receiving supported housing services (independent housing with off-site support) were more likely to feel at home where they live and feel that they belong there than individuals receiving standard community care (Patterson,

[2] Vulnerable housing is defined using criteria developed by the Canadian Mortgage and Housing Corporation (CMHC) for identifying individuals having "core housing needs". It includes individuals living in housing that that falls below adequacy, affordability, and suitability standards (CMHC, 2010). This involves having housing that requires major repairs (adequacy), paying more than 30% of one's income on housing (affordability), and not having enough bedrooms for the size and makeup of one's household (suitability). Within the current study, the majority of vulnerably housed individuals lived in rooming houses that typically failed to meet one or more of these criteria.

Moniruzzaman, & Somers, 2014). However, supported housing residents living in independent apartments were no more likely to know the people that lived near them compared to a standard care group (Patterson et al., 2014).

Community-level predictors. Several community-level variables appear to facilitate psychological integration among homeless individuals who attain housing. Community-level facilitators of increased psychological integration include a "match" between one's race/ethnicity and the neighbourhood's (Yanos et al., 2004), social cohesion/neighbour relations in the neighbourhood (Yanos et al., 2007), a higher immigrant concentration (Yanos, Stefancic, & Tsemberis, 2011), and the perceived quality of the neighbourhood (Yanos et al., 2011). Barriers to psychological integration include living in a disadvantaged neighbourhood (e.g., high proportion of households receiving public assistance, high proportion of households at or below the poverty line) (Yanos et al., 2011) and having a greater concentration of immigrants in the neighbourhood (Yanos et al., 2007).

Psychological Integration Among Low-income and Vulnerably Housed Individuals

Brodsky (1996) provides an alternative understanding of psychological integration and states that there has been little consideration given to individuals experiencing a negative sense of community. By conducting qualitative interviews with low-income women in "risky" neighbourhoods, she found that one of the barriers to community membership was their lack of physical and emotional safety in their neighbourhoods. Some participants purposefully created a divide between themselves and the community as a means to keep their children safe from negative influences.

Furthering her own work, Brodsky, O'Campo, and Aronson (1999) examined the individual- and community-level variables associated with psychological integration for individuals living in low-income, inner-city neighbourhoods. At the individual level, increased age was related to a positive sense of community and for those households with children, a negative association with community integration emerged.

For community-level variables, positive associations with psychological sense of community were linked to regular attendance to places of worship, involvement in neighbourhood organizations, higher voter registration and higher rates of community involvement (Brodsky et al., 1999). Community involvement variables were inversely related to psychological sense of community and these included greater concerns about the worsening condition of the neighbourhood. Several community-level socioeconomic variables were inversely associated with having a greater level of psychological sense of community: a larger average household size, a higher neighbourhood population density, a higher percentage of residents not in the labour force, and a higher per capita income. Positively related variables included higher percentages of owner-occupied housing.

Lastly, Nemiroff, Aubry, and Klodawsky (2011) investigated the influence of housing, employment, social support and personal characteristics on psychological integration among a sample of formerly homeless women. Significant individual predictors offing her levels of psychological integration included having dependent children, having higher quality housing, spending a shorter period of time in one's current housing, and having more interactions with neighbours.

Proposed Model of Psychological Integration

The preceding literature review demonstrated the variety of factors that influence psychological integration for formerly homeless and vulnerably housed individuals. The model of psychological integration tested in the current study is based upon the work of Aubry and Myner (1996), Wong and Solomon (2002), and Yanos et al. (2007). Aubry and Myner (1996) and Wong and Solomon (2002) each propose multi-dimensional representations of community integration (e.g., physical integration, psychological integration, and social integration). Wong and Solomon (2002) and Yanos et al. (2007) both advocate the use of multilevel factors when assessing psychological integration. The current study modifies the work of the aforementioned authors and tailors it to a homeless and vulnerably housed population. The proposed predictors (individual, housing, and neighbourhood-level) of psychological integration are based on previous research and discussed in detail below. Figure 1 presents the heuristic model and the specific predictive variables found within each level.

Predictors

Individual. As previously stated, higher levels of psychological integration are associated with being employed (Yanos et al., 2007) and being older (Brodsky et al., 1999). Considering inverse relationships, higher levels of psychopathology are related to lower psychological integration (Gulcur et al., 2007). Gender may also play an important role, as low-income women may experience psychological integration differently than men (Brodsky, 1996).

Substance use, physical health, and social support may also influence psychological integration among homeless and vulnerably housed individuals.

Homeless individuals with substance abuse problems are more likely to experience periods of housing instability than those individuals without substance abuse problems (Kreindler & Coodin, 2010; Zlotnick, Robertson, & Lahiff, 1999). Furthermore, "hard to house" individuals living in marginal housing settings often have substance abuse problems (Gurstein & Small, 2005). In terms of physical health, rooming house residents report poorer physical health in comparison to the general population and other low-income individuals (Hwang, Martin, Tolomiczenko, & Hulchanski, 2003). When considering populations receiving support within the community, Prince and Prince (2002) found that having high levels of social support resulted in increased psychological integration. Their sample included individuals with serious mental illness living in the community and receiving Assertive Community Treatment services.

Based upon this literature, eight individual-level variables are included in the current model: a) age; b) gender; c) social support; d) employment; e) mental health functioning; f) physical health functioning; g) drug use; and h) alcohol use.

Housing. Psychological integration is also influenced by housing characteristics. In particular, having higher quality housing (Nemiroff et al., 2011), living in housing for a shorter period of time (Nemiroff et al., 2011), and having choice in deciding where to live (Gulcur et al., 2007) are all related to higher levels of psychological integration. Within the general population, poor quality housing is linked to lower levels of psychological well-being (Evans et al., 2003) and to negative social outcomes (Wells & Harris, 2007). Lastly, homeless individuals exiting homelessness into stable housing were found to have longer tenancies if they had shorter periods of homelessness in their lifetime

(Dworsky & Piliavin, 2000; Zlotnick et al., 1999) and live in independent housing rather than congregate settings (Dworsky & Piliavin, 2000; Kreindler & Coodin, 2010).

Based upon this the literature, four housing variables are included in the present model: a) housing status at present (homeless or housed); b) length of stay in current residence; c) number of homeless episodes in the past year; and d) subjective perception of housing quality[3].

Neighbourhood. The most common predictors of psychological integration have involved neighbourhood-level variables. Several variables are related to higher levels of psychological integration among formerly homeless individuals and vulnerably housed individuals: lower rates of unemployment (Brodsky et al., 1999; Yanos et al., 2011), higher levels of immigrant concentration (Yanos et al., 2007; Yanos et al., 2011), and higher levels of home ownership (Brodsky et al., 1999).

Samples that focused on the general population found that higher levels of psychological integration were related to residing in neighbourhoods with a higher proportion of low rise residential buildings in the neighbourhood (Weening, Schmidt, & Midden, 1990) and greater residential stability in the neighbourhood (Farrell, Aubry, & Coloumbe, 2004). Samples focused on individuals with serious mental illness found that higher levels of satisfaction with the neighbourhood were associated with increased psychological integration (Townley & Kloos, 2011).

[3] It is acknowledged that a subjective assessment of housing quality could feasibly be placed within the individual-level predictors, due to its subjectivity. However, it was decided to include it in the housing-level variables since it tapped into the overall quality of one's housing, not the subjective impact of the housing quality that it may have on the lives of the participants. Furthermore, the other housing indicators were all objective and it was decided that a subjective account of the participants' housing would allow for a more comprehensive housing analysis. .

Based upon this literature, eight community-level variables were selected for the current analysis. These were percentage of: a) unemployed individuals in the neighbourhood; b) low-income households in the neighbourhood; c) residents that have moved in the past year (residential stability); d) households requiring major repairs in the neighbourhood; e) recent immigrants in the neighbourhood; f) buildings that are high-rise apartments in the neighbourhood; g) individuals without high school educations in the neighbourhood; and h) the subjective impact of the neighbourhood on the participants[4].

Hypotheses

Hypotheses are presented based upon the three levels of predictor variables (individual, housing, and neighbourhood) and are in relation to increased psychological integration: 1) Being employed, having higher levels of social support, not having problematic substance use problems, not having alcohol use problems, and having higher levels of physical and mental health functioning; 2) Being housed, having a longer length of stay in one's current housing situation, experiencing fewer homeless episodes, and having a higher level of satisfaction with one's housing; 3) Living in a neighbourhood that has residential stability, a lower proportion of renters, a lower proportion of recent immigrants, a lower proportion of individuals without a high school education, fewer buildings that require repairs and being satisfied with the impact of one's neighbourhood and not living in a socioeconomically disadvantaged area; and 4)

[4] It is acknowledged that the subjective impact of the neighbourhood could be included within the individual-level variables. It was decided to place this variable in the neighbourhood-level block of predictors, as subjective accounts of neighbourhoods have been neglected within many neighbourhood-level studies (O'Campo et al., 2015). Including both objective and subjective indicators within this block of predictors allows for a more comprehensive neighbourhood-level analysis.

Neighbourhood level variables will have the strongest associations with feeling psychologically integrated.

Methods

Data for this research comes from the *Health and Housing in Transition* (HHiT) *Study*, a longitudinal study conducted by researchers at the University of Ottawa, St.-Michael's Hospital, and the University of British Columbia. It is a multi-site study involving about 1200 homeless and vulnerably housed individuals with approximately 400 individuals from Ottawa, Toronto, and Vancouver.

The methodology used in HHiT was approved by the Research Ethics Boards at the University of Ottawa, St.-Michael's Hospital in Toronto, and St.-Paul's Hospital in Vancouver. The objective of the study is three-fold: 1) record the housing transitions of participants; 2) identify the risk factors for housing losses and the resources for obtaining housing; and 3) determine whether housing transitions are associated with changes in physical and mental health functioning. Only data from the Ottawa site is used for the current study, as the availability of rich neighbourhood-level data from the Ottawa Neighbourhood Study was limited to just Ottawa. As well, the three cities are not comparable in terms of several indicators, most notably the number of homeless shelters present and the affordability of independent housing.

Participants and Procedure

Data collection for the HHiT study took place in three phases (baseline, Follow-up 1, Follow-up 2), from 2008 to 2011. At baseline, participants (N = 397) completed in-depth, in-person interviews. Follow-up 1 (FU1) (N = 341; 85%) and Follow-up 2 (FU2) (N = 321; 81%) interviews were completed primarily in person, with some interviews

being conducted via telephone for those individuals no longer living in the Ottawa area. Interviews were conducted by trained Research Assistants who were students in Psychology or Social Work, or who had experience in interviewing and/or working with individuals who are homeless. Baseline interviews lasted, on average, 68 minutes. Follow-up 1 interviews lasted, on average, 65 minutes. Follow-up 2 interviews lasted, on average, 53 minutes. The majority of interviews across all three time points were conducted in English [*N* = 380 (95.7%) (baseline); *N* = 330 (96.7%) (FU1); *N* = 306 (95.3%) (FU2)], with a small number [*N*= 17 (4.3%) (baseline); *N* = 11(3.3%) (FU1); *N* = 15 (4.7%) (FU2)] completed in French[5].

Two stages of sampling were conducted for participant recruitment. In the first stage, the primary sampling units (shelters, meal programs, SRO hotels, and rooming houses) were randomly selected. The second stage involved the random selection of individuals from the primary sampling units. The targeted number of vulnerably housed individuals could not be attained due to difficulty with gaining access to residents. Therefore, the recruitment sites of vulnerably housed individuals were enhanced to include drop-in centres, community health centres, and the aforementioned meal programs.

All participants were over the age of 18 and did not live with a partner or dependent child. An individual was defined as homeless if he or she: (1) lived in a shelter, public place, vehicle, abandoned building, or someone else's place and (2) did not have his or her own place (e.g., house, apartment, or room). An individual was defined as vulnerably housed if he or she: (1) lived in a socially marginalized type of

[5] The hierarchical multiple regressions were run with and without the French participants at FU1 and FU2 to determine if language impacted the results. Results demonstrated no differences when French participants were included or excluded.

housing (SRO room or rooming house); (2) met the Canadian Mortgage Housing Corporation (CMHC) criteria for “core housing need” on the basis of having housing costs greater than 30% of their monthly income; (3) had moved at least twice in the past 12 months; or (4) had moved less than twice in the past 12 months, but experienced homelessness in that time. Participants received honoraria of $20 for each interview.

Interview Protocol

The interview protocols for the HHiT study comprised of previously validated instruments. Measures were selected based upon relevance to and previous use with homeless and vulnerably housed individuals, along with their psychometric properties and ease of administration. The protocol included both quantitative and qualitative components.

Measures

Predictors.

Individual Characteristics.

Employment. Employment status was operationalized as having worked, either full-time or part-time, within the past year. This variable was assessed via the question: “In the past 12 months, did you work at a paid job?” The variable was dichotomized, in that participants who worked were coded as “1” and participants who have not worked were coded as “0”.

Social Support. The Social Provisions Scale (SPS) (Cutrona & Russell, 1987) is a 24-item scale measuring the degree to which consumer’s social relationships provide social support. There are six dimensions assessing attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance. It is a

self-report measure and items are scored on a four-point rating system, from “strongly agree” (1) to “strongly disagree” (4). The items are summed to obtain the total score, with higher scores indicating stronger social support. It is based upon the consumer’s current situation. The HHiT used an abbreviated 8-item version of the scale to generate the total score. Therefore, the minimum score a consumer could receive was 8 and the maximum was 32. Cutrona, Russell, and Rose (1984) found internal consistency ratings of the scale to be α= .70 and test-retest reliability coefficients ranging from r = .37 to .66. The internal consistency ratings in the current study were .77 at baseline, .81 at FU1 and .81 at FU2.

Substance Use.

DAST-10.The Drug Abuse Screening Tool-10 (DAST-10) is a shortened version of the Drug Abuse Screening Tool (DAST) (Skinner, 1982). It is a self-report scale that provides a quantitative indication of problematic drug use based upon the participant’s use in the past 12 months. Total scores range from 0 to 10, with a score of 3 or more indicating a strong likelihood of problematic drug use and a score of 6 or more indicating substantial drug problems (Skinner, 1982). It has shown great utility in studies involving vulnerable populations (Maisto, Carey, Carey, Gordon, & Gleason, 2000). It has demonstrated a respectable internal consistency of r = .86 and a good test-retest reliability of ICC = .71 (Cocco & Cary, 1998). The internal consistency ratings in the current study were .70 at baseline, .85 at FU1 and .83 at FU2.

This variable was dichotomized based upon the scoring cut off of 6, which indicates substantial drug problems (Skinner, 1982). Therefore, non-problematic drug

use was coded as “0” and corresponded with a score of 5 or less. Problematic drug use was coded as “1” and corresponded to a score of 6 or more.

AUDIT. The Alcohol Use Disorders Identification Test (AUDIT) was developed by the World Health Organization. It is a 10-item scale that assesses alcohol intake, dependence, and adverse consequences based upon a participant’s use in the past 12 months (Reinert & Allen, 2002). Eight of the items are based upon a five-point rating scale and two are based upon a three-point rating scale. Total scores of 0 to 7 indicate low risk, scores of 8 to 15 indicate a hazardous level, scores of 16 to 19 indicate a harmful level, and scores of 20 or more indicate dependence. It has found utility in a variety of settings and is equally applicable to both genders and different ethnicities (Reinert & Allen, 2002). It has shown a high internal consistency of r = .85 and a test-retest reliability of r = .64 (Maisto, Conigliaro, McNeil, Kraemer, & Kelley, 2000). Daeppen, Yersin, Landry, Pécoud, and Decrey (2000) reported a slightly higher test-retest reliability of r = .81. The Cronbach’s alpha coefficients for the scale in the current study were.89 at baseline, .91 at FU1 and .90 at FU2.

This variable was dichotomized based upon the scoring cut off of 8, which indicates problematic alcohol use. Therefore, non-problematic alcohol use was coded as “0” and corresponded to a score of 7 or less. Problematic alcohol use was coded as “1” and corresponded to a score of 8 or more.

***Physical and Mental Health Functioning*.** The SF-12 (Ware, Kosinski, & Keller, 1996) is derived from the SF-36 Health Survey, which measures an individual’s subjective general health status. The SF-12 includes 8 concepts commonly represented in health surveys: physical functioning, role functioning physical, bodily

pain, general health, vitality, social functioning, role functioning emotional, and mental health. It is a self-report measure that is based upon an individual's functioning within the previous four weeks of test administration. Results are expressed in terms of a meta-score: the Physical Component Summary (PCS) reflecting physical health functioning and the Mental Components Summary (MCS) reflecting mental health functioning. Scores on items are weighted to produce scores that can range from 0 to 100, with scores higher than 50 indicating above average health status.

The PCS has demonstrated high test-retest reliability among seriously mentally ill patients [ICC =.79 (Salyers, Bosworth, Swanson, Lamb-Pagone, & Osher, 2000)] and the general population [ICC =.89 (Ware et al., 1996)]. The SF-12 also showed strong convergent validity, as demonstrated by individuals with greater numbers of chronic health conditions having lower scores on the PCS and the MCS (Salyers et al., 2000). The internal consistency rating in the current study was .79 at baseline, .82 at FU1, and .83 at FU2.

The test-retest reliability of the MCS has ranged from ICC = .79 among seriously mentally ill patients (Salyers et al., 2000) and *r* = .76 among the general population (Ware et al., 1996). The scale also demonstrated relatively strong validity, as mentally ill patients with no psychiatric hospitalizations in the prior year had higher MCS scores than those with at least one psychiatric hospitalization (Salyers et al., 2000). Similarly, mentally ill patients without substance use disorders had higher MCS scores than mentally ill patients with substance use disorders (Salyers et al., 2000). The internal consistency rating in the current study was .80 at baseline, .82 at FU1, and .83 at FU2.

Housing Characteristics.

The housing status of the participants was assessed using the Housing Timeline Follow-Back Calendar (HTFBC) (Tsemberis, McHugo, Williams, Hanrahan, & Stefancic, 2007). This method asks participants to recount their previous living situations within a specified amount of time. For the current analysis it was two years at baseline and one year since the last interview at FU1 and FU2. A calendar is presented to the participant and they are asked to start with their current living situation and work their way back. The type of residence, length of stay, rent price (if applicable) and subsidy status is noted. This technique allows for the determination of the number of moves, length of homelessness, and housing status of a participant. This measure has demonstrated high test-retest reliability over a two-week period (0.80-0.93) for most residential outcome measures and strong validity as demonstrated by congruency among client and agency reports of client housing statuses (Tsemberis et al., 2007).

Housing status. Current housing status was operationalized into a dichotomous variable. Housed (living in own apartment/house; living with friends or family and paying rent; rooming house; nursing home; supportive housing) was coded as “0” and homeless (homeless shelter; living on the streets; campground, motel or hotel) was coded as “1”. Those currently residing in prison, a medical or psychiatric hospital, boarding home, group home, halfway house or a substance abuse treatment facility were not included in the analysis.

Length of stay in current residence. This continuous variable was created by examining the participants’ number of days in their current housing situation.

Number of homeless episodes in the past year. This continuous variable was created by examining the participants' housing histories. A participant was considered homeless if they were living in a shelter, on the streets, in a motel/hotel or in a campground. The number of homeless episodes, defined as the number of different times a participant moved from being housed to homeless, since the previous year's interview was summed. If a participant was homeless for the entire time, the participant was considered as having one homeless episode.

Housing satisfaction. The total score from the Toro Housing Quality (Toro, Passero Rabideau, Bellavia, Daeschler, Wall, &Thomas, 1997) instrument was used to assess subjective housing satisfaction. This 6-item scale assesses six domains of an individual's current living situation: comfort, safety, spaciousness, privacy, friendliness, and overall quality. Responses are scored on a 7-point scale, ranging from very bad (1) to very good (7). Overall scores range from 6 to 42, with higher scores indicating a higher level of perceived housing quality. Toro et al. (1995) found a test-retest correlation of .81 for the scale amongst a sample of homeless adults. The internal consistency ratings in the current study were .81 at baseline, .91 at FU1 and .90 at FU2.

Neighbourhood Characteristics.

As part of the housing history questions, participants were asked to provide their current address or location of residence. These addresses were entered into Google Maps in order to identify their physical location and then compared to online maps provided by the Ottawa Neighbourhood Study (ONS) to locate each participant within the boundary of a neighbourhood. The placement in a neighbourhood allowed for objective neighbourhood indicators to be drawn from the ONS database. The ONS was

initiated to better define the neighbourhoods in Ottawa and map social determinants of health indicators within each neighbourhood (Ottawa Neighbourhood Study, 2009). Neighbourhood boundaries were created using an iterative process, including real estate maps, community team member knowledge, and city planning department knowledge. In general, the neighbourhoods are much smaller than the census profiles provided by the Canadian census.

In total, 107 neighbourhoods were included. Objective indicators were created by the ONS using 2011 Canadian Census data, DMTI Enhanced Points of Interest (software used for location-based services), City of Ottawa municipal data, and National Capital Commission data. For the current study, seven variables were selected from the ONS and are described below. The eighth neighbourhood-level variable is subjective and was taken from the HHiT survey protocol.

Of the 341 respondents at FU1, 293 individuals were coded into a neighbourhood. Of the 48 individuals who could not be coded into a neighbourhood, four were a result of a missing address and 44 were a result of not living in Ottawa, being in hospital, or being in jail. Of the 321 respondents at FU2, 272 individuals were coded into a neighbourhood. Of the 49 individuals who could not be coded into a neighbourhood, one was a result of a missing address and 48 were a result of the individual not living in Ottawa, being in hospital, or being in jail.

Percentage of unemployed individuals*.* The number of unemployed individuals in the neighbourhood was divided by the number of individuals in the labour force in the neighbourhood and multiplied by 100 to obtain this variable (Statistics Canada, 2007).

Percentage of residents that have moved in the past year (residential stability). This was calculated by looking at a person's usual place of residence on Census Day and his or her usual place of residence one year earlier. A person was classified as a "mover" if a difference existed. The percentage of "movers" among total households in the neighbourhood was used for the current analysis and derived by dividing the number of "movers" in the Census tract by the total number of individuals in the neighbourhood (Statistics Canada, 2007).

Percentage of low-income households. This variable is operationalized as the proportion of households with "families or persons not in economic families spend 20% more than average of their before tax income on basic needs such as food, shelter, and clothing" (Statistics Canada, 2007). The number of households who answered affirmatively to this question was divided by the total number of households in the neighbourhood to determine the percentage of low-income households (Statistics Canada, 2007).

Percentage of households requiring major repairs. Respondents were asked whether, in their own judgment, their dwelling required any major repairs excluding desirable remodelling or additions. The number of households who answered affirmatively to this question was divided by the total number of households in the neighbourhood to determine the percentage of households requiring major repairs (Statistics Canada, 2007).

Percentage of high-rise apartments. This variable refers to the structural characteristics and/or dwelling configuration of the residence. Possible classifications include a single-detached house, an apartment in a high-rise building (five stories or

higher), a row house, a mobile home, etc. (Statistics Canada, 2007). For the current analysis, the percentage of high-rise apartment among total households in the neighbourhood was used.

Percentage of recent immigrants. This variable refers to the percentage of persons in the neighbourhood who settled in Canada less than five years ago. The number of persons who fit this description was divided by the total number of individuals in the neighbourhood to attain this percentage (Statistics Canada, 2007).

Percentage of individuals without a high school education. This variable refers to the percentage of persons in the neighbourhood who did not graduate from high school. The number of persons who fit this description was divided by the total number of individuals in the neighbourhood to attain this percentage (Statistics Canada, 2007).

Neighbourhood impact. Satisfaction with the impact of one's neighbourhood was based upon a single item from the Quality of Life for Homeless and Hard-to-House Individuals scale (Hubley, Russell, Gadermann, & Palepu, 2009). Participants were asked to rate the kind of impact/effect that their neighbourhood had on them. Responses are scored on a 7-point scale, ranging from large negative impact/effect (1) to large positive impact/effect (7). No reliability statistics have been documented for this particular scale.

Predicted Variable

Psychological Integration. Psychological integration was measured at FU1 and FU2 using a 6-item version of the sense of community scale used by Farrell et al. (2004). The original scale includes 14-items, but the scale was reduced to six items

due to relevance of items to the population and for overall survey length concerns. The scale was developed based upon the definition of sense of community by McMillan and Chavis (1986). It assesses a participant's perception of their sense of belonging in their neighbourhood, as well as neighbourhood safety, availability of support, and emotional investment in the neighbourhood.

Sample items include, "There are people in this neighbourhood who really care about me" and "I like to think of myself as similar to the people who live in this neighbourhood." Response options range from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The possible total score ranges from 6-30, with higher scores representing greater psychological integration. Farrell et al. (2004) report internal consistency of α=.72 for the 14-item scale. The internal consistency ratings in the current study were .78 at FU1 and .79 at FU2. The internal consistency rating at baseline is not presented as it was not included in the protocol at this time point.

Data Analysis

The main question asked for this study is what predicts psychological integration at FU1 and what predicts psychological integration at FU2? To answer this question, two sequential multiple regressions were conducted. One predicted psychological integration at FU1 and the second predicted psychological integration at FU2. For each of the multiple regressions, the predictor variables were entered in three blocks. The first block included the individual variables, the second block included the housing variables, and the third block included the neighbourhood variables.

Due to the nature of the design, which includes analyses at two time points, it is acknowledged that the analysis has the potential of an inflated risk of Type I error

because some variables may only be significant at one time point. Since a strength of the design is the replication process that is being utilized, greater attention was given to those variables that were significant at both periods. Furthermore, a lower alpha level of .01 was used.

An important consideration for this study was the longitudinal nature of the data. Since the psychological integration scale is contingent upon a participant's current residence (FU1 or FU2), it therefore made sense to include all variables based upon one's current housing location (FU1 or FU2). One of the housing variables (number of episodes of homelessness in the past year) and one of the individual variables (employment) were aggregated over the one-year period.

An a priori power analysis was conducted using G*Power 3 (Faul, Erdefelder, Lang, & Buchner, 2007) in order to justify the number of predictor variables as compared to the overall sample. In order to detect a medium effect size (f^2=.15) for a regression equation with 20 predictor variables with power =.80 and an α set at .01, a sample size of N = 207 is needed. Therefore, both the FU1 and FU2 samples are considered to have sufficient power to detect a medium effect for relationships between predictor and predicted variables.

Data Screening

Data was screened for missing values and violations of the assumptions for regression analyses. No variables exceeded having 10% missing values and there was an appropriate ratio of cases to independent variables. The FU1 and FU2 analyses both had limited univariate and multivariate outliers. Transformations were performed, however, as overall results did not differ from those obtained using untransformed

variables, the untransformed variables were retained. Similarly, the inclusion of the multivariate outlier did not affect the results and hence was retained in the analysis.

Multicollinearity was an issue for both analyses. Specifically, several neighbourhood-level variables were highly correlated with one another and had high Variance Inflation Factor values. To fix this situation, a composite variable was created for the affected variables (low-income, unemployment, immigration, education). Similar to Yanos et al. (2007), the standardized scores of these four variables were summed to create a “neighbourhood socioeconomic index” variable. Linearity and heteroscedasticity were not issues.

To further justify the creation of the composite neighbourhood variable, a principle components analysis was conducted at both FU1 and FU2. Two factors obtained eigen values greater than 1.0 at both time points. These factors accounted for 46.5% and 31.3% at FU1 and 45.3% and 30.7% at FU2. One of these factors supported the hypothesized structure of the newly created neighbourhood socioeconomic index and this occurred at both time points.

An Oblimin rotation with Kaiser normalization was then performed on factor analyzed variables at both time points. Factor 1 (the neighbourhood socioeconomic index) included the unemployment, low-income, immigration, and high school education variables, with factor loadings of .92, .80, .89, and .88 at FU1 and .89, .82, .85, and .83 at FU2. The second factor included the low-income, residential stability, major repairs, and high-rise apartment variables, with factor loadings of .55, .88, .67, and .77 at FU1 and .49, .90, .53, and .80 at FU2. The very high factor loadings for the neighbourhood socioeconomic index composite variable supports its creation. The unexpected

emergence of a second factor with relatively high factor loadings is a surprising finding, as these variables did not correlate highly with one another. Due to the high factor loadings, it was determined that a second neighbourhood composite variable would be created. This variable included residential stability, major repairs, and high-rise apartments and it was labelled as “rental housing impacts”. Low-income was not included as it was cross-loaded with the socioeconomic factor and displayed comparatively lower factor loadings on the housing impacts variable. Similar to the socioeconomic variable, the standardized scores of these three variables were summed to create the “housing impacts index” variable (see Tables 2a and 3a for the correlational matrix).

Respondents at follow-up vs. non-respondents. Respondents at FU1 (n = 341) were compared to non-respondents (n = 56) on the nine individual and four housing variables at baseline to determine if differences existed between the two groups. Neighbourhood variables were not examined as a large proportion of participants had moved since FU1. It was also not possible to examine any differences in psychological integration since it was not included as part of the baseline survey. Significant differences emerged on two variables: housing status and physical health functioning. Respondents were more likely to be housed, χ^2 (1, N = 397) = 16.46, p <.001, and to have poorer physical health functioning, t (381) = 2.43, p < .05 at baseline than non-respondents.

The same analyses were run for respondents at FU2 (n = 321) to non-respondents (n = 76) at baseline. Significant differences emerged on two variables: housing status and length of stay in current housing. Respondents were more likely to

be housed, χ^2 (1, N = 397) = 4.27, p <.05, and to have stayed longer in their current residence, t (303.15) = -3.37, p < .01, at baseline than non-respondents.

Results

Sample Characteristics

Sample characteristics are presented in Table 1a. The sample was predominantly male, White, single, and in their early-40s. Slightly more than half of the sample (56.4%) had a high school education and approximately one-third were employed in the past year. Approximately 25% of the sample had problematic drug use and around 36% had problematic alcohol use. Physical and mental health functioning averages were both below the general population norms, with the sample having particularly lower mental health functioning. At FU1 and FU2, approximately 60% of the sample reported being diagnosed with a mental health problem in their lifetime. Of the individuals who reported a diagnosis, the most common diagnoses were depression (approximately 67%), general anxiety disorder (approximately 30%), bipolar disorder (approximately 18%), and schizophrenia (approximately 13%). The sample had moderate levels of social support. The majority of individuals (72.3 %) were housed at FU1 and this percentage increased in FU2 (81.5%). The average number of homeless episodes was one in FU1 and less than one in FU2. Individuals had lived in their current place of residence for approximately two-thirds of the year in FU1 and for close to a year in FU2. Subjective housing quality was in the moderate range at both time points.

On average, neighbourhoods in which participants lived had low percentages of unemployed individuals [6.6% (FU1), 6.9% (FU2)], recent immigrants [4.0% (FU1) and

4.2% (FU2)], and individuals without a high school education [7.3% (FU1) and 8.1% (FU2)]. Approximately 10% of houses required major repairs and 32% of individuals were considered to be low-income. Approximately 23% of individuals had moved in the past year and 40% of individuals lived in high-rise apartments. The sample had an average neighbourhood impact score indicating a neutral impact on their lives.

Of the 107 possible neighbourhoods in Ottawa, participants were coded into 37 of them at FU1 and 38 of them at FU2. At FU1, 60% of individuals lived in four specific neighbourhoods. These neighbourhoods were generally centrally located and one of the neighbourhoods contained the majority of the city's homeless shelters, meal programs, and drop-in programs. These neighbourhoods also had a slightly higher rate of high-rise apartments (50.3%) and residential mobility (27.4%), than the average of all the neighbourhoods included in the analysis. The remaining characteristics of these four neighbourhoods were similar to that of the other neighbourhoods. At FU2, the percentage of individuals living in these four specific neighbourhoods dropped to 53%.

Levels of psychological integration. At FU1, the mean psychological integration score was 18.54 with a standard deviation of 5.16. Five (1.7%) individuals had the lowest (6) possible score and four (1.4%) individuals had the highest (30) possible score. At FU2, the mean psychological integration score was 18.80 with a standard deviation of 5.09. Four (1.5%) individuals had the lowest (6) possible score and two (0.7%) individuals had the highest (30) score possible. The means at FU1 and FU2 indicate that individuals were reporting psychological integration ratings that fell above the mid-range of the scale that is more in line with being in agreement with items reflecting psychological integration.

Examination of individual items demonstrated interesting trends. When combining the agree and strongly agree (or disagree and strongly disagree) category, 60.6% (FU1) and 66.0% (FU2) of individuals viewed their neighbourhood as safe, 42.7% (FU1) and 43.6% (FU2) thought of themselves as similar to the people who lived in the neighbourhood, 62.2% (FU1) and 63.5% (FU2) felt confident that someone would help them if they needed it in an emergency, 40.1% (FU1) and 47.4% (FU2) planned to remain a resident of the neighbourhood for a number of years, 46.8% (FU1) and 49.0% (FU2) felt that there were people in the neighbourhood who really cared about them, and 36.1% (FU1) and 34.9% (FU2) disagreed that people in their neighbourhood were not friendly.

Hierarchical regression results at FU1. The model was significant at the end of the first step, with the entry of individual-level variables included in the equation, F (8, 252) = 6.87, $p < .001$, $R^2 = .18$ (see Table 4a). Two significant predictors emerged: age, $\beta = .23$, $p < .001$, and social support, $\beta = .28$, $p < .001$. Individuals who were older and individuals who had greater levels of social support reported higher levels of psychological integration.

The second step, with the entry of individual- and housing-level variables in the equation, was also significant, *F change* (4, 248) = 13.17, $p < .001$, $R^2 = .32$. One significant housing predictor emerged: housing quality, $\beta = .41$, $p < .001$. Individuals who assessed their housing as being of higher quality reported higher levels of psychological integration. Age and social support remained significant.

The third step, with the entry of individual-, housing-, and neighbourhood-level variables in the equation, was also significant, *F change* (3, 245) = 20.26, $p < .001$, $R^2 =$

.46. One significant neighbourhood predictor emerged: neighbourhood impact, β = .46, $p < .001$. Individuals who rated their neighbourhood as having a positive impact on them reported higher levels of psychological integration. Age, social support, and housing quality remained significant.

Hierarchical regression results at FU2. The model was significant at the end of the first step, with just the entry of individual-level variables included in the equation, F (8, 224) = 8.90, $p < .001$, $R^2 = .24$ (see Table 4a). Three significant predictors emerged: age, β = .20, $p < .01$, mental health functioning, β = .23, $p < .01$, and social support, β = .24, $p < .001$. Individuals who were older, individuals who had higher mental health functioning, and individuals with greater levels of social support reported higher levels of psychological integration. Physical health functioning approached significance, β = .16, $p = .02$, indicating that there was a trend towards individuals with higher physical health functioning also having higher psychological integration.

The second step, with the entry of individual- and housing-level variables in the equation, was also significant, *F change* (4, 220) = 19.04, $R^2 = .44$. One significant housing predictor emerged: housing quality, β = .50, $p < .001$. Individuals who had higher subjective housing quality reported higher levels of psychological integration. Length of stay approached significance, β = .14, $p = .02$, indicating that there was a trend in the direction of individuals who had longer lengths of stay in their current residence having higher levels of psychological integration. Social support remained significant.

The third step, with the entry of individual-, housing-, and neighbourhood-level variables in the equation, was also significant, *F change* (3, 217) = 11.19, $p < .001$, R^2 =

.51. One significant neighbourhood predictor emerged: neighbourhood impact, β = .37, $p < .001$. Individuals who rated their neighbourhood as having a positive impact on them reported higher levels of psychological integration. Social support and housing quality remained significant.

Discussion

This study examined predictors of psychological integration among a sample of homeless and vulnerably housed individuals. Scores on the psychological integration measure remained consistent from FU1 to FU2 and fell in the midrange of the spectrum. This result is similar to Aubry and Myner (1996), Brodsky et al. (1999), Nemiroff et al. (2011), and Prince and Prince (2002). The scores indicate that, on average, participants had a moderate sense of belonging to their neighbourhoods.

Examination of individual items demonstrated that individuals were more apt to view their neighbourhoods as safe and have confidence that they could acquire assistance if there was an emergency compared to the other items. These findings support Townley and Kloos' (2011) finding that individuals living in neighbourhoods they perceive to be safe have higher psychological integration. The remaining items all had support from less than half of the respondents and focused on feeling similar to others in the neighbourhood, planning long-term residency in the neighbourhood, feeling connected to their neighbours, and neighbourhood friendliness. Differential item responses may indicate that respondents felt safe and assured in their neighbourhoods, but lacked the meaningful connections with those residing in their neighbourhoods and therefore lacked the crucial elements of psychological integration.

The model presented in this study accounted for 46.0% of the variability in psychological integration at FU1 and 51.2% of the variability in psychological integration at FU2. These numbers demonstrate that the models accounted for a great deal of variability in psychological integration and further support the importance of investigating psychological integration through an ecological model (Wong & Solomon, 2002).

Despite the importance of the ecological model, the individual block of variables accounted for the majority of variance in psychological integration at both points and contrary to what was hypothesized, the neighbourhood block of variables accounted for the least amount of variance. The most robust individual predictors to emerge were age and social support. Each of these predictors impacted psychological integration positively, meaning that older individuals and individuals with high levels of social support had higher levels of psychological integration.

The significance of older age replicates findings from Brodsky et al. (1999). Older individuals may be more likely to maintain their current housing (Kreindler & Coodin, 2010) and thus be able to create meaningful bonds within their neighbourhoods. However, length of stay in one's current housing only approached significance at FU2. This puzzling association of older age as a significant predictor but not length in housing was also reported by Brodsky et al. (1999). Brodsky et al. (1999) surmise that older individuals, regardless of length of stay in their residence, develop strong commitments to their neighbourhoods. Thus, older individuals in the current study may also have a stronger association to their neighbourhoods than younger individuals because they are more apt to spend more time close to home and look to

having contact with neighbours. Older individuals may also be less mobile and require more assistance from their neighbours than younger individuals, facilitating an increased opportunity for a bond to develop among neighbours.

These age differences could also be attributed to the societal shifts resulting from the urbanisation of our society. This shift, occurring in the first half of the 20th century, resulted in "a social order in which the traditional ties of community – shared space, close kinship links, shared religious and moral values – were being replaced by anonymity, individualism, and competition" (Forrest & Kearns, 2001). Therefore, neighbourhood interactions may be less important for younger individuals today than for older individuals who may have more traditional ties to the community.

Higher levels of social support resulted in higher psychological integration among the respondents. The finding is supported by the work of Prince and Prince (2002) and makes intuitive sense. The social support that many respondents receive may be from individuals located in their neighbourhoods. It could also be that individuals with high levels of social support are more apt to interact with their neighbours since they have stronger social skills. These social supports may also exist outside of their neighbourhoods, indicating the importance of more relational types of communities (Dalton, Elias, & Wandersman, 2001). The relational ties may not be bound by interactions with neighbours, but instead supports existing in the larger community, such as meal programs and drop-in centres. Social support is very important for individuals experiencing homelessness and vulnerable housing, as enhanced social support has been linked with homeless exits (Thompson, Pollio, Eyrich, Bradbury, & North, 2004; Zlotnick, Tam, & Robertson, 2003). For individuals in the current study that exited

homelessness or were in the process of exiting homelessness, they may be more likely to recognize the continued importance of social support and establish a sense of belonging with their communities.

Two individual-level predictors were significant or approached significance at only FU2. Individuals with better mental and physical health functioning tended to have higher psychological integration. Gulcur et al. (2007) found that higher levels of psychopathology resulted in lower levels of psychological integration, so the positively related relationship in the current study makes intuitive sense. In terms of physical health, the sample in the current study demonstrated lower than average physical health functioning which is in line with previous research (Hwang, 2001). As it relates to psychological integration, individuals with better physical health may be more apt to explore their neighbourhoods than individuals with poor health who may be less interested or too ill to leave their housing.

The block of housing variables also significantly contributed to the variability in the psychological integration scores. Housing quality had a particularly robust influence, as higher quality housing was significantly related to better psychological integration at both time points. Nemiroff et al. (2011) reported similar findings among their sample of formerly homeless women. Poor housing conditions are a major concern for rooming house residents (Mifflin & Wilton, 2005) and poor housing quality has been linked to poor health conditions among rooming house residents (Hwang et al., 2003). Perhaps most salient to the current study is Mifflin and Winton's (2005) finding that rooming house residents often preferred to socialize away from their building and did not want to invite friends to their building due to space constraints and

the quality of the building. Participants in the current study who live in better quality housing may be more apt to stay within their neighbourhoods, invite neighbours into their homes, and develop a sense of belonging compared to individuals living in poor quality housing.

Homeless shelter quality has received less attention, however Elias and Inui (1993) found that some of their older, “hard to house” participants preferred shelter living to residing in poor quality housing accommodations and received more social support in the shelter compared to when they were housed. This has two ramifications. It may indicate that in some cases, some affordable housing is in such disrepair and of poor quality that individuals would prefer to live in emergency shelter settings. It may also indicate that homeless individuals may have difficulties with disaffiliating from their status as a homeless individual upon the acquisition of housing.

Some individuals find it important to maintain ties with their old social networks and neighbourhood (Patterson, Rezansoff, Currie, & Somers, 2013), which could explain why housing status did not significantly predict psychological integration in the current study. Individuals may find it difficult to engage in neighbourhoods where they may feel like an outsider due to their history of homelessness and instead return to areas where they have social connections with individuals with shared experiences.

One housing-level variable approached significance at FU2. Individuals with longer housing tenancies also had higher levels of psychological integration at FU2. This result in is contrast to Nemiroff et al. (2011) who found that shorter tenancies resulted in improved psychological integration. This difference may be attributed to Nemiroff et al.’s (2011) sampling of females exclusively. In the current study, it makes

sense for length of housing to be significant at only FU2, as longer housing tenancies may have allowed for individuals to engage with their neighbourhoods at a greater level than during their transitory periods between baseline and FU1.

As mentioned previously, the set of neighbourhood-level variables had the least significant impact on the variability in psychological integration scores. Subjective neighbourhood impact was the only significant and robust neighbourhood-level predictor. Townley and Kloos (2011) report a similar finding in that individuals more satisfied with their neighbourhoods had greater psychological integration. This is result makes sense, as individuals who enjoy their neighbourhoods should feel a sense of belonging to it and prefer to remain there.

The comparatively small impact of the neighbourhood variables is in contrast to what is reported in previous studies (Brodsky et al., 1999; Townley & Kloos, 2011; Yanos et al., 2004; Yanos et al., 2007; Yanos et al., 2011). The only significant predictor to emerge from the neighbourhood variables was subjective satisfaction with the neighbourhood. As psychological integration is a subjective experience (McMillan & Chavis, 1986), perhaps objective indicators based upon socioeconomic indicators are less salient than how individuals feel about their neighbourhoods. Instead, subjective indicators based upon objective indicators (e.g., “What impact does the unemployment rate in the neighbourhood have on you?”) may provide greater insights.

The lack of neighbourhood significance could also be attributed to the sample in the current study. Much of the previous literature sampled individuals living in supported housing, with some of whom moving to new neighbourhoods (Yanos et al., 2004; Yanos et al., 2007; Yanos et al., 2011). As these studies focused on individuals’

experiences once housed, the combination of new housing and a new neighbourhood could explain the importance of neighbourhood socioeconomic conditions more so than in the current study (e.g., a neighbourhood with a greater concentration of low-income individuals). Furthermore, as part of the supported housing models used in the previous literature, individuals often received a rent subsidy and choice in where they live (Aubry, Ecker, & Jetté, 2014). For individuals in the current study, subsidies were not as common (37% of the sample in housing received a subsidy at FU1 and 39% at FU2) and choice in housing may have been limited due to financial resources. As a result, individuals may have been more accustomed to certain neighbourhood conditions where affordable housing and community resources were present, therefore limiting the influence of socioeconomic indicators on psychological integration.

Lastly, the neighbourhood variables selected may not have been the most appropriate for studying psychological integration. O'Campo et al. (2015) argue that there has been an over-reliance on census-based measures when conducting research on the effects of neighbourhoods. They suggest a broader range of indicators coming from several sectors including justice, transportation, housing, and subjective accounts. They also argue that sampling techniques should be broadened so that neighbourhoods, rather than individuals, are targeted in order to ensure significant representation within each neighbourhood (O'Campo et al., 2015). As it stands now, and what was utilized in the current study, most studies sample individuals first and then link them to their neighbourhoods. Consequently, individuals may end up living in a relatively small number of neighbourhoods with similar characteristics such as in the present study.

Limitations

A primary limitation of this study was the lack of neighbourhood variability. Approximately 60% of individuals were living in four neighbourhoods, one of which housed the majority of the city's main homeless shelters and drop-in services. These neighbourhoods also displayed similar trends on the objective indicators, creating a relatively homogeneous sample of neighbourhoods. This is in part a limitation of the sampling frame used and a reality of where individuals who experienced homelessness or are vulnerably find themselves living. As a result, the findings of this study may not be generalizable to larger cities where low-income housing is present in greater dispersion.

A second limitation was the exclusion of an objective neighbourhood safety variable. Neighbourhood safety is associated with increased psychological integration (Townley & Kloos, 2011) and the crime rates within each neighbourhood were to be included in the analysis. Unfortunately, the crime rate statistics were based upon different neighbourhood boundaries than the Ottawa Neighbourhood Study, making it not possible to examine this variable as a predictor. Future analyses should include this variable.

Lastly, the self-report data may have been vulnerable to the effects of bias or inaccuracy due to memory lapses or defensiveness. In particular, questions about alcohol and drug use may have been underreported. The psychological integration questions may have been particularly difficult for individuals residing in a homeless shelter as trying to define who a neighbour is could be difficult. Prompts were provided in the questioning to ensure that fellow shelter residents were not to be considered

neighbours, but this exclusionary wording may have been in contrast to how they would define a neighbour.

Future Research

Future research on psychological integration for homeless and vulnerably housed individuals should take several directions. Firstly, psychological integration scales tailored to this population should be created in consultation with the population. Integration, neighbourhood, and neighbours may have different connotations for individuals experiencing housing transitions compared to the general public. Secondly, there should be attempts to sample individuals from a wide range of neighbourhoods. Holistic and ecological models should continue to be used, however with objective and subjective neighbourhood indicators. Continued research should be conducted with similar samples of homeless and vulnerably housed individuals. It is important to consider individuals that fall across all ends of the socioeconomic spectrum, not just individuals residing in stable housing.

Implications

The results from this study present several implications for service providers and policy advisors. Younger and socially isolated homeless and vulnerably housed individuals should be encouraged to engage with their neighbours and neighbourhoods. By developing bonds within their communities and acquiring social support, they may reduce the risk of entering homelessness again. One way to facilitate this is to create community events, such as community dinners or mixers, to allow for positive social opportunities to occur. It is also important for housing workers to consider the importance of housing quality when considering housing placements. Although easier

said than done, particularly with the poor stock of good quality affordable housing available, housing of high overall quality should be sought. Service providers should also consider creating specific post-housing service plans to promote socialization within the neighbourhood.

There needs to be a greater emphasis on creating and maintaining affordable housing that is safe, comfortable, provides adequate living space and privacy, in a friendly environment and of high overall quality. It is clear that housing is more than just the physical space it provides. Good quality housing located in a variety of neighbourhoods will lead to a sense of belonging and social opportunities for individuals who may otherwise not have such opportunities. By doing so, formerly homeless and vulnerably housed individuals may find a home and remain stably housed.

References

Aubry, T., Tefft, B., & Currie, R. (1995). Public attitudes and intentions regarding tenants of community mental health residences who are neighbours. *Community Mental Health Journal, 31,* 39-52.

Aubry, T. & Myner, J. (1996). Community integration and quality of life: A comparison of persons with psychiatric disabilities in housing programs and community residents who are neighbours. *Canadian Journal of Community Mental Health, 15* (1), 5-20.

Aubry, T., Ecker, J., & Jetté, J. (2014). Supported housing as a promising Housing First approach for people with severe and persistent mental illness. *Homelessness and Health in Canada*. Guirguis, M., MacNeil, R., & Hwang, S. (Eds.), Ottawa, ON, University of Ottawa Press. 155-188.

Brodsky, A.E. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. *Journal of Community Psychology, 24* (4), 347-363.

Brodsky, A.E., O'Campo, P.J., & Aronson, R.E. (1999). PSOC in community context: Multi-level correlates of a measure of psychological sense of community in low-income, urban neighborhoods. *Journal of Community Psychology, 27* (6), 659-679.

Canadian Mortgage and Housing Corporation. (2010). Definitions: Core housing need status. Retrieved from: http://cmhc.beyond2020.com/HiCODefinitions_EN.html

Cocco, K.M & Carey, K.B. (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. *Psychological Assessment, 10*(4), 408-414.

Cutrona, C., & Russell, D. (1987). The provisions of social relationships and adaptation to stress. In W. H. Jones, & D. Perlman (Eds.), *Advances in personal relationships* (pp. 37–67). Greenwich, CT: JAI Press.

Cutrona, C.E., Russell, D., & Rose, J. (1984). Psychosocial factors and physical and mental health among the elderly. Unpublished manuscript.

Daeppen, J-B., Yersin, B., Landry, U., Pécoud, A., & Decrey, H. (2000). Reliability and validity of the Alcohol Use Disorders Identification Test (AUDIT) imbedded within a general health risk screening questionnaire: Results of a survey in 332 primary care patients. *Alcoholism: Clinical and Experimental Research, 24*(5), 659-665.

Dalton, J.H., Elias, M.J., & Wandersman, A. (2001). *Community psychology: Linking individuals and communities.* Stamford, CT: Wadsworth.

Dworsky, A.L. & Piliavin, I. (2000). Homeless spell exits and returns: Substantive and methodological elaborations on recent studies. *Social Service Review, 74* (2), 193-213.

Elias, C.J. & Inui, T.S. (1993). When a house is not a home: Exploring the meaning of shelter among chronically homeless older men. *The Gerontologist, 33* (3), 396-402.

Evans, G.W., Wells, N.M., & Moch, A. (2003). Housing and mental health: A review of the evidence and a methodological and conceptual critique. *Journal of Social Issues, 59* (3), 475-500.

Farrell, S., Aubry, T., & Coloumbe, D. (2004). Neighborhoods and neighbors: Do they contribute to personal well-being? *Journal of Community Psychology, 32* (1), 9-25.

Faul, F., Erdfelder, E., Land, A-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175-191.

Forrest, R. & Kearns, A. (2001). Social cohesion, social capital and the neighbourhood. *Urban Studies, 38,* 2125-2143.

Gulcur, L., Tsemberis, S., Stefancic, A., & Greenwood, R.M. (2007). Community integration of adults with psychiatric disabilities and histories of homelessness. *Community Mental Health Journal, 43* (3), 211-228.

Gurstein, P. & Small, D. (2005). From housing to home. Reflexive management for those deemed hard to house. *Housing Studies, 20* (5), 717-735.

Hubley, A.M., Russell, L.B., Gadermann, A.M., & Palepu, A. (2009). *Quality of Life for Homeless and Hard-to-House Individuals (QoLHHI) Inventory: Administration and Scoring Manual.* Vancouver, BC: Authors.

Hwang, S. W. (2001). Homelessness and health. *Canadian Medical Association Journal, 164* (2), 229-233.

Hwang, S.W., Martin, R.E., Tolomiczenko, G.S. & Hulchanski, J.D. (2003). The relationship between housing conditions and health status of rooming house residents in Toronto. *Canadian Journal of Public Health, 94* (6), 436-440.

Kreindler, S.A. & Coodin, S. (2010). Housing histories of Assertive Community Treatment clients: Program impacts and factors associated with housing stability. *Canadian Journal of Psychiatry, 55* (3), 150-156.

McMillan, D.W. & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14,* 6-23.

Maisto, S.A., Carey, M.P., Carey, K.B., Gordon, C.M., & Gleason, J.R. (2000). Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with severe and persistent mental illness. *Psychological Assessment, 12,* 186-192.

Maisto, S.A., Conigliaro, J., McNeil, M., Kraemer, K., & Kelley, M.E. (2000). An empirical investigation of the factor structure of the AUDIT. *Psychological Assessment, 12*(3), 346-353.

Mifflin, E. & Wilton, R. (2005). No place like home: Rooming houses in contemporary urban context. *Environment and Planning A, 37,* 403-421.

Nemiroff, R., Aubry, T., & Klodawsky, F. (2011). From homelessness to community: Psychological integration of women who have experienced homelessness. *Journal of Community Psychology, 39* (8), 1003-1018.

O'Campo, P., Wheaton, B., Nisenbaum, R., Glazier, R.H., Dunn, J.R., & Chamber, C. (2015). The neighbourhood effects on health and well-being (NEHW) study. *Health & Place, 31,* 65-74.

Ottawa Neighbourhood Study. (2014). Retrieved from http://neighbourhoodstudy.ca/neighbourhood-maps-2011/

Patterson, M.L., Rezansoff, S., Currie, L., & Somers, J.M. (2013). Trajectories of recovery among homeless adults with mental illness who participated in a randomised controlled trial of Housing First: A longitudinal, narrative analysis. *BMJ Open, 3,* 1-8.

Patterson, M.L., Moniruzzaman, A., & Somers, J.M. (2014). Community participation and belonging among formerly homeless adults with mental illness after 12 months of Housing First in Vancouver, British Columbia: A randomized controlled trial. *Community Mental Health Journal, 50,* 604-611.

Prince, P.N. & Prince, C.R. (2002). Perceived stigma and community integration among clients of assertive community treatment. *Psychiatric Rehabilitation Journal, 25* (4), 323-331.

Reinert, D.F. & Allen, J.P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism: Clinical and Experimental Research, 26*(2), 272-279.

Salyers, M.P., Bosworth, H.B., Swanson, J.W., Lamb-Pagone, J., & Osher, F.C. (2000). Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care, 38*(11), 1141-1150.

Segal, S.P., & Aviram, U. (1978). *The mentally ill in community-based sheltered care: A study of community care and social integration.* New York: John Wiley & Sons.

Skinner, H.E. (1982). The Drug Abuse Screening Test. *Addictive Behaviors, 7,* 363-371.

Stergiopoulos, V., Gozdzik, A., O'Campo, P., Holby, A.R., Jeyaratnam, J., & Tsemberis, S. (2014). Housing First: Exploring participants' early support needs. *BMC Health Services Research, 14,* 167.

Statistics Canada. (2007). Census definitions. Retrieved from: http://www12.statcan.ca/census-recensement/2006/ref/dict/azindex-eng.cfm

Thompson, S.J., Pollio, D.E., Eyrich, K., Bradbury, E., & North, C.S. (2004). Successfully exiting homelessness: Experiences of formerly homeless mentally ill individuals. *Evaluation and Program Planning, 27,* 423-431.

Toro, P.A., Bellavia, C.W., Daeschler, C.V., Owens, B.J., Wall, D.D., Passero, J.M., & Thomas, D.M. (1995). Distinguishing homelessness from poverty: A comparative study. *Journal of Consulting and Clinical Psychology, 63* (2), 280-289.

Toro, P.A., Passero Rabideau, J.M., Bellavia, C.W., Daeschler, C.V., Wall, D.D., & Thomas, D.M. (1997). Evaluating an intervention for homeless persons: Results of a field experiment. *Journal of Consulting & Clinical Psychology, 65* (3), 476-484.

Townley, G. & Kloos, B. (2011). Examining the psychological sense of community for individuals with serious mental illness residing in supported housing environments. *Community Mental Health Journal, 47,* 436-446.

Tsemberis, S., McHugo, G., Williams, V., Hanrahan, P., & Stefancic, A. (2007) Measuring homelessness and residential stability: The residential time-line follow-back inventory. *Journal of Community Psychology*, *35*, 29-42.

Ware, Jr., J.E., Kosinski, M., & Keller, S.D. (1996). A 12-Item Short-Form Health Survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*(3), 220-233.

Weening, M.W.H., Schmidt, T., & Midden, C.J.H. (1990). Social dimensions of neighbourhoods and the effectiveness of information programs. *Environment and Behavior, 22,* 27-54.

Wells, N. & Harris, J. (2007). Housing quality, psychological distress, and the mediating role of social withdrawal: A longitudinal study of low-income women. *Journal of Environment Psychology, 27,* 69-78.

Wolfensberger, W. (1972). *The principle of Normalization in human services*. Toronto: National Institute on Mental Retardation.

Wong, Y-L., I. & Solomon, P.L. (2002). Community integration of persons with psychiatric disabilities in supportive independent housing : A conceptual model and methodological considerations. *Mental Health Services Research, 4* (1), 13-28.

Yanos, P.T., Barrow, S.M., & Tsemberis, S. (2004). Community integration in the early phase of housing among homeless persons diagnosed with severe mental illness: Successes and challenges. *Community Mental Health Journal, 40* (2), 133-150.

Yanos, P.T., Felton, B.J., Tsemberis, S., & Frye, V.A. (2007). Exploring the role of housing type, neighborhood characteristics, and lifestyle factors in the community integration of formerly homeless persons diagnosed with mental illness. *Journal of Mental Health, 16* (6), 703-717.

Yanos, P.T., Stefancic, A., & Tsemberis, S. (2011). Psychological community integration among people with psychiatric disabilities and nondisabled community members. *Journal of Community Psychology, 39* (4), 390-401.

Zlotnick, C., Robertson, M.J., & Lahiff, M. (1999). Getting off the streets: Economic resources and residential exits from homelessness. *Journal of Community Psychology, 27* (2), 209-224.

Zlotnick, C., Tam, T., & Robertson, M.J. (2003). Disaffiliation, substance use, and exiting homelessness. *Substance Use & Misuse, 38* (3-6), 577-599.

Table 1.a Individual, Housing, and Neighbourhood Characteristics. .

	FU1 (N = 261) Mean (SD) or *n* (%)	FU2 (N = 233) Mean (SD) or *n* (%)
Individual		
Age	42.97 (11.20)	43.35 (11.08)
Race (White)	201 (76.1%)	173 (74.9%)
Partner (Yes)	75 (28.2%)	75 (32.2%)
High School Graduate (Yes)	150 (56.4%)	n/a
Gender (Male)	188 (70.4%)	166 (71.2%)
Problematic Alcohol Use (Yes)	102 (38.2%)	80 (34.3%)
Problematic Drug Use (Yes)	71 (26.6%)	57 (24.5%)
Physical Health Functioning	43.49 (12.20)	43.52 (11.77)
Mental Health Functioning	40.62 (13.69)	42.15 (13.74)
Mental Health Diagnosis (Yes)	176 (61.1%)	163 (60.8%)
Depression	120 (68.2%)	107 (65.6%)
General Anxiety	52 (29.5%)	48 (29.4%)
Bipolar	32 (18.2%)	29 (17.8%)
Schizophrenia	22 (12.5%)	20 (12.3%)
Social Support	22.90 (4.23)	23.38 (3.94)
Employed (Yes)	91 (34.1%)	70 (30.0%)
Housing		
Housed (Yes)	193 (72.3%)	190 (81.5%)
Homeless Episodes	1.02 (1.17)	.69 (1.09)
Length of Stay	233.13 (191.29)	339.21 (301.48)
Housing Quality	28.78 (9.67)	29.73 (8.53)
Neighbourhood		
Unemployed Individuals	6.57% (2.54)	6.91% (2.28)
Low-income Individuals	32.28% (9.03)	32.49% (8.93)
Movers	23.94% (5.72)	23.05% (5.62)
Major Repairs Required	10.37% (2.56)	10.36% (2.51)
Recent Immigrants	4.04% (1.93)	4.19% (1.98)
No High School Education	7.28% (5.36)	8.11% (5.58)
High Rise Apartments	41.26% (17.37)	39.88% (17.97)
Neighbourhood Impact	4.49% (1.85)	4.64% (1.74)
Psychological Integration	18.54 (5.16)	18.80 (5.09)

Table 2.a Correlation matrix for Follow-up 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Psychological Integration	-															
2. Gender	-.11*	-														
3. Age	.22***	-.13*	-													
4. Social Support	.32***	-.03	-.04	-												
5. AUDIT	-.01	-.17**	-.06	-.05	-											
6. DAST	-.07	.01	-.04	-.06	.05	-										
7. PCS	.10	-.12*	-.23***	.18**	.02	.03	-									
8. MCS	.22***	-.22***	.07	.33***	-.09	-.11*	.06	-								
9. Employment	-.01	-.17**	-.27	.16**	.19**	-.12*	.23***	.14*	-							
10. Housing type	-.15**	-.10	-.01	-.05	.04	.10*	.06	-.06	-.05	-						
11. Homeless episodes	-.06	-.04	-.05	-.01	.08	.05	.02	-.04	-.07	.53***	-					
12. Length of stay	.03	.05	.12*	-.12*	-.11*	-.07	-.05	-.02	-.08	-.27***	-.48***	-				
13. Housing quality	.49***	-.08	.13*	.28***	-.09	-.07	.11*	.38***	-.08	-.16**	.00	-.05	-			
14. Neighbourhood impact	.60***	-.10	.10	.21***	.03	-.07	.19**	.28***	.01	-.20**	-.04	-.03	.56***	-		
15. Neighbourhood index	.03	.17**	.03	.01	-.05	-.03	-.10	-.04	-.04	-.28***	-.10*	.04	-.02	-.05	-	
16. Rental housing impacts	-.11*	-.03	-.03	-.05	.02	-.02	-.04	.05	.13*	.26***	.04	.08	-.13*	-.14*	.01	-

** p< .05;* ***p* <.01; *** *p* < .001

Table 3.a Correlation matrix for Follow-up 2.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Psychological Integration	-															
2. Gender	-.13*	-														
3. Age	.20**	-.09	-													
4. Social Support	.32***	.04	.00	-												
5. AUDIT	-.14*	-.06	-.09	-.11	-											
6. DAST	-.18**	.10	-.21**	-.21**	.12*	-										
7. PCS	.16**	-.19**	-.25***	.11*	-.16**	-.10	-									
8. MCS	.36***	-.23***	.05	.34***	-.16**	-.30***	.18**	-								
9. Employment	-.06	-.16**	-.18**	.18**	.14*	-.09	.25***	.08	-							
10. Housing type	-.19**	-.05	-.03	-.15*	.05	.13*	-.01	-.07	-.03	-						
11. Homeless episodes	-.22***	-.07	-.09	-.17**	.10	.14*	-.04	-.05	-.04	.65***	-					
12. Length of stay	.16**	-.01	.17**	-.01	-.07	-.13*	.01	-.05	-.09	-.26***	-.47***	-				
13. Housing quality	.60***	-.04	.13*	.29***	-.09	-.26***	.13*	.47***	-.05	-.31***	-.23***	.03	-			
14. Neighbourhood impact	.62***	-.16**	.15*	.11*	-.07	-.18**	.14*	.42***	-.02	-.16**	-.14*	.06	.65***	-		
15. Neighbourhood index	-.12*	.10	.01	.11	.06	-.02	-.13*	-.05	.04	-.29***	-.14*	.02	-.07	-.13*	-	
16. Rental housing impacts	-.03	.00	.10	-.04	.14*	-.08	-.14*	.04	-.01	.28***	.19**	.10	-.11*	-.03	.08	-

** p< .05; **p* <.01; *** *p* < .001

Table 4.a Hierarchical regression for Follow-ups 1 and 2.

		FU1					FU2				
		B	se	β	R^2	ΔR^2	B	se	β	R^2	ΔR^2
Step 1					.18	.18***				.24	.24***
	Gender	-.44	.70	-.04			-.69	.71	-.06		
	Age	.11	.03	.23***			.09	.03	.20**		
	Social Support	.34	.08	.28***			.31	.08	.24***		
	AUDIT	.33	.63	.03			-.16	.66	-.02		
	DAST	-.50	.68	-.04			-.12	.75	-.01		
	PCS	.04	.03	.10			.07	.03	.16*		
	MCS	.04	.02	.11			.09	.03	.23**		
	Employment	-.55	.70	-.05			-1.35	.70	-.12		
Step 2					.32	.14***				.44	.20***
	Housing type	-.76	.74	-.07			.52	.90	.04		
	Homeless episodes	.01	.30	.00			-.07	.34	-.02		
	Length of stay	.00	.00	.05			.00	.00	.14*		
	Housing quality	.22	.03	.41***			.30	.04	.50***		
Step 3					.46	.14**				.51	.08***
	Neighbourhood impact	1.28	.17	.46***			1.03	.19	.35***		
	Neighbourhood index	.14	.09	.09			-.12	.08	-.08		
	Rental housing Impacts	-.04	.12	-.02			.06	.12	.03		

** p< .05; **p* <.01; *** *p* < .001

CHAPTER 7

Predictors of Social Integration

Contributions

The data for the study presented in the manuscript were collected as part of the *Health and Housing in Transition* (HHiT) study. Dr. Tim Aubry served as a co-Principal Investigator for the HHiT study and supervised the doctoral thesis research presented in this manuscript. Mr. John Ecker developed the research presented in this manuscript and helped to conduct interviews with the participants in the study, as well as conducting data entry, data cleaning, and data analysis.

Acknowledgements

Funding for the *Health and Housing in Transition* study was provided by the Canadian Institutes of Health Research (CIHR). John Ecker was supported by a grant from the Social Sciences and Humanities Research Council (SSHRC).

Individual, Housing, and Neighbourhood Level Predictors of Social Integration Among Vulnerably Housed and Homeless Individuals

John Ecker & Tim Aubry

University of Ottawa

Ottawa, Ontario, Canada

John Ecker, Doctoral Candidate in Experimental Psychology, University of Ottawa & Centre for Research on Educational and Community Services

.

Abstract

The current longitudinal study evaluated the individual, housing, and neighbourhood level predictors of social integration among a population of homeless and vulnerably housed individuals. Participants were recruited at homeless shelters, meal programs, and rooming houses in Ottawa and participated in three in-person interviews, each approximately one year apart. Prospective and cross-sectional predictors of psychological integration at Follow-up 1 and Follow-up 2 were examined. There were 397 participants at baseline, 341 at Follow-up 1 and 320 at Follow-up 2. Hierarchical multiple regressions uncovered several significant predictors of social integration. The most salient and common predictor was having greater social support in one's life. Implications for service provision and policy advancements to better address social integration among homeless and vulnerably housed individuals are discussed.

Social integration is a longstanding variable of interest in community psychology practice. Although definitions vary, it is best described as the "extent to which an individual engages in community interactions" (Wong & Solomon, 2002, p.18-19) or the social contact that occurs among neighbours (Aubry & Myner, 1996). It became of particular importance during the post-deinstitutionalization era, as one of the primary goals of this process was to have former patients become fully integrated members of society (Segal & Aviram, 1978).

Today, much of the social integration research focuses on the experiences of homeless individuals with serious mental illness participating in supported housing programs (e.g., Gulcur, Tsemberis, Stefancic, & Greenwood, 2007; Yanos, Felton, Tsemberis, & Frye, 2007). What has been neglected is how homeless and vulnerably housed[6] individuals not involved in housing interventions interact within their communities. Despite their lack of stable housing and the transiency these individuals frequently experience, they are undoubtedly influenced by the communities they live in. The current study recognizes the exclusion of these groups and investigates the experiences of social integration (based upon locality, specifically, neighbourhood location) among a non-clinical sample of homeless and vulnerably housed individuals. A heuristic model is proposed and tested that posits individual, housing, and neighbourhood-level variables as predictors of social integration.

[6] To begin, it is important to define what is meant by vulnerable housing. Vulnerable housing is defined using criteria developed by the Canadian Mortgage and Housing Corporation (CMHC). It includes individuals living in core need whose housing falls below adequacy, affordability, and suitability standards (CMHC, 2010). This involves having housing that requires major repairs (adequacy), paying more than 30% of one's income on housing (affordability), and not having enough bedrooms for the size and makeup of one's household (suitability). Within the current study, the majority of vulnerably housed individuals lived in rooming houses.

Literature on Predictors of Social Integration

Residential Facilities

The seminal research on social integration focused on individuals living in residential facilities. Several individual-, residential-, and community-level variables were found to either facilitate or hinder social integration among this population. Focusing on individual-level facilitators, Segal and Aviram (1978) found that social integration was facilitated by having a lower level of psychiatric symptoms, a higher level of psychosocial ability, higher levels of income and of financial control, being younger, and being more social. Residential-level indicators that facilitated social integration included being provided with the choice to live in the residential facility (Segal & Aviram, 1978).

Community-level variables were also investigated. Subjective facilitators of social integration included having meaningful contact with neighbours (Segal & Aviram, 1978). When considering objective neighbourhood indicators, living in neighbourhoods with a higher proportion of females, a greater proportion of older (65 years of age and older) and younger (age 15-24) individuals, a greater proportion of renters, denser households (6 or more individuals in one dwelling), and a lower proportion of low-income individuals were related to increased levels of social integration (Trute & Segal, 1976). Segal, Baumhol, and Moyles (1980) found that living in neighbourhoods with liberal, non-traditional values led to increased social integration among sheltered-care facility residents. These neighbourhoods were characterized as politically liberal, racially diverse, of mixed-income, with a high proportion of renters, and a relatively high crime rate.

Factors that impeded social integration included neighbour complaints against the residential facility (Segal & Aviram, 1978), increased distance from community agencies (Segal & Aviram, 1978), being rurally located (Segal & Aviram, 1978), and living in conservative neighbourhoods (Segal et al., 1980). Conservative neighbourhoods were described as middle-class with an almost exclusively white population, a high proportion of families and a low proportion of renters.

Community Support and Supported Housing Studies

More recent studies have focused on formerly homeless individuals with a serious mental illness engaged in some form of community support, such as supported housing programs or community-based treatments (e.g., Critical Time Intervention, Assertive Community Treatment). Individual-level variables that predicted social integration in these studies included having a higher level of education (Yanos, Stefancic, & Tsemberis, 2012), engaging in increased treatment supports (Tsai & Rosenheck, 2012), being female (Baumgartner & Herman, 2012), and having higher levels of psychopathology (Gulcur et al., 2007; Yanos et al., 2012). The influence of psychopathology on higher levels of social integration appear to be counter-intuitive, but Gulcur et al. (2007) state that individuals with higher levels of psychological disability may be more likely to need and attract the support of others than those with lower levels of psychopathology. Therefore, individuals with higher levels of psychopathology may be more satisfied with these sought out social interactions. In contrast, other studies have found that more severe mental health symptoms were related to poorer social integration (Baumgartner & Herman, 2012) and that clinical symptoms had no effect on social integration (Tsai & Rosenheck, 2012).

In terms of housing, Yanos et al. (2007) found that social integration levels did not differ between individuals living in independent apartments and congregate living arrangements. Other studies report that higher ratings of social integration were related to residing in supported housing compared to treatment and sobriety contingent housing (Gulcur et al., 2007) and having an increased length of time in one's housing (Yanos et al., 2012).

Neighbourhood-level variables appeared to have little effects on social integration. Yanos et al. (2007) found that neighbourhood-level variables had impacts on other forms of community integration, such as psychological integration, but not social integration. These results are in direct contrast to the previous work of Segal & Aviram (1978), Segal et al. (1980), and Trute & Segal (1976).

Model of Social Integration

As evident from the preceding literature review, a variety of factors can influence social integration for both formerly homeless and vulnerably housed individuals. The proposed model of social integration in the current study is based upon the work of Aubry and Myner (1996), Wong and Solomon (2002), and Yanos et al. (2007). Aubry and Myner (1996) and Wong and Solomon (2002) each proposed multi-dimensional representations of community integration (e.g., physical integration, psychological integration, and social integration). Wong and Solomon (2002) and Yanos et al. (2007) both advocate the use of multilevel correlates when assessing psychological integration. The current study slightly modifies the work of the aforementioned authors and tailors it to a homeless and vulnerably housed population. Figure 1 presents the model and the specific variables found within each level of predictor. The proposed predictors

(individual, housing, and neighbourhood-level) of these different types of social integration are discussed in detail below.

Predictors

Individual

As mentioned above, greater social integration has been associated with being female (Baumgartner & Herman, 2012), younger (Segal & Aviram, 1978), having higher levels of social support (Segal & Aviram, 1978), higher levels of income and of financial control (Segal & Aviram, 1978), and higher education levels (Yanos et al., 2012). Psychopathology has an interesting relationship with social integration. Segal and Aviram (1978) found that decreased levels of psychopathology was positively related to social integration, whereas Gulcur et al. (2007) and Yanos et al. (2012) found increased levels of psychopathology were related to social integration.

The current model proposes several other variables that may influence social integration among homeless and vulnerably housed individuals. Employment can have significant impacts on social integration, as having few employment opportunities was rated as a significant barrier to community integration (Mallik et al., 1998). Homeless individuals with substance abuse problems are more likely to experience periods of housing instability than those individuals without substance abuse problems (Kreindler & Coodin, 2010; Zlotnick, Robertson, & Lahiffi, 1999). Furthermore, “hard to house” individuals living in marginal housing settings often have substance abuse problems (Gurstein & Small, 2005). In terms of physical health, rooming house residents have been found to have poorer physical health, including increased occurrences of certain chronic conditions, in comparison to the general population and other low-income

individuals (Hwang, Martin, Tolomiczenko, & Hulchanski, 2003). Physical health restraints may limit the opportunity for social interactions to occur, therefore limiting the capacity for social integration.

Based upon this literature, eight individual-level variables will be included in this model: a) age; b) gender; c) social support; d) employment; e) mental health functioning; f) physical health functioning; g) drug use; and h) alcohol use

Housing

The type of housing that an individual resides in can have great impacts on their feelings of social integration. It has been found that an increased length of stay in one's apartment is related to increases in social integration (Yanos et al., 2012). Outside of the integration literature, housing issues, such as its poor quality, have been linked to poor psychological well-being (Evans, Wells, & Moch, 2003) and to negative social outcomes (Wells & Harris, 2007). Lastly, homeless individuals exiting homelessness into stable housing were found to have longer tenancies if they had shorter periods of homelessness in their lifetime (Dworsky & Piliavin, 2000; Zlotnick et al., 1999) and live in independent housing rather than congregate settings (Dworsky & Piliavin, 2000; Kreindler & Coodin, 2010).

Based upon this the literature, four housing variables will be included in the present model: a) housing status at present (homeless or housed); b) length of stay in current residence; c) number of homeless episodes; and d) a subjective housing satisfaction index[7].

[7] It is acknowledged that a subjective assessment of housing quality could feasibly be placed within the individual-level predictors, due to its subjectivity. However, it was decided to include it in the housing-level variables since it tapped into the overall quality of one's housing, not the subjective impact of the housing quality that it may have on the lives of the participants. Furthermore, the other housing indicators

Neighbourhood

The most common predictors of community integration have involved neighbourhood-level variables. As highlighted in the above literature review, several facilitators and barriers to community integration exist. Neighbourhoods facilitating social integration include those with a greater proportion of renters (Trute & Segal, 1976), a lower proportion of low-income individuals (Trute & Segal, 1976), and racial diversity (Segal et al., 1980). Other neighbourhood-level variables that have been found to have an influence in non-homeless samples include residential stability (Farrell, Aubry, & Coloumbe, 2004) and apartment type (e.g., high-rise compared to low-rise) (Weening, Schmidt, & Midden, 1990).

For theoretical justification, parsimony, and availability of data, eight neighbourhood-level variables were selected for the current analysis and include percentage of: a) of unemployed individuals in the neighbourhood; b) of low-income households in the neighbourhood; c) of residents that have moved in the past year (residential stability); d) of households in the neighbourhood requiring major repairs; e) of recent immigrants in the neighbourhood; f) of high-rise apartments; g) of individuals without high school educations in the neighbourhood; and h) the participants' subjective satisfaction with the impact of their neighbourhood[8].

---

were all objective and it was decided that a subjective account of the participants' housing would allow for a more comprehensive housing analysis.

[8] It is acknowledged that the subjective impact of the neighbourhood could be included within the individual-level variables. It was decided to place this variable in the neighbourhood-level block of predictors, as subjective accounts of neighbourhoods have been neglected within many neighbourhood-level studies (O'Campo et al., 2015). Including both objective and subjective indicators within this block of predictors allows for a more comprehensive neighbourhood-level analysis.

Hypotheses

Hypotheses are presented based upon the three levels of predictor variables (individual, housing, and neighbourhood) and are related to increased social integration: 1) Being employed, having higher levels of social support, not having problematic substance use problems, not having alcohol use problems, and having higher levels of physical and mental health functioning; 2) Being housed, with a longer length of stay in one's current housing, experiencing fewer homeless episodes, and having a higher level of satisfaction with one's housing; 3) Living in a neighbourhood that has residential stability, a lower proportion of renters, an above average proportion of recent immigrants, a lower proportion of individuals without a high school education, fewer buildings that require repairs and being satisfied with the impact with one's neighbourhood and not living in a socioeconomically disadvantaged area; and 4) Despite the work of recent studies, the robustness of neighbourhood influences on social integration is well established in the literature. It is hypothesized that neighbourhood level variables will have the most powerful associations with feeling socially integrated in one's community.

Methods

Data for this research comes from the *Health and Housing in Transition* (HHiT) *Study*, a longitudinal study conducted by researchers at the University of Ottawa, St.-Michael's Hospital, and the University of British Columbia. It is a multi-site study involving homeless and vulnerably housed individuals in Ottawa, Toronto, and Vancouver. The methodology used in the HHiT study was approved by the Research Ethics Boards at the University of Ottawa, St.-Michaels Hospital, and University of

British Columbia. The objective of the HHiT study is three-fold. The first is to record the housing transitions of participants. The second is to identify the risk factors for housing loses and the resources for obtaining housing. The third is to determine whether housing transitions are associated with changes in physical and mental health functioning. Only data from the Ottawa site is used for the current study.

Participants and Procedure

Data collection for the HHiT study took place in three phases [baseline, follow-up 1 (FU1), follow-up 2 (FU2)], from 2008 to 2011. At baseline, participants (*N* = 397) completed in-depth, in-person interviews. Follow-up 1 (*N* = 341; 85%) and Follow-up 2 (*N* = 321; 81%) interviews were completed primarily in person, with some interviews being conducted via telephone for those individuals no longer living in the Ottawa area. Interviews were conducted by trained Research Assistants who were students in Psychology or Social Work, or who had experience in interviewing and/or working with individuals who are homeless. Baseline interviews lasted, on average, 68 minutes. Follow-up 1 interviews lasted, on average, 65 minutes. Follow-up 2 interviews lasted, on average, 53 minutes. The majority of interviews across all three time points were conducted in English [*N* = 380 (95.7%) (baseline); *N* = 330 (96.7%) (FU1); *N* = 306 (95.3%) (FU2)], with a small number [*N*= 17 (4.3%) (baseline); *N* = 11(3.3%) (FU1); *N* = 15 (4.7%) (FU2)] completed in French.[9]

Two stages of sampling were conducted for participant recruitment. In the first stage, the primary sampling units (shelters, meal programs, SRO hotels, and rooming houses) were randomly selected. The second stage involved the random selection of

[9] The hierarchical multiple regressions were run with and without the French participants at FU1 and FU2 to determine if language impacted the results. Results demonstrated no differences when French participants were included or excluded.

individuals from the primary sampling units. The targeted number of vulnerably housed individuals could not be attained due to difficulty with gaining access to residents. Therefore, the recruitment sites of vulnerably housed individuals were enhanced to include drop-in centres, community health centres, and the aforementioned meal programs.

All participants were over the age of 18 and did not live with a partner or dependent child. An individual was defined as homeless if he or she: (1) lived in a shelter, public place, vehicle, abandoned building, or someone else's place and (2) did not have his or her own place (e.g., house, apartment, or room). An individual was defined as vulnerably housed if he or she: (1) lived in a socially marginalized type of housing (SRO room or rooming house); (2) met the Canadian Mortgage Housing Corporation (CMHC) criteria for "core housing Need" on the basis of having housing costs greater than 30% of their monthly income; (3) had moved at least twice in the past 12 months; or (4) had moved less than twice in the past 12 months, but experienced homelessness in that time. Participants received honoraria of $20 for each interview.

Interview Protocol

The interview protocols for the HHiT study comprised of previously validated instruments. Each measure was selected based upon its relevance to and previous use with individuals who are homeless and vulnerably housed, along with its psychometric properties and ease of administration. The protocol included both quantitative and qualitative components.

Measures

Predictors

Individual Characteristics

Employment. Employment status was operationalized as having worked, either full-time or part-time, within the past year. This variable was assessed via the question: "In the past 12 months, did you work at a paid job?" The variable was dichotomized, in that participants who worked were coded as "1" and participants who have not worked were coded as "0".

Social Support. The Social Provisions Scale (SPS) (Cutrona & Russell, 1987) is a 24-item scale measuring the degree to which consumer's social relationships provide social support. There are six dimensions assessing attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance. It is a self-report measure and items are scored on a four-point rating system, from "strongly agree" (1) to "strongly disagree" (4). The items are summed to obtain the total score, with higher scores indicating stronger social support. It is based upon the consumer's current situation. The HHiT used an abbreviated 8-item version of the scale to generate the total score. Therefore, the minimum score a consumer could receive was 8 and the maximum was 32. Cutrona, Russell, and Rose (1984) found internal consistency ratings of the scale to be α= .70 and test-retest reliability coefficients ranging from r = .37 to .66. The internal consistency ratings in the current study were .77 at baseline, .81 at FU1 and .81 at FU2.

Substance Use

DAST-10.The Drug Abuse Screening Tool-10 (DAST-10) is a shortened version of the Drug Abuse Screening Tool (DAST) (Skinner, 1982). It is a self-report scale that provides a quantitative indication of problematic drug use based upon the participant's use in the past 12 months. Total scores range from 0 to 10, with a score of 3 or more indicating a strong likelihood of problematic drug use and a score of 6 or more indicating substantial drug problems (Skinner, 1982). It has shown great utility in studies involving vulnerable populations (Maisto, Carey, Carey, Gordon, & Gleason, 2000). It has demonstrated a respectable internal consistency of r = .86 and a good test-retest reliability of ICC = .71 (Cocco & Cary, 1998). The internal consistency ratings in the current study were .70 at baseline, .85 at FU1 and .83 at FU2.

This variable was dichotomized based upon the scoring cut-off of 6, which indicates substantial drug problems (Skinner, 1982). Therefore, non-problematic drug use was coded as "0" and corresponded with a score of 5 or less. Problematic drug use was coded as "1" and corresponded to a score of 6 or more.

AUDIT. The Alcohol Use Disorders Identification Test (AUDIT) was developed by the World Health Organization. It is a 10-item scale that assesses alcohol intake, dependence, and adverse consequences based upon a participant's use in the past 12 months (Reinert & Allen, 2002). Eight of the items are based upon a five-point rating scale and two are based upon a three-point rating scale. Total scores of 0 to 7 indicate low risk, scores of 8 to 15 indicate a hazardous level, scores of 16 to 19 indicate a harmful level, and scores of 20 or more indicate dependence. It has found utility in a variety of settings and is equally applicable to both genders and different ethnicities

(Reiner t& Allen, 2002). It has shown a high internal consistency of *r* = .85 and a test-retest reliability of *r* = .64 (Maisto, Conigliaro, McNeil, Kraemer, & Kelley, 2000). Daeppen, Yersin, Landry, Pécoud, and Decrey (2000) reported a slightly higher test-retest reliability of *r* = .81. The Cronbach's alpha coefficients for the scale in the current study were.89 at baseline, .91 at FU1 and .90 at FU2.

This variable was dichotomized based upon the scoring cut-off of 8, which indicates problematic alcohol use. Therefore, non-problematic alcohol use was coded as "0" and corresponded to a score of 7 or less. Problematic alcohol use was coded as "1" and corresponded to a score of 8 or more.

***Physical and Mental Health Functioning*.** The SF-12 (Ware, Kosinski, & Keller, 1996) is derived from the SF-36 Health Survey, which measures an individual's subjective general health status. The SF-12 includes 8 concepts commonly represented in health surveys: physical functioning, role functioning physical, bodily pain, general health, vitality, social functioning, role functioning emotional, and mental health. It is a self-report measure that is based upon an individual's functioning within the previous four weeks of test administration. Results are expressed in terms of a meta-score: the Physical Component Summary (PCS) reflecting physical health functioning and the Mental Components Summary (MCS) reflecting mental health functioning. Scores on items are weighted to produce scores that can range from 0 to 100, with scores higher than 50 indicating above average health status.

The PCS has demonstrated high test-retest reliability among seriously mentally ill patients [ICC =.79 (Salyers, Bosworth, Swanson, Lamb-Pagone, &Osher, 2000)] and the general population [ICC =.89 (Ware et al., 1996)]. The SF-12 also showed strong

convergent validity, as demonstrated by individuals with greater numbers of chronic health conditions having lower scores on the PCS and the MCS (Salyers et al., 2000). The internal consistency rating in the current study was .79 at baseline, .82 at FU1, and .83 at FU2.

The test-retest reliability of the MCS has ranged from ICC = .79 among seriously mentally ill patients (Salyers et al., 2000) and *r* = .76 among the general population (Ware et al., 1996). The scale also demonstrated relatively strong validity, as mentally ill patients with no psychiatric hospitalizations in the prior year had higher MCS scores than those with at least one psychiatric hospitalization (Salyers et al., 2000). Similarly, mentally ill patients without substance use disorders had higher MCS scores than mentally ill patients with substance use disorders (Salyers et al., 2000). The internal consistency rating in the current study was .80 at baseline, .82 at FU1, and .83 at FU2.

Housing Characteristics

The housing status of the participants was assessed using the Housing Timeline Follow-Back Calendar (HTFBC) (Tsemberis, McHugo, Williams, Hanrahan, &Stefancic, 2007). This method asks participants to think about their living situation within a specified amount of time. For the current analysis, it was two years at baseline and one year since the last interview at FU1 and FU2. A calendar is presented to the participant and they are asked to start with their current living situation and work their way back. The type of residence, length of stay, rent price (if applicable) and subsidy status is noted. This technique allows for the determination of the number of moves, length of homelessness, and housing status of a participant. This measure has demonstrated relatively high test-retest reliability (over a two week period, ICC = 0.80-0.93) for most

residential outcome measures and strong validity as demonstrated by congruency among client and agency reports of client housing statuses (Tsemberis et al., 2007).

Housing status. Current housing status was operationalized into a dichotomous variable. Housed (living in own apartment/house; living with friends or family and paying rent; rooming house; nursing home; supportive housing) was coded as "0" and homeless (homeless shelter; living on the streets; campground, motel or hotel) was coded as "1". Those currently residing in prison, a medical or psychiatric hospital, boarding home, group home, halfway house or a substance abuse treatment facility were not included in the analysis.

Length of stay in current residence. This continuous variable was created by examining the participants' current housing situation (in days).

Number of homeless episodes in the past year. This continuous variable was created by examining the participants' housing histories. A participant was considered homeless if they lived in a shelter, on the streets, or in a campground. The number of episodes, defined as the number of times a participant moved from being housed to homeless, since the previous year's interview was summed. If a participant was homeless for the entire time, the participant was said to have had one homeless episode.

Housing satisfaction. The total score from the Toro Housing Quality (Toro, Passero Rabideau, Bellavia, Daeschler, Wall, & Thomas, 1997) instrument was used to assess subjective housing satisfaction. This 6-item scale assesses six domains of an individual's current living situation: comfort, safety, spaciousness, privacy, friendliness, and overall quality. Responses are scored on a 7-point scale, ranging from very bad (1)

to very good (7). Overall scores range from 6 to 42, with higher scores indicating a higher level of perceived housing quality. Toro et al. (1995) found a test-retest correlation of .81 for the scale amongst a sample of homeless adults. The Cronbach's alpha for the scale in the current study was .81 at baseline, .91 at FU1 and .90 at FU2.

Neighbourhood Characteristics

As part of the housing history questions, participants are asked to provide their current address or location of residence. These addresses were entered into Google Maps in order to identify location and then compared to online maps provided by the Ottawa Neighbourhood Study (ONS) to locate each participant in a neighbourhood. The placement in a neighbourhood allowed for objective neighbourhood indicators to be drawn from the ONS database. The ONS was initiated to better define the neighbourhoods in Ottawa and map social determinants of health indicators within each neighbourhood (Ottawa Neighbourhood Study, 2009). Neighbourhood boundaries were created using an iterative process, including real estate maps, community team member knowledge, and city planning department knowledge. In general, the neighbourhoods are much smaller than the census profiles provided by the Canadian census.

In total, 107 neighbourhoods were included. Objective indicators were created by the ONS using 2006 Canadian Census data, DMTI Enhanced Points of Interest (software used for location-based services), City of Ottawa municipal data, and National Capital Commission data. For the current study, seven variables were selected from the ONS and are described below. The eighth neighbourhood-level variable is subjective and was taken from the HHiT survey protocol.

Of the 341 respondents at FU1, 293 individuals were coded into a neighbourhood. Of the 48 individuals who could not be coded into a neighbourhood, four were a result of a missing address and 44 were a result of not living in Ottawa, being in hospital, or being in jail. Of the 321 respondents at FU2, 272 individuals were coded into a neighbourhood. Of the 49 individuals who could not be coded into a neighbourhood, one was a result of a missing address and 48 were a result of the individual not living in Ottawa, being in hospital, or being in jail.

Percentage of unemployed individuals. The number of unemployed individuals in the neighbourhood was divided by the number of individuals in the labour force in the neighbourhood and multiplied by 100 to obtain this variable (Statistics Canada, 2007).

Percentage of residents that have moved in the past year (residential stability). This was calculated by looking at a person's usual place of residence on Census Day and his or her usual place of residence one year earlier. A person was classified as a "mover" if a difference existed. The percentage of "movers" among total households in the neighbourhood was used for the current analysis and derived by dividing the number of "movers" in the Census tract by the total number of individuals in the neighbourhood (Statistics Canada, 2007).

Percentage of low-income households. This variable is operationalized as the proportion of households with "families or persons not in economic families spend 20% more than average of their before tax income on basic needs such as food, shelter, and clothing" (Statistics Canada, 2007). The number of households who answered affirmatively to this question was divided by the total number of households in the

neighbourhood to determine the percentage of low-income households (Statistics Canada, 2007).

Percentage of households requiring major repairs. Respondents were asked whether, in their own judgment, their dwelling required any major repairs excluding desirable remodelling or additions. The number of households who answered affirmatively to this question was divided by the total number of households in the neighbourhood to determine the percentage of households requiring major repairs (Statistics Canada, 2007).

Percentage of high-rise apartments. This variable refers to the structural characteristics and/or dwelling configuration of the residence. Possible classifications include a single-detached house, an apartment in a high-rise building (five stories or higher), a row house, a mobile home, etc. (Statistics Canada, 2007). For the current analysis, the percentage of high-rise apartment among total households in the neighbourhood was used.

Percentage of recent immigrants. This variable refers to the percentage of persons in the neighbourhood who settled in Canada less than five years ago. The number of persons who fit this description was divided by the total number of individuals in the neighbourhood to attain this percentage (Statistics Canada, 2007).

Percentage of individuals without a high school education. This variable refers to the percentage of persons in the neighbourhood who did not graduate from high school. The number of persons who fit this description was divided by the total number of individuals in the neighbourhood to attain this percentage (Statistics Canada, 2007).

Neighbourhood impact. Satisfaction with the impact of one's neighbourhood was based upon a single item from the Quality of Life for Homeless and Hard-to-House Individuals scale (Hubley, Russell, Gadermann, &Palepu, 2009). Participants were asked to rate the kind of impact/effect that their neighbourhood had on them. Responses are scored on a 7-point scale, ranging from large negative impact/effect (1) to large positive impact/effect (7). No reliability statistics have been documented for this particular scale.

Predicted Variables

Social Integration. Social integration was measured using a 7-item version of the neighbouring scale created by Aubry, Tefft, and Currie (1995). The original scale includes 12-items, but the scale was reduced to seven items due to relevance of items to the population and for overall survey length concerns. The scale assesses a participant's social contact with neighbours, ranging from minimal, such as saying hello, to more intimate, such as being invited to a neighbour's home. Items are rated on a 5-point scale ranging from 1 ("Never") to 5 ("Frequently"). The potential total score ranges from 7-35, with higher scores indicating greater social integration. Aubry et al. (1995) report high internal consistency on the 12-item scale ($\alpha = .92$) in a large community sample. The Cronbach's alpha coefficients for the scale in the current study were .86 at FU1 and .88 at FU2. The alpha is not presented for baseline as the measure was not utilized at this time point.

Data Analysis

The main question asked for this study is what predicts social integration at FU1 and what predicts social integration at FU2? To answer this question, two sequential

multiple regressions were conducted. One predicted social integration at FU1 and the second predicted social integration at FU2. For each of the multiple regressions, the predictor variables were entered in three blocks. The first block included the individual variables, the second block included the housing variables, and the third block included the neighbourhood variables.

Due to the nature of the design, which includes analyses at two time points, it is acknowledged that the analysis has the potential of an inflated risk of Type I error because some variables may only be significant at one time point. Since a strength of the design is the replication process being utilized, greater attention will be given to those variables that are significant at both times. Furthermore, a lower alpha level of .01 will be used in the study

An important consideration for this study is the longitudinal nature of the data. Since the social integration scale is contingent upon a participant's current residence (FU1 or FU2), it therefore makes sense to include all variables based upon one's current housing location (FU1 or FU2). However, one of the housing variables (number of episodes of homelessness in the past year) and one of the individual variables (employment) were aggregated over the one-year period.

An a priori power analysis was conducted using G*Power 3 (Faul, Erdefelder, Lang, & Buchner, 2007) in order to justify the number of predictor variables as compared to the overall sample. In order to detect a medium effect size (f^2=.15) for a regression equation with 20 predictor variables with power =.80 and an α set at .01, a sample size of N = 207 is needed. Therefore, both the FU1 and FU2 samples are

considered to have sufficient power to detect a medium effect for relationships between predictor and predicted variables.

Data Screening

Data was screened for missing values and violations of the assumptions for regression analyses. No variables exceeded 5% missing values and there was an appropriate ratio of cases to independent variables. The FU1 and FU2 analyses both had limited univariate and multivariate outliers. Transformations were performed, however, as overall results did not differ from those obtained using untransformed variables, the untransformed variables were retained. Similarly, the inclusion of the multivariate outlier did not affect the results and hence was retained in the analysis.

Multicollinearity was an issue for both analyses. Specifically, several neighbourhood-level variables were highly correlated with one another and had high Variance Inflation Factor values. To fix this situation, a composite variable was created for the affected variables (low-income, unemployment, immigration, education). Similar to Yanos et al. (2007), the standardized scores of these four variables were summed to create a “neighbourhood socioeconomic index” variable.

To further justify the creation of the composite neighbourhood variable, a principle components analysis was conducted at both FU1 and FU2. Two factors obtained eigen values greater than 1.0 at both time points. These factors accounted for 46.5% and 31.3% at FU1 and 45.3% and 30.7% at FU2. One of these factors supported the hypothesized structure of the newly created neighbourhood socioeconomic index and this occurred at both time points.

An Oblimin rotation with Kaiser normalization was then performed at both time points. Factor 1 (the neighbourhood socioeconomic index) included the unemployment, low-income, immigration, and high school education variables, with factor loadings of .92, .80, .89, and .88 at FU1 and .89, .82, .85, and .83 at FU2. The second factor included the low-income, residential stability, major repairs, and high-rise apartment variables, with factor loadings of .55, .88, .67, and .77 at FU1 and .49, .90, .53, and .80 at FU2. The very high factor loadings for the neighbourhood socioeconomic index composite variable supports its creation. The unexpected emergence of a second factor with relatively high factor loadings is a surprising finding, as these variables did not correlate highly with one another.

Due to the high factor loadings, it was determined that a second neighbourhood composite variable would be created. This variable included residential stability, buildings needing major repairs, and high-rise apartments and it was labelled as “rental housing impacts”. Low-income was not included as it was cross-loaded with the socioeconomic factor and displayed comparatively lower factor loadings on the housing impacts variable. Similar to the socioeconomic variable, the standardized scores of these three variables were summed to create the “rental housing impacts index” variable (see Tables 2b and 3b for the correlational matrices).

Heteroscedasticity was an issue, as demonstrated by the graphical representation of the residual plot. To correct for this, a more stringent α level was used than proposed earlier (Tabachnick & Fidell, 2006). The new α was set at.005.

Respondents at follow-up vs. non-respondents. Respondents at FU1 (*n* = 341) were compared to non-respondents (*n* = 56) on the nine individual and four housing

variables at baseline to determine if differences existed between the two groups. Neighbourhood variables were not examined, as little variability existed in neighbourhood located at baseline due to the sampling locations used. Social integration was not included as it was not included in the baseline survey. Significant differences emerged on two variables: housing status and physical health functioning. Respondents were more likely to be housed, χ^2 (1, N = 397) = 16.46, p <.001, and to have poorer physical health functioning, t (381) = 2.43, p < .05 at baseline than non-respondents.

The same analyses were run for respondents at FU2 (n = 321) to non-respondents (n = 76) at baseline. Significant differences emerged on two variables: housing status and length of stay in current housing. Respondents were more likely to be housed, χ^2 (1, N = 397) = 4.27, p <.05, and to have stayed longer in their current residence, t (303.15) = -3.37, p < .01, at baseline than non-respondents.

Results

Sample Characteristics

Sample characteristics are presented in Table 1b. The sample was predominantly male, White, single, and in their early-40s. A little more than half of the sample (56.1%) had a high school education and approximately one-third were employed in the past year. Approximately 25% of the sample had problematic drug use and around 36% had problematic alcohol use. Physical and mental health functioning averages were both below the general population norms, with the sample having particularly lower mental health functioning. At FU1 and FU2, approximately 60% of the sample reported being diagnosed with a mental health problem in their lifetime. Of the

individuals who reported a diagnosis, the most common diagnoses were depression (approximately 67%), general anxiety disorder (approximately 30%), bipolar disorder (approximately 18%), and schizophrenia (approximately 13%). The sample had moderate levels of social support. The majority of individuals (72.2%) were housed at FU1and this percentage increased in FU2 (79.8%). The average number of homeless episodes was one in FU1 and less than one in FU2. Individuals had lived in their current place of residence for approximately two-thirds of the year in FU1 and for close to a year in FU2. Subjective housing quality was in the moderate range at both time points.

The average neighbourhood characteristics included low percentages of unemployed individuals [6.6% (FU1), 7.0% (FU2)], recent immigrants [4.1% (FU1); 4.2% (FU2)], and individuals without a high school education [7.3% (FU1); 8.1% (FU2)]. Approximately 10% of houses required major repairs and 32% of individuals were considered low-income. Approximately 23% of individuals had moved in the past year and 40% of individuals lived in high-rise apartments. The sample had an average neighbourhood impact score indicating a neutral impact on their lives.

Of the 107 available neighbourhoods located in Ottawa to be coded in, participants were coded into 37 at FU1 and 38 at FU2. At FU1, 60% of individuals lived in four specific neighbourhoods. These neighbourhoods were generally centrally located and one of the neighbourhoods contained the majority of the city's homeless shelters, , meal programs, and drop-in programs. These neighbourhoods also had a slightly higher rate of high-rise apartments (50.3%) and residential mobility (27.4%), than the average of all the neighbourhoods included in the analysis. The remaining

characteristics of these four neighbourhoods were similar to that of the other neighbourhoods. At FU2, the percentage of individuals living in these four specific neighbourhoods dropped to 53%. In particular, the neighbourhood with the city's shelters dropped approximately 8%, which is in line with the increase in the number of individuals housed at FU2.

Levels of Social Integration. At FU1, the mean social integration score was 15.79 with a standard deviation of 6.30. Twenty-three (7.8%) individuals had the lowest possible score and three (1.0%) individuals had the highest possible score. At FU2, the mean social integration score was 15.98 with a standard deviation of 6.38. Eleven (4.0%) individuals had the lowest (7) possible score and eight (2.9%) individuals had the highest (35) score possible. The means at FU1 and FU2 indicate that individuals were reporting social integration ratings that fell below the mid-range of the scale. The scores also demonstrate consistency across the two periods.

Examination of individual items demonstrated interesting trends. When combining the fairly often and frequently categories, 48.1% (FU1) and 49.5% (FU2) of individuals said hello or waved to a neighbour when seeing them on the street, 11.9% (FU1) and 8.8% (FU2) went on a social outing with a neighbour, 16.7% (FU1) and 13.1% (FU2) discussed neighbourhood issues with a neighbour, 10.1% (FU1) and 13.8% (FU2) were invited into their neighbour's home for socializing, 13.4% (FU1) and 15.0% (FU2) assisted a neighbour with a household task, 10.1% (FU1) and 9.7% (FU2) talked to a neighbour about personal issues, and 25.0% (FU1) and 24.6% (FU2) had a conversation with a neighbour when seeing them on the street.

Hierarchical regression results at FU1. With just the individual-level variables included in the equation, the first step of the model was significant, F (8, 254) = 7.62, p < .001, R^2 = .19 (see Table 4b). One significant predictor emerged: social support, β = .43, p < .001. Individuals that had greater levels of social support had higher ratings of social integration. Two predictors approached significance: age, β= .15, p = .02 and mental health functioning, β = -.13, p = .04, indicating that there was a trend of older individuals and individuals with poorer mental health functioning having higher ratings of social integration.

The second step, with the individual- and housing-level variables in the equation, was not significant, *F change* (4, 250) = 2.27, R^2 = .22, p = .06. The model accounted for 22.2% of the variance in social integration. No significant housing predictors emerged. Two predictors approached significance: length of stay, β = .14, p = .04, and housing quality, β = .14, p = .03, indicating that there was a trend of individuals with longer stays in their current residence and with higher subjective housing quality having higher ratings of social integration. Social support remained significant.

The third step, with the individual-, housing-, and neighbourhood-level variables in the equation, was not significant, *F change* (3, 247) = 2.84, p =<.05, R^2 = .25. The final model accounted for 24.8% of the variance in social integration. One neighbourhood predictor approached significance: neighbourhood impact, β = .18, p = .01. Individuals that rated their neighbourhood as having a positive impact on them had higher ratings of social integration. Social support remained significant and mental health functioning became significant, β = -.19, p < .005.

Hierarchical regression results at FU2. With just the individual-level variables included in the equation, the first step of the model was significant, F (8, 228) = 4.70, p < .001, R^2 = .14 (see Table 4b). The model accounted for 14.1% of the variance in social integration. One significant predictor emerged: social support, β = .38, p < .001. Individuals that had greater levels of social support had higher ratings of social integration. One predictor approached significance: age, β= .12, p = .09, indicating that there was a trend towards increased age and increased social integration.

The second step, with the individual- and housing-level variables in the equation, was also significant, *F change* (4, 224) = 6.10, R^2 = .23, p < .001. The model accounted for 22.6% of the variance in social integration. Two significant housing predictors emerged: length of stay, β = .25, p < .001 and housing quality, β = .22, p < .01. This indicates that individuals living in their current housing for longer periods of time and with higher satisfaction with housing quality had higher social integration. Social support remained significant.

The third step, with the individual-, housing-, and neighbourhood-level variables in the equation, was not significant, *F change* (3, 221) = 2.34, p = .07, R^2 = .25. The final model accounted for 25.2% of the variance in social integration. One neighbourhood predictor approached significance: rental housing impacts, β = .14, p < .05. Social support and length of stay remained significant.

Discussion

This study examined predictors of social integration among a sample of homeless and vulnerably housed individuals. Scores on the social integration measure remained consistent from FU1 to FU2 and fell below the midrange of the spectrum.

Scores were slightly higher than what was reported by Aubry and Myner (1996) and Prince and Prince (2002). The scores indicate that, on average, participants had a low to moderate level of social interaction with their neighbours and in their neighbourhoods.

Examination of individual items demonstrated that individuals were more apt to wave or say hello to their neighbours when seeing them on the street than the remaining items. In fact, the remaining items demonstrated very low agreement ratings with the exception of approximately 25% of participants agreeing that they speak to neighbours when seeing them on the street. These low individual items are consistent with the literature (Aubry & Myner, 1996; Prince & Prince, 2002) and may be a result of the measure used to assess social integration. Homeless and vulnerably housed individuals may view social interactions in ways that differ from the scale. For example, individuals may not have the financial means to go to a restaurant, nor the space to invite others into their home. Further, for people living in homeless shelters, they may seek out social attachments with others living in the facility rather than individuals in their neighbourhood, similar to what Aubry and Myner (1996) reported about individuals living in residential homes.

The model presented in this study accounted for 24.8% of the variability in social integration at FU1 and 25.2% of the variability in social integration at FU2. These numbers demonstrate that the models accounted for a limited amount of variability in social integration and indicate that the model is not a particularly good fit. Moreover, the individual block of variables accounted for the majority of variance in social integration in both regressions.

The most robust predictor to emerge was social support. Individuals with high levels of social support had higher levels of social integration. The finding is supported by the work of Segal and Aviram (1978) and makes intuitive sense. The social support that many respondents receive may be from individuals located in their neighbourhoods. Individuals with high levels of social support may also be more apt to interact within their neighbourhoods since they are likely to have stronger social skills. These social supports may also exist outside of their neighbourhoods, indicating the importance of more relational types of communities (Dalton, Elias, & Wandersman, 2001). The relational ties may not be bound by interactions with neighbours, but instead supports may exist in the larger community, such as drop-in centres. Social support is very important for individuals experiencing homelessness and vulnerable housing, as enhanced social support has been linked with homeless exits (Thompson, Pollio, Eyrich, Bradbury, & North, 2004; Zlotnick, Tam, & Robertson, 2003). For individuals in the current study that exited homelessness or were in the process of exiting homelessness, they may be more likely to recognize the continued importance of social support and reach out to their neighbours and establish social connections with them.

Two individual-level predictors were significant or approached significance. Increased age resulting in higher social integration approached significance at both FU1 and FU2. Poorer mental health functioning resulting in higher social integration approached significance at FU1 only. Focusing on age, the significance of older age contrasts findings from Segal and Aviram (1978) who found that younger individuals had higher social integration. Older individuals may be more likely to maintain their current housing (Kreindler & Coodin, 2010) and thus be able to create meaningful

bonds within their neighbourhoods. This has some support within the current study, as length of stay in one's current housing was significant at FU2 and approached significance at FU1. Older individuals with longer housing tenancies may be more apt to develop longstanding social connections within their neighbourhoods than younger individuals.

Mental health functioning had a surprising association with social integration. Individuals with poorer mental health functioning had higher levels of social integration at FU1. Although this result only approached significance, it is important to consider and replicates work by Gulcur et al. (2007) and Yanos et al. (2012). As stated in the introduction, individuals with higher levels of psychological disability may be more likely to need and attract the support of others and may be more satisfied with these sought out social interactions. Individuals with poor mental health functioning in the current study may also be seeking out housing situations where they know social support is readily available and are more apt to access these resources than individuals with better mental health functioning.

The block of housing variables contributed little variability to the social integration scores. Housing quality and length of stay both approached significance at FU1 and became significant at FU2. Both variables were positively related to social integration, such that increased housing quality and longer housing stays were associated with increased levels of social integration. Good quality housing is an important, but often overlooked variable when considering the housing situations of vulnerably housed individuals. Previous research partially supports this finding, as Nemiroff et al. (2011) report similar findings among their sample of formerly homeless women in terms of

psychological integration. Wells and Harris (2007) found poor housing quality led to negative social outcomes within their sample of low-income women.

Poor housing conditions are a major concern for rooming house residents (Mifflin & Wilton, 2005) and it has been linked to poor health conditions among rooming house residents (Hwang et al., 2003). Perhaps most salient to the current study is the finding that rooming house residents often preferred to socialize away from their building and did not want to invite friends to their building due to space constraints and the quality of the building (Mifflin & Wilton, 2005). Participants in the current study with good quality housing may be more apt to stay within their neighbourhoods and socialize with their neighbours compared to individuals living in poor quality housing.

Homeless shelter quality has received less attention. Elias and Inui (1993) found that some of their older, "hard to house" participants preferred shelter living to poor quality housing accommodations and received more social support in the shelter compared to when they were housed. This has two ramifications. It may indicate that some affordable housing is in such disrepair that individuals would prefer to live in sheltered settings. It also indicates that homeless individuals may have difficulties with disaffiliating from their status as a homeless individual upon the acquisition of housing. Some individuals find it important to maintain ties with their old identities and neighbourhood (Patterson, Rezansoff, Currie, & Somers, 2013), which could explain why housing status did not significantly predict social integration in the current study. Individuals may find it difficult to engage in neighbourhoods where they may feel like an outsider due to their history of homelessness and instead return to areas where they developed social connections with individuals with shared experiences.

Individuals who had longer stays in their current housing reported higher levels of social integration. This replicates the work of Yanos et al. (2012). Longer housing tenancies may allow individuals to engage with their neighbourhoods at a greater level than individuals with shorter tenancies. It also allows for a sense of familiarity to develop in the neighbourhood, which may facilitate social interactions (Yanos et al., 2012). As mentioned previously, this finding may also be linked to age.

The neighbourhood set of variables contributed the least amount of variability within the social integration scores. None of the variables were significant, but subjective neighbourhood impact approached significance at FU1 and rental housing impacts approached significance at FU2. Individuals reporting that their neighbourhoods had a positive subjective impact had higher social integration levels. Townley and Kloos (2011) report a similar finding in that individuals more satisfied with their neighbourhoods had greater psychological, not social, integration. This is a sensible result, as individuals who enjoy their neighbourhoods should feel more comfortable interacting with their neighbours. Interestingly though, subjective neighbourhood impact only approached significance at FU1 and was not significant at FU2. Although this significance at only one time point may be a result of statistical error, it could also indicate that the impact of one's neighbourhood on social integration dissipates in significance as time passes.

Individuals living in neighbourhoods with higher rates of residential mobility, more dwellings requiring major repairs, and a greater frequency of high-rise apartments also had higher social integration levels. This result appears to contradict previous work that found that decreased residential stability led to increased social integration (Farrell et

al., 2004) and living in low-rise apartment buildings (4 floors or less) led to lower social integration levels (Weening et al., 1990); however, it is line with the work of Trute and Segal (1978) who found that individuals living in neighbourhoods with a greater proportion of renters resulted in higher social integration. Neighbourhoods with a greater proportion of renters may be located in areas with more high-rise apartments and increased residential mobility. The participants in the current study may be accustomed to this type of neighbourhood dynamic and therefore be more willing to approach new neighbours moving into their buildings or residences.

The comparatively small impact of the housing and neighbourhood variables is in contrast to the presented hypotheses, but do follow the same trend as Yanos, Stefancic, and Tsemberis (2011). Studies conducted in the 1970s and 1980s (e.g., Segal & Aviram, 1978; Segal et al., 1980) were more likely to report the influence of neighbourhood indicators on social integration. These temporal differences could be attributed to the societal shifts resulting from the urbanisation of our society. This shift, occurring in the first half of the 20th century, resulted in "a social order in which the traditional ties of community – shared space, close kinship links, shared religious and moral values – were being replaced by anonymity, individualism, and competition" (Forrest & Kearns, 2001). Neighbourhood interactions may be less important for individuals today than in the past.

The lack of housing and neighbourhood significance could further be attributed to the lack of housing choice and financial limitations experienced by the participants in the current study. As part of the supported housing models used in the other studies (e.g., Yanos et al., 2004), individuals often received a rent subsidy and choice in where

they live (Aubry, Ecker, & Jetté, 2014). For individuals in the current study, subsidies were not as common (37% of the sample in housing received a subsidy at FU1 and 39% at FU2) and choice in housing may have been limited due to financial resources. As a result, individuals may have been more accustomed to certain housing and neighbourhood conditions where affordable housing and community resources were present, therefore limiting the influence of housing and socioeconomic indicators on social integration.

Lastly, the neighbourhood variables selected may not have been the most appropriate for studying psychological integration. O'Campo et al. (2015) argue that there has been an over-reliance on census-based measures when conducting research on the effects of neighbourhoods. They suggest a broader range of indicators coming from several sectors including justice, transportation, housing, and subjective accounts. They also argue that sampling techniques should be broadened so that neighbourhoods, rather than individuals, are targeted in order to ensure significant representation within each neighbourhood (O'Campo et al., 2015). As it stands now, and what was utilized in the current study, most studies sample individuals first and then link them to their neighbourhoods.

Limitations

A primary limitation of this study was the lack of neighbourhood variability. Approximately 60% of individuals were living in four neighbourhoods, one of which housed the majority of the city's main homeless shelters and drop-in services. These neighbourhoods also displayed similar trends on the objective indicators, creating a relatively homogeneous sample. This is in part a limitation of the sampling frame used

and a reality of the city's landscape. As a result, the findings of this study may not be generalizable to larger cities where low-income housing is present in greater dispersion.

The self-report data may have been vulnerable to the effects of bias or inaccuracy due to memory lapses or disinterest in the questions. In particular, questions about alcohol and drug use may have been underreported. The social integration questions may have been particularly difficult for individuals residing in a homeless shelter as trying to define who a neighbour is could be difficult. Prompts were provided in the questioning to ensure that fellow shelter residents were not to be considered neighbours, but this narrow definition may have been in contrast to how they actually defined who a neighbour was.

Future Research

Future research on social integration for homeless and vulnerably housed individuals should take several directions. Firstly, social integration scales tailored to this population should be created in consultation with the population. Integration, neighbourhood, and neighbours may have different connotations for individuals experiencing housing transitions compared to the general public. Secondly, there should be attempts to sample individuals from a wide range of neighbourhoods. Holistic and ecological models should continue to be used, however objective and subjective neighbourhood indicators should be also be utilized. Continued research should be conducted with similar samples of homeless and vulnerably housed individuals. It is important to consider individuals that fall across all ends of the spectrum, not just individuals receiving supported housing services.

Implications

The results from this study present several implications for service providers and policy advisors. Socially isolated homeless and vulnerably housed individuals should be encouraged to interact with their neighbours and in their neighbourhoods. By developing bonds within their communities and acquiring social support, they may reduce the risk of entering homelessness again. One way to facilitate this is to create community events, such as community dinners or mixers, to allow for positive social opportunities to occur. It is also important for service providers to consider the importance of the other significant, but not robust, variables related to social integration: age, mental health functioning, housing quality, length of stay, and subjective neighbourhood impact. In particular, housing of high overall quality located in quality neighbourhoods should be considered when housing placements are completed. Unfortunately, this is easier said than done since there is a substantial lack of affordable housing available in the majority of municipalities. Service providers should also consider creating specific post-housing service plans to promote socialization within the neighbourhood.

There needs to be a greater emphasis on creating and maintaining affordable housing of high overall quality. It is clear that housing is more than just the physical space it provides. Good quality housing located in a variety of neighbourhoods will lead to social opportunities for individuals who may otherwise not have such opportunities. By doing so, formerly homeless and vulnerably housed individuals may find a home and remain stably housed.

References

Aubry, T., Tefft, B., & Currie, R. (1995). Public attitudes and intentions regarding tenants of community mental health residences who are neighbours. *Community Mental Health Journal, 31,* 39-52.

Aubry, T. & Myner, J. (1996). Community integration and quality of life: A comparison of persons with psychiatric disabilities in housing programs and community residents who are neighbours. *Canadian Journal of Community Mental Health, 15* (1), 5-20.

Aubry, T., Ecker, J., & Jetté, J. (2014). “Supported housing as a promising Housing First approach for people with severe and persistent mental illness”. *Homelessness and Health in Canada*. Guirguis, M., MacNeil, R., & Hwang, S. (Eds.), Ottawa, ON, University of Ottawa Press. 155-188.

Baumgartner, J.B. & Herman, D.B. (2012). Community integration of formerly homeless men and women with severe mental illness after hospital discharge. *Psychiatric Services, 63* (5), 435-437.

Bassuk, E.L. & Lamb, H.R. (1986). Homelessness and the implementation of deinstitutionalization. *New Directions for Mental Health Services, 30,* 7-14.

Brodsky, A.E. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. *Journal of Community Psychology, 24* (4), 347-363.

Brodsky, A.E., O'Campo, P.J., & Aronson, R.E. (1999). PSOC in community context: Multi-level correlates of a measure of psychological sense of community in low-income, urban neighborhoods. *Journal of Community Psychology, 27* (6), 659-679.

Canadian Mortgage and Housing Corporation. (2010). Definitions: Core housing need status. Retrieved from: http://cmhc.beyond2020.com/HiCODefinitions_EN.html

Cocco, K.M & Carey, K.B. (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. *Psychological Assessment, 10*(4), 408-414.

Crystal, S. & Beck, P. (1992). A room of one's own: The SRO and the single elderly. *The Gerontologist, 32* (5), 684-692.

Cutrona, C., & Russell, D. (1987). The provisions of social relationships and adaptation to stress. In W. H. Jones, & D. Perlman (Eds.), *Advances in personal relationships* (pp. 37–67). Greenwich, CT: JAI Press.

Cutrona, C.E., Russell, D., & Rose, J. (1984). Psychosocial factors and physical and mental health among the elderly. Unpublished manuscript.

Daeppen, J-B., Yersin, B., Landry, U., Pécoud, A., & Decrey, H. (2000). Reliability and validity of the Alcohol Use Disorders Identification Test (AUDIT) imbedded within a general health risk screening questionnaire: Results of a survey in 332 primary care patients. *Alcoholism: Clinical and Experimental Research, 24*(5), 659-665.

Dalton, J.H., Elias, M.J., & Wandersman, A. (2001). *Community psychology: Linking individuals and communities.* Stamford, CT: Wadsworth.

Dworsky, A.L. & Piliavin, I. (2000). Homeless spell exits and returns: Substantive and methodological elaborations on recent studies. *Social Service Review, 74* (2), 193-213.

Elias, C.J. & Inui, T.S. (1993). When a house is not a home: Exploring the meaning of shelter among chronically homeless older men. *The Gerontologist, 33* (3), 396-402.

Evans, G.W., Wells, N.M., & Moch, A. (2003). Housing and mental health: A review of the evidence and a methodological and conceptual critique. *Journal of Social Issues, 59* (3), 475-500.

Farrell, S., Aubry, T., & Coloumbe, D. (2004). Neighborhoods and neighbors: Do they contribute to personal well-being? *Journal of Community Psychology, 32* (1), 9-25.

Faul, F., Erdfelder, E., Land, A-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175-191.

Forrest, R. & Kearns, A. (2001). Social cohesion, social capital and the neighbourhood. *Urban Studies, 38,* 2125-2143.

Gulcur, L., Tsemberis, S., Stefancic, A., & Greenwood, R.M. (2007). Community integration of adults with psychiatric disabilities and histories of homelessness. *Community Mental Health Journal, 43* (3), 211-228.

Gurstein, P. & Small, D. (2005). From housing to home. Reflexive management for those deemed hard to house. *Housing Studies, 20* (5), 717-735.

Hubley, A.M., Russell, L.B., Gadermann, A.M., & Palepu, A. (2009). *Quality of Life for Homeless and Hard-to-House Individuals (QoLHHI) Inventory: Administration and Scoring Manual.* Vancouver, BC: Authors.

Hwang, S. W. (2001). Homelessness and health. *Canadian Medical Association Journal, 164* (2), 229-233.

Hwang, S.W., Martin, R.E., Tolomiczenko, G.S. & Hulchanski, J.D. (2003). The relationship between housing conditions and health status of rooming house residents in Toronto. *Canadian Journal of Public Health, 94* (6), 436-440.

Kreindler, S.A. & Coodin, S. (2010). Housing histories of Assertive Community Treatment clients: Program impacts and factors associated with housing stability. *Canadian Journal of Psychiatry, 55* (3), 150-156.

McMillan, D.W. & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14,* 6-23.

Maisto, S.A., Carey, M.P., Carey, K.B., Gordon, C.M., & Gleason, J.R. (2000). Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with severe and persistent mental illness. *Psychological Assessment, 12,* 186-192.

Maisto, S.A., Conigliaro, J., McNeil, M., Kraemer, K., & Kelley, M.E. (2000). An empirical investigation of the factor structure of the AUDIT. *Psychological Assessment, 12*(3), 346-353.

Mallik, K., Reeves, R.J., & Dellario, D.J. (1998). Barriers to community integration for people with severe and persistent psychiatric disabilities. *Psychiatric Rehabilitation Journal, 22* (2), 175-180.

Mifflin, E. & Wilton, R. (2005). No place like home: Rooming houses in contemporary urban context. *Environment and Planning A, 37,* 403-421.

Nemiroff, R., Aubry, T., & Klodawsky, F. (2011). From homelessness to community: Psychological integration of women who have experienced homelessness. *Journal of Community Psychology, 39* (8), 1003-1018.

O'Campo, P., Wheaton, B., Nisenbaum, R., Glazier, R.H., Dunn, J.R., & Chamber, C. (2015). The neighbourhood effects on health and well-being (NEHW) study. *Health & Place, 31,* 65-74.

Ottawa Neighbourhood Study. Retrieved from http://neighbourhoodstudy.ca/neighbourhood-maps-2011/

Patterson, M.L., Rezansoff, S., Currie, L., & Somers, J.M. (2013). Trajectories of recovery among homeless adults with mental illness who participated in a randomised controlled trial of Housing First: A longitudinal, narrative analysis. *BMJ Open, 3,* 1-8.

Prince, P.N. & Prince, C.R. (2002). Perceived stigma and community integration among clients of assertive community treatment. *Psychiatric Rehabilitation Journal, 25* (4), 323-331.

Reinert, D.F. & Allen, J.P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism: Clinical and Experimental Research, 26*(2), 272-279.

Salyers, M.P., Bosworth, H.B., Swanson, J.W., Lamb-Pagone, J., & Osher, F.C. (2000). Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care, 38*(11), 1141-1150.

Segal, S.P., & Aviram, U. (1978). *The mentally ill in community-based sheltered care: A study of community care and social integration.* New York: John Wiley & Sons.

Segal, S.P., Baumohl, J., & Moyles, E.W. (1980). Neighborhood types and community reaction to the mentally ill: A paradox of intensity. *Journal of Health and Social Behavior, 21,* 345-359.

Skinner, H.E. (1982). The Drug Abuse Screening Test. *Addictive Behaviors, 7,* 363-371.

Stergiopoulos, V., Gozdzik, A., O'Campo, P., Holby, A.R., Jeyaratnam, J., & Tsemberis, S. (2014). Housing First: Exploring participants' early support needs. *BMC Health Services Research, 14,* 167.

Tabachnick, B.G. & Fidel, L.S. (2006). Using multivariate statistics (5th edition). Pearson: New York, NY.

Thompson, S.J., Pollio, D.E., Eyrich, K., Bradbury, E., & North, C.S. (2004). Successfully exiting homelessness: Experiences of formerly homeless mentally ill individuals. *Evaluation and Program Planning, 27,* 423-431.

Toro, P.A., Bellavia, C.W., Daeschler, C.V., Owens, B.J., Wall, D.D., Passero, J.M., & Thomas, D.M. (1995). Distinguishing homelessness from poverty: A comparative study. *Journal of Consulting and Clinical Psychology, 63* (2), 280-289.

Toro, P.A., Passero Rabideau, J.M., Bellavia, C.W., Daeschler, C.V., Wall, D.D., & Thomas, D.M. (1997). Evaluating an intervention for homeless persons: Results of a field experiment. *Journal of Consulting & Clinical Psychology, 65* (3), 476-484.

Townley, G. & Kloos, B. (2011). Examining the psychological sense of community for individuals with serious mental illness residing in supported housing environments. *Community Mental Health Journal, 47,* 436-446.

Trute, B., & Segal, S.P. (1976). Census tract predictors and the social integration of the sheltered-care residents. *Social Psychiatry, 11,* 153-161.

Tsai, J. & Rosenheck, R.A. (2012). Conceptualizing social integration among formerly homeless adults with severe mental illness. *Journal of Community Psychology, 40* (4), 456-467.

Tsemberis, S., McHugo, G., Williams, V., Hanrahan, P., & Stefancic, A. (2007) Measuring homelessness and residential stability: The residential time-line follow-back inventory. *Journal of Community Psychology*, *35*, 29-42.

Ware, Jr., J.E., Kosinski, M., & Keller, S.D. (1996). A 12-Item Short-Form Health Survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*(3), 220-233.

Weening, M.W.H., Schmidt, T., & Midden, C.J.H. (1990). Social dimensions of neighbourhoods and the effectiveness of information programs. *Environment and Behavior, 22,* 27-54.

Wells, N. & Harris, J. (2007). Housing quality, psychological distress, and the mediating role of social withdrawal: A longitudinal study of low-income women. *Journal of Environment Psychology, 27,* 69-78.

Wolfensberger, W. (1972). *The principle of Normalization in human services*. Toronto: National Institute on Mental Retardation.

Wong, Y-L., I. & Solomon, P.L. (2002). Community integration of persons with psychiatric disabilities in supportive independent housing : A conceptual model and methodological considerations. *Mental Health Services Research, 4* (1), 13-28.

Yanos, P.T., Barrow, S.M., & Tsemberis, S. (2004). Community integration in the early phase of housing among homeless persons diagnosed with severe mental illness: Successes and challenges. *Community Mental Health Journal, 40* (2), 133-150.

Yanos, P.T., Felton, B.J., Tsemberis, S., & Frye, V.A. (2007). Exploring the role of housing type, neighborhood characteristics, and lifestyle factors in the community integration of formerly homeless persons diagnosed with mental illness. *Journal of Mental Health, 16* (6), 703-717.

Yanos, P.T., Stefancic, A., & Tsemberis, S. (2011). Psychological community integration among people with psychiatric disabilities and nondisabled community members. *Journal of Community Psychology, 39* (4), 390-401.

Yanos, P.T., Stefancic, A., & Tsemberis, S. (2012). Objective community integration of mental health consumers living in supported housing and of others in the community. *Psychiatric Services, 63* (5), 438-444.

Zlotnick, C., Robertson, M.J., & Lahiff, M. (1999). Getting off the streets: Economic resources and residential exits from homelessness. *Journal of Community Psychology, 27* (2), 209-224.

Zlotnick, C., Tam, T., & Robertson, M.J. (2003). Disaffiliation, substance use, and exiting homelessness. *Substance Use & Misuse, 38* (3-6), 577-599.

Table 1b. *Individual, Housing, and Neighbourhood Characteristics at Follow-ups 1 & 2.*

	FU1 (N = 263) Mean (SD) or *n* (%)	FU2 (N = 238) Mean (SD) or *n* (%)
Individual		
Age	42.88 (11.14)	43.46 (11.12)
Race (White)	199 (76.5%)	204 (75.8%)
Partner (Yes)	74 (28.2%)	86 (31.9%)
High School Graduate (Yes)	147 (56.1%)	n/a
Gender (Male)	206 (70.3%)	190 (70.1%)
Problematic Alcohol Use (Yes)	101 (38.4%)	91 (34.9%)
Problematic Drug Use (Yes)	70 (26.6%)	66 (24.4%)
Physical Health Functioning	43.44 (12.10)	43.36 (11.93)
Mental Health Functioning	40.27 (13.72)	42.11 (13.61)
Mental Health Diagnosis (Yes)	176 (61.1%)	163 (60.8%)
Depression	120 (68.2%)	107 (65.6%)
General Anxiety	52 (29.5%)	48 (29.4%)
Bipolar	32 (18.2%)	29 (17.8%)
Schizophrenia	22 (12.5%)	20 (12.3%)
Social Support	22.88 (4.22)	23.46 (3.96)
Employed (Yes)	91 (34.6%)	84 (31.1%)
Housing		
Housed (Yes)	190 (72.2%)	217 (79.8%)
Homeless Episodes	1.02 (1.16)	.68 (1.08)
Length of Stay	231.82 (191.83)	338.78 (301.86)
Housing Quality	28.64 (9.74)	29.74 (8.53)
Neighbourhood		
Unemployed Individuals	6.57 (2.54)	6.95 (2.30)
Low-income Individuals	32.30 (8.89)	32.42 (9.15)
Movers	24.01 (5.67)	22.95 (5.73)
Major Repairs Required	10.37 (2.56)	10.32 (2.56)
Recent Immigrants	4.05 (1.93)	4.20 (1.99)
No High School Education	7.29 (5.38)	8.09 (5.57)
High Rise Apartments	41.33 (17.25)	39.56 (18.00)
Neighbourhood Impact	4.49 (1.84)	4.65 (1.76)
Social Integration	15.79 (6.30)	15.98 (6.38)

Table 2b. *Correlational Matrix for Follow-up 1.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Social Integration	-															
2. Gender	.01	-														
3. Age	.11*	-.14*	-													
4. Social Support	.38***	-.04	-.04	-												
5. AUDIT	.01	-.19**	-.06	-.05	-											
6. DAST	.07	-.01	-.03	-.07	.04	-										
7. PCS	.01	-.13*	-.22***	.19**	.03	.04	-									
8. MCS	.02	-.23***	.06	.34***	-.07	-.10	.09	-								
9. Employment	.08	-.18**	-.25	.16**	.18**	-.11*	.23***	.13*	-							
10. Housing type	-.02	-.11*	-.01	-.05	.03	.09	.07	-.06	-.06	-						
11. Homeless episodes	-.04	-.04	-.05	-.01	.08	.04	.01	-.04	-.07	.53***	-					
12. Length of stay	.07	.04	.12*	-.11*	-.11*	-.06	-.03	-.01	-.06	-.27***	-.48***	-				
13. Housing quality	.16**	-.08	.12*	.27***	-.08	-.07	.10*	.38***	-.09	-.15**	.01	-.06	-			
14. Neighbourhood impact	.20***	-.10	.10	.20**	.04	-.07	.17**	.28***	.01	-.19**	-.03	-.03	.56***	-		
15. Neighbourhood index	.06	.18**	.01	.00	-.05	-.03	-.10	-.04	-.05	-.29***	-.10	.03	-.01	-.04	-	
16. Rental housing impacts	.04	-.02	-.04	-.04	.03	-.01	-.02	.05	.11*	.26***	.04	.08	-.14*	-.15**	.02	-

** p< .05;* ***p* <.01; *** *p* < .001

Table 3b. *Correlational Matrix for Follow-up 2.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Social Integration	-															
2. Gender	.02	-														
3. Age	.10	-.09	-													
4. Social Support	.36***	.06	.01	-												
5. AUDIT	-.02	-.05	-.07	-.10	-											
6. DAST	-.07	.09	-.21**	-.22***	.10	-										
7. PCS	.04	-.18**	-.26***	.11*	-.15*	-.09	-									
8. MCS	.07	-.23***	.05	.34***	-.13*	-.30***	.20**	-								
9. Employment	.06	-.17**	-.18**	.18**	.11*	-.08	.24***	.08	-							
10. Housing type	-.14*	-.03	-.01	-.13*	.07	.10	-.02	-.04	-.06	-						
11. Homeless episodes	-.15*	-.07	-.09	-.16**	.11	.13*	-.04	-.04	-.04	.65***	-					
12. Length of stay	.21***	-.01	.15*	-.04	-.07	-.12*	-.02	-.03	-.06	-.30***	-.24***	-				
13. Housing quality	.25***	-.04	.14**	.28***	-.07	-.25***	.12*	.45***	-.06	-.29***	-.23***	.03	-			
14. Neighbourhood impact	.20**	-.16**	.15*	.11	-.06	-.16**	.13*	.41***	-.02	-.14*	-.14*	.06	.65***	-		
15. Neighbourhood index	.00	.09	.01	.11	.06	-.04	-.14*	-.50	.03	-.27***	-.13*	.01	-.07	-.15*	-	
16. Rental housing impacts	.10	.00	.09	-.05	.13*	-.11*	-.13*	.05	-.03	.26***	.20**	.09	-.10	-.05	.11*	-

** p< .05;* ***p* <.01; *** *p* < .001

Table 4b. *Hierarchical regression for Follow-ups 1 & 2.*

		FU1					FU2				
		B	se	β	R^2	ΔR^2	B	se	β	R^2	ΔR^2
Step 1					.19	.19***				.14	.14***
	Gender	.38	.84	.03			.00	.93	.00		
	Age	.08	.03	.15*			.07	.04	.12		
	Social Support	.65	.09	.43***			.61	.11	.38***		
	AUDIT	.30	.76	.02			.29	.87	.02		
	DAST	1.47	.82	.10			.29	1.00	.02		
	PCS	-.03	.03	-.05			.02	.04	.04		
	MCS	-.06	.03	-.13*			-.03	.03	-.07		
	Employment	1.18	.82	.09			.20	.92	.01		
Step 2					.22	.03				.23	.08***
	Housing type	.68	.96	.05			-.33	1.30	-.02		
	Homeless episodes	.05	.40	.01			.43	.50	.07		
	Length of stay	.00	.00	.14*			.01	.00	.25***		
	Housing quality	.09	.04	.14*			.17	.05	.22**		
Step 3					.25	.03				.25	.02
	Neighbourhood impact	.60	.24	.18*			.41	.29	.11		
	Neighbourhood index	.13	.13	.07			-.02	.14	-.01		
	Rental housing impacts	.15	.16	.06			.39	.18	.14*		

** p< .05; **p* <.01; *** *p* < .001

CHAPTER 8

Qualitative Comparative Analysis

Contributions

The data for the study presented in the manuscript were collected as part of the *Health and Housing in Transition* (HHiT) study. Dr. Tim Aubry serves as a co-Principal Investigator for the HHiT study and supervised the doctoral thesis research presented in this manuscript. Mr. John Ecker developed the research presented in this manuscript and helped to conduct interviews with the participants in the study, as well as conducting data entry and data analysis.

Acknowledgements

Funding for the *Health and Housing in Transition* study was provided by the Canadian Institutes of Health Research (CIHR). John Ecker was supported by a grant from the Social Sciences and Humanities Research Council (SSHRC).

A Mixed Methods Analysis of Individual, Housing, and Neighbourhood Impacts on Community Integration Among Vulnerably Housed and Homeless Individuals

John Ecker & Tim Aubry

University of Ottawa

Ottawa, Ontario, Canada

John Ecker, Doctoral Candidate in Experimental Psychology, University of Ottawa & Centre for Research on Educational and Community Services

Abstract

The current longitudinal study used a mixed methods approach to examine the relationship of individual, housing, and neighbourhood characteristics and community integration among a population of homeless and vulnerably housed individuals. Participants were recruited at homeless shelters, meal programs, and rooming houses in Ottawa and participated in three in-person interviews, each approximately one year apart. Participants were placed into either a “high” or a “low” integration based upon their community integration scores at Follow-up 1 and Follow-up 2. There were 14 “high” and 32 “low” integration participants at Follow-up 1 and 17 “high” and 35 “low” participants at Follow-up 2. A general inductive approach utilizing First Cycle and Second Cycle coding was utilized to analyze responses to several open-ended questions at both Follow-up 1 and Follow-up 2. Responses were compared within and between each group at both time points. The most salient themes that affected community integration involved substance use in one’s housing and neighbourhood, neighbourhood safety and location, and housing quality. Implications for service provision and policy advancements to better address community integration among homeless and vulnerably housed individuals are discussed.

Community integration extends beyond its literal definition of integrating one's self into one's community. The term is multi-faceted and includes physical integration, psychological integration, and social integration (Aubry & Myner, 1996; Wong & Solomon, 2002). Physical integration includes how individuals participate in community activities; psychological integration includes how individuals feel a sense of belonging and membership in their communities; and social integration includes how an individual engages with others in the community.

For individuals with insecure housing, community integration can be difficult since they may move through several neighbourhoods, making the opportunity to establish social connections and feel connected to one's community short-lived. Surprisingly, the bulk of the literature on community integration for homeless and vulnerably housed individuals does not take housing transitions into account and instead focuses on individuals once they achieve stable housing, often through some form of supported housing program (e.g., Gulcur, Tsemberis, Stefancic, & Greenwood, 2007; Yanos, Felton, Tsemberis, & Frye, 2007). As well, much of the research has been quantitative; however there is an emerging trend of more mixed methods (e.g., Yanos, Barrow, & Tsemberis, 2004; Yanos et al., 2007) and qualitative studies being conducted (e.g., Anucha, 2010; Patterson, Rezansoff, Currie, & Somers, 2013; Wong, Metzendorf, & Min, 2006). Qualitative inquiries are important given that community integration is a subjective phenomenon that may not be accurately captured within the confines of a forced-choice measurement scale.

The current mixed methods study investigates the experiences of community integration, specifically psychological and social integration, among a non-clinical

sample of homeless and vulnerably housed individuals. It compares individuals with high levels of community integration to individuals with low levels, on a variety of open-ended responses to housing and neighbourhood satisfaction questions and furthers the work completed in the first two studies of this thesis. It has the potential to uncover housing and neighbourhood variables that are important for psychological and social integration that were not included in the quantitative studies.

Two time-points of data are used as a means to validate the findings. Data analysis was guided by a general inductive approach as outlined by Saldana (2009). A series of steps guided by First Cycle and Second Cycle coding was utilized to identify themes in the data. Recurring themes indicate that these are particularly salient to community integration. The goal is to determine what individual, housing, and neighbourhood factors facilitate and hinder experiences of community integration among homeless and vulnerably housed individuals.

Vulnerable Housing

To begin, it is important to define vulnerable housing. It is defined using the criteria developed by the Canadian Mortgage and Housing Corporation (CMHC) for identifying individuals living in core need. It includes individuals living in housing that that falls below adequacy, affordability, and suitability standards (CMHC, 2010). This involves having housing that requires major repairs (adequacy), paying more than 30% of one's income on housing (affordability), and not having enough bedrooms for the size and makeup of one's household (suitability). Within the current study, the majority of vulnerably housed individuals lived in rooming houses.

Although limited, there has been some research into the lives of individuals living in vulnerable housing. In a qualitative study of rooming house residents in Canada, Mifflin and Wilton (2005) found that their participants expressed four concerns about living in rooming houses. These were the physical condition of the building, sharing with other tenants and a lack of private space, safety and security, and difficulties in maintaining sobriety. Participants also stated some positive features of living in a rooming house. These included the proximity of the rooming house to services, downtown retail stores, and public transit. A second positive feature was the affordability of the accommodation.

Lastly, when considering social contacts, individuals living in Single Room Occupancy (SRO) hotels were found to have few visits with friends (Crystal & Beck, 1992) and frequently experienced social isolation (Elias & Innui, 1993). These results demonstrate that individuals living in vulnerable housing may have difficulty in becoming socially integrated members of their community and risk becoming socially isolated. Social isolation presents many challenges, as Elias and Innui (1993) found their participants engaged in binge drinking as response to social isolation and this led to employment loss and eventually housing loss.

Housing Intervention Studies

Three mixed methods and/or qualitative studies that were part of intervention research, focused on individuals living in supported housing. Yanos et al. (2004) explored whether participants of a Housing First program differed in their community integration experiences compared to participants of staffed residential settings. Using qualitative methods, they asked participants about their transition into being housed.

They reported that most of their participants felt like they fit in with their communities. A contributing factor to their fitting in was the "match" between their own race/ethnicity and that of other residents living in their neighbourhood. Some individuals reported having difficulty fitting into their neighbourhood. These individuals typically lived in independent apartments, rather than congregate settings. These participants stated that it was difficult to live by themselves and some felt socially isolated. The participants noted that in their previous living arrangements (e.g., shelters, institutions, the street), they developed friendships. Factors related to not experiencing comfort in their neighbourhood included a race/ethnicity or language mismatch with other neighbourhood residents, the presence of crime and drug activity in the neighbourhood, and differences in attitudes and behaviours with other neighbourhood residents.

Yanos et al. (2007) sampled individuals who were formerly homeless, but who had been stably housed for more than one year. Individuals were living in either supported- independent housing or congregate housing. They categorized their participants into four groups based on the setting in which their "meaningful activities" took place. These settings included one's neighbourhood or employment setting, one's residential building, one's apartment or room, and a null category for those who had no meaningful activity. The null category had the greatest proportion of individuals. Housing type had a significant association to group membership. Those with meaningful activities in their neighbourhood or employment, or apartment were primarily living in independent apartments. Using these groupings and comparing them on their community integration, it was found that individuals with meaningful activity in their

neighbourhood or employment had significantly higher psychological and social integration scores compared to participants with no meaningful activity.

Patterson et al. (2013) examined whether participants of a Housing First program differed in their community integration experiences compared to participants receiving standard care in the community using a longitudinal, narrative analysis. They found that social isolation was a barrier to recovery for many of the tenants in Housing First programs. Some participants, particularly those with lengthy homeless histories, had difficulties disassociating from their identity as a homeless person. This made it difficult to engage within their new communities. For participants with positive recovery trajectories, exploring new opportunities to enhance their social identity were important; however, individuals with positive recovery trajectories also noted that it was important to maintain ties with their old identities and neighbourhoods, creating a fine balance between embracing a new identity but maintaining some aspects of their old one.

Supportive/Supported Housing Residents Compared to Community Members

Wong et al. (2006) investigated the social interactional aspect of community integration between mental health consumers and their neighbours. This qualitative analysis acquired the perspectives of mental health consumers in three community residential programs and the staff members providing services to these consumers in separate focus groups. Consumer data revealed three themes regarding their interactions with neighbours. (1) There were positive and negative experiences in their encounters with community residents. A “good” neighbour was described as respectful and who “looked out” for each other. A “bad” neighbour was someone who was noisy, intrusive, and aggressive; (2) They reported having experiences of social rejection and

labelling. Social rejection often occurred in circumstances with greater numbers of mental health consumers present. (3) The described feeling part of the community. In general, consumers reported being satisfied with living in the community. Some consumers reported differences between themselves and community members based upon mental health status, age, family status, nationality, and income. Although these differences with neighbours were reported, many consumers felt that these differences and the cultural diversity of their neighbourhoods were beneficial for their reintegration into society. Patience was also mentioned, as some consumers thought that with time and exposure, they would gain greater acceptance in the community.

Low-income and Vulnerably Housed Individuals

Brodsky (1996) contributed a different approach to the community integration literature. By conducting qualitative interviews with low-income women in “risky” neighbourhoods, she explored this idea of negative psychological sense of community further. The women stated that one of the barriers to community membership was the lack of physical and emotional safety in their neighbourhoods. Some participants purposefully created a divide between themselves and the community, using “us” versus “them” speak. This divide was created primarily as a means to keep their children safe from negative influences. The women did not form strong bonds with other residents of their neighbourhood, as they viewed their values as different from their neighbours. Even though a disconnect to their neighbourhood was present, many of the women were involved in community groups or organizations, particularly ones that involved their children.

Anucha (2010) conducted qualitative interviews with individuals living in two shared accommodation, community housing residences who were at risk of being evicted. Both residences had community housing workers on site 24 hours a day, seven days a week. The majority of eviction notices were for payment of rent issues, with the remaining being behaviour-related. In terms of their current housing, all participants stated that their current residences were housing, but not homes. Conflicts in their housing were said to arise over such issues as hygiene, guest visits, theft, and noise. These tensions were inflated because most of the residents did not leave the residence, as they were unemployed and lacked finances. The mental health of the other tenants was mentioned repeatedly by the participants as something that was difficult to live with. The quality of the housing also impeded the participants from inviting friends over, which made it difficult to build relationships with potentially supportive people.

The preceding literature demonstrates the unique challenges that homeless and vulnerably housed individuals experience with regards to community integration. Poor housing and neighbourhood quality can lead to social isolation, however some homeless and vulnerably housed individuals are able to become fully integrated members of their neighbourhoods. This study attempts to examine these individual, housing, and neighbourhood differences among homeless and vulnerably housed individuals with high and low levels of social and psychological integration.

This study provides a contribution to the community integration literature in several ways. Firstly, given that the majority of the research has focused on individuals living in some form of supportive or supported housing (Anucha, 2010; Patterson et al.,

2013; Wong et al., 2006; Yanos et al., 2004; Yanos et al., 2007) the sample used in the current study provides new insights. Secondly, the longitudinal nature of the study allows for a deeper understanding of how housing transitions can effect community integration than cross-sectional designs used in other studies (e.g., Anucha, 2010; Wong et al., 2006; Yanos et al., 2004; Yanos et al., 2007). Lastly, the protocol is focused on an ecological model (Brofenbrenner, 1979), so that multiple levels impacting community integration are investigated.

Methods

A mixed methods design informed by the work of Caracelli and Greene (1993) was used. In their review of the literature on mixed methods evaluations, they identified four major designs. The design that best fit the current analysis was an extreme case analysis. This type of analysis identifies extreme cases through one type of data and then further investigates it using the other data type (Caracelli & Greene, 1993). The intent is to test the original classification scheme. Therefore, participants were classified as having “high” or “low” community integration using quantitative means and these classifications were tested using qualitative methods. Further description of the method used to code individuals as “high” or “low” is found below.

Study Description

Data for this research comes from the *Health and Housing in Transition* (HHiT) *Study*, a longitudinal study conducted by researchers at the University of Ottawa, St.-Michael’s Hospital, and the University of British Columbia. It is a multi-site study involving homeless and vulnerably housed individuals in Ottawa, Toronto, and Vancouver. The methodology used in HHiT was approved by the Research Ethics

Board at the University of Ottawa. The objective of the study is three-fold. The first is to record the housing transitions of participants. The second is to identify the risk factors for housing loses and the resources for obtaining housing. The third is to determine whether housing transitions are associated with changes in physical and mental health functioning.

Only data from the Ottawa site is used for the current study, as the intent was to examine community integration in one context. Vancouver and Toronto were thought to have different housing and homeless contexts, as Vancouver's low-income housing is often Single Room Occupancy hotels rather than rooming houses and Toronto has a greater multitude of homeless services than Ottawa.

Participants and Procedure

Data collection for the HHiT study took place in three phases (baseline, Follow-up 1, Follow-up 2), from 2008 to 2011. At baseline, participants (*N* = 397) completed in-depth, in-person interviews. Follow-up 1 (*N* = 341; 86%) and Follow-up 2 (*N* = 321; 81%) interviews were completed primarily in person, with some interviews being conducted via telephone for those individuals no longer living in the Ottawa area. Interviews were conducted by trained research assistants who were students in Psychology or Social Work, or who had experience in interviewing and/or working with individuals who are homeless. Baseline interviews lasted, on average, 68 minutes. Follow-up 1 interviews lasted, on average, 65 minutes. Follow-up 2 interviews lasted, on average, 53 minutes. The majority of interviews across all three time points were conducted in English [*N* = 380 (95.7%) (baseline); *N* = 330 (96.7%) (FU1); *N* = 306

(95.3%) (FU2)], with a small number [*N*= 17 (4.3%) (baseline); *N* = 11(3.3%) (FU1); *N* = 15 (4.7%) (FU2)] completed in French

Two stages of sampling were conducted for participant recruitment. In the first stage, individuals were sampled from shelters, meal programs, SRO hotels, and rooming houses. The second stage involved the random selection of individuals from the settings of the first stage of sampling. All participants were over the age of 18 and did not live with a partner or dependent child. An individual was defined as homeless if he or she: (1) lived in a shelter, public place, vehicle, abandoned building, or someone else's place and (2) did not have his or her own place (e.g., house, apartment, or room). An individual was defined as vulnerably housed if he or she: (1) lived in a socially marginalized type of housing (SRO room or rooming house); (2) met the Canadian Mortgage Housing Corporation (CMHC) criteria for "core housing Need" on the basis of having housing costs greater than 30% of their monthly income; (3) had moved at least twice in the past 12 months; or (4) had moved less than twice in the past 12 months, but experienced homelessness in that time. Participants received honoraria of $20.00 for each of the three interviews.

Interview Protocol

The HHIT interview protocol included both close-ended quantitative questions and open-ended qualitative questions. The qualitative questions were interspersed throughout the protocol and participant answers were written down, verbatim, by the interviewer. All responses were entered into a qualitative data entry template in Microsoft Word.

In order to enhance the comfort of the participants during the interview process, the same interviewer was used, when possible, across the three periods. This was completed in order for the development of a rapport between interviewer and interviewee. Although this may seem as a superficial attempt to develop a relationship between interviewer and interviewee, a level of familiarity is beneficial to any circumstance involving the sharing of life stories.

Measures

Qualitative

Three sets of questions were assessed: 1) individual impacts, 2) housing impacts, and 3) neighbourhood impacts. The individual impact questions were: “What helps you get through the rough times? What are some of the things you do to cope?” and “Anything else you do to socialize?” The housing impact questions included: “Do you have the kind of housing you want?”; “What is the best thing about the place where you currently live or stay?” and “What is the worst thing about the place where you currently live or stay?” The neighbourhood impact questions included: “Do you feel safe if your neighbourhood? Why or why not?”, “What is the best thing about your neighbourhood?” and “What is the worst thing about your neighbourhood?”

It is noted that the questions do not directly ask about community integration experiences. This is in part a limitation of the pre-existing survey measure that was used. However, the mixed methods approach used in this analysis compensates for this indirect line of questioning of community integration. Due to the sampling steps that were taken, the community integration levels of the participants are already known. The open-ended questions support the purpose of this study, which is to further the work of

the previous two quantitative studies and potentially uncover new individual, housing, and neighbourhood facilitators and barriers to community integration. Furthermore, the literature has demonstrated that particular housing and neighbourhood characteristics, such as housing quality (Nemiroff, Aubry, & Klodawsky (2011) and neighbourhood safety (Yanos et al., 2004), can impact community integration, something that the questions used in this analysis can uncover. Lastly, the broad nature of the questions allowed the participants to frame their own answers and eliminates the risk of leading questions.

Quantitative

Psychological Integration. Psychological integration was measured at follow-up 1 and 2 using a 6-item version of the sense of community scale used by Farrell, Aubry, and Coloumbe (2004). The original scale includes 14-items, but the scale was reduced to 6 items due to relevance of items to the population and for overall survey length concerns. The scale was developed based upon the definition of sense of community by McMillan and Chavis (1986). It assesses a participant's perception of their sense of belonging in their neighbourhood, as well as neighbourhood safety, availability of support, and emotional investment in the neighbourhood. Sample items include, "There are people in this neighbourhood who really care about me" and "I like to think of myself as similar to the people who live in this neighbourhood." Response options range from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The possible total score ranges from 6-30, with higher scores representing greater psychological integration. Farrell et al. (2004) report internal consistency of α=.72 for the 14-item

scale. The 'Cronbach's alphas for the measure in the current study were .78 at FU1 and .79 at FU2

Social Integration. Social integration will be measured at follow-up 2 using a 7-item version of the neighbouring scale created by Aubry, Tefft, and Currie (1995). The original scale includes 12-items, but the scale was reduced to 7 items due to relevance of items to the population and for overall survey length concerns. The scale assesses a participant's social contact with neighbours, ranging from minimal, such as saying hello, to more intimate, such as being invited to a neighbour's home. Items are rated on a 5-point scale ranging from 1 ("Never") to 5 ("Frequently"). The potential total score ranges from 7-35, with higher scores indicating greater social integration. Aubry et al. (1995) report high internal consistency on the 12-item scale ($\alpha = .92$) in a large community sample. The Cronbach's alphas for the measure in the current study were .86 at FU1 and .88 at FU2.

"High" and "Low" Community Integration

A series of selection criterion was established prior to the grouping of participants as either experiencing "high" levels of psychological and social integration or "low" levels. Participants had to be living in Ottawa at the time of their survey. Some participants had moved out of the city and it was thought the experiences of their neighbourhoods would lose contextually relevant factors to participants remaining in Ottawa. Secondly, the psychological and social integration scales were not asked to participants currently in a hospital or jail. Of the 341 respondents at FU1, 293 individuals were still residing in Ottawa and not currently residing in a hospital or jail. Of the 48 individuals who were excluded, four were a result of a missing housing data and

44 were a result of not living in Ottawa, being in hospital, or being in jail. Of the 321 respondents at FU2, 272 individuals were still residing in Ottawa. Of the 49 individuals who were excluded, one was a result of missing housing data and 48 were a result of the individual not living in Ottawa, being in hospital, or being in jail.

The total scores from both the psychological integration scale and the social integration scale were used to create two groupings of participants: “high” community integration and “low” community integration. This process was completed at both FU1 and FU2. As the psychological integration and social integration scales do not have standardized cut-offs for what can be considered “high” or “low” integration, arbitrary limits were created after examining the distribution for the study sample on the two measures. For the psychological integration scale, a score of 6-13 was considered “low”, a score of 14-21 was considered “medium”, and a score of 22-30 was considered “high”. At FU1, 84 (28.7%) individuals reported a “high” psychological integration level and 45 (15.4%) of individuals reported a “low” psychological integration level. At FU2, 86 (31.6%) of individuals reported a “high” psychological integration level and 44 (16.2%) of individuals reported a “low” psychological integration level. For the social integration scale, a score of 7-15 was considered “low”, a score of 16-24 was considered “medium”, and a score of 25-35 was considered “high”. At FU1, 25 (8.5%) of individuals reported a “high” social integration level and 156 (53.2%) reported a “low” social integration level. At FU2, 26 (9.6%) of individuals reported a “high” social integration level and 140 (51.5%) reported a “low” social integration level.

A participant was rated as “high” if s/he had “high” scores on both scales. A participant was rated as “low” if s/he had “low” scores on both scales. Participants who

scored “high” on one scale and “low” on the other scale were not included, as with participants with scores of “medium” on either of the scales. This elimination process was conceived in order to investigate the greatest contrasts between individuals with differing levels of community integration and to ensure that individuals experiencing “low” and “high” levels of community integration were being selected.

It should be noted that the same individuals classified as either “high” or “low” at FU1 were not necessarily included in FU2. Individuals who had “high” or “low” scores at FU1 that did not meet the cut-offs in FU2 were not included. It was decided to not follow individuals at both time points who no longer fit into either category since the questions asked in the survey would not necessarily tap into why this change may have occurred. As well, the main objective of this study was to assess differences and/or similarities between individuals with “high” and “low” integration and not changes in integration.

Data Analysis

Data analysis was guided by a general inductive approach as outlined by Saldana (2009). The data was analyzed using a series of steps, specifically, First Cycle and Second Cycle. First Cycle coding involves an initial review of the data and the development of preliminary codes. Second Cycle coding reorganizes and reanalyzes codes developed through First Cycle coding. The goal is to develop, “a coherent synthesis of the data corpus” (Saldana, 2009, p.149). As a result, a series of themes are developed. Specific steps of the data analysis are described below.

The First Cycle of data analysis involved the open coding of data. Each response was read line-by-line and codes were developed for segments of the data. As

initial codes should stick closely to the data (Charmaz, 2006), in vivo coding, or the words spoken by the participants, was used as often as possible. Following open coding, Second Cycle coding was completed. This type of coding allows data to be synthesized and placed into meaningful categories and subcategories. During this stage of coding, a constant comparison technique was used. Within this, codes and categories were compared within each individual transcript and then across all of the transcripts. Regular reviews of the data can correct fatigue by the analyst and maintain consistency throughout the process. Throughout this latter stage of coding, the use of theoretical memos was used. These memos allow the researcher to write down his or her thoughts about any linkages within the data that he or she perceives (Marshall & Rossman, 2011). Seeking out disconfirming data was also continuously completed throughout the coding process in order to increase validity (Maxwell, 1998).

Reflexive work was utilized throughout the analysis, which enhanced the integrity and trustworthiness of the data (Finlay, 2002). The process allows for the recognition of the way we construct our knowledge. It also allows for enhanced validity of one's findings, as one can recognize the investigator-participant relationship and its effects on data analysis. By engaging in this process, it furthers enhance validity (Hall & Callery, 2001). Part of the process included bracketing out my presuppositions of the experiences of homeless and vulnerably housed individuals before beginning the data analysis through theoretical memo writing. This memo writing also occurred during the data analysis process.

As the data came from structured, open-ended responses, member checking was not feasible as there were few opportunities for follow-up questioning of participant

responses during the interview. As well, post-interview access to the participants was limited as the analysis was conducted years after the interviews took place. To compensate, the trustworthiness of the data was sought through triangulation. In this process, multiple methods are used to verify data (Cho & Trent, 2006). The multiple methods used included methodological rigour, community integration theory, and theoretical memoing.

Once the coding steps were completed, the final themes were compared within each respective group ("low" or "high") at each time point and then between groups. This was completed to note similarities and differences within groups and between groups. If great variability existed within the groups or little variability existed between the groups, then the "high" compared to "low" classification scheme may be inadequate. Alternatively, variability within and differences between groups could indicate that experiences of community integration are unique and cannot be aggregated among individuals.

The lead author was the sole coder involved in the qualitative data analysis. This occurred for practical reasons, as this article is part of the lead author's doctoral thesis; however, this is not a limitation of the current study. Having a single coder is particularly important for studies that place the researcher in ongoing relationships with their research participants (Bradley, Curry, & Devers, 2007). As the HHiT study was longitudinal, I was able to interact with many of the participants for over three years. Although I was not responsible for interviewing all of the participants within the "high" and "low" integration groups, I developed a familiarity with the sample as a whole. To involve a coder without this specific experience would result in a muddled analysis. To

ensure reliability, and as discussed earlier, reflexive work and theoretical memoing were conducted throughout the coding process.

Results

Sample Description

***Follow-up 1*.** Fourteen individuals (4.8%) fit into the "high" integration category at FU1. There were nine males and five females. The average age was 43.6 years. Eleven individuals defined themselves as Caucasian. Individuals had lived in Ottawa for approximately 27 years and the average length of stay in one's current housing was approximately 323 days. All but one individual was housed, as one person was couch surfing with family or friends. The majority of individuals had their own apartments, but other individuals were living in rooming houses, group homes, or temporarily with friends and paying rent. Seven individuals had been employed in the past year and six individuals had at least a high school education. Three individuals had been in prison in the past year. Three individuals currently had partners. Four individuals fit the criteria for problematic drug use and three individuals fit the criteria for problematic alcohol use. Six individuals reported being diagnosed with a mental health problem in their lifetime, with depression (66%) being the most common diagnosis.

Thirty-two individuals (10.9%) fit into the "low" integration category. There were 23 males and nine females. The average age was 39.9 years. Eighteen individuals defined themselves as Caucasian and eight identified as aboriginal. Individuals had lived in Ottawa for approximately 14 years and the average length of stay in one's current housing was approximately 300 days. Twenty-one individuals were housed and 11 were homeless. All the homeless individuals were living in shelters. Housed

individuals were living in their own apartments, rooming houses, and with friends or family. Twelve individuals had been employed in the past year and 21 individuals had at least a high school education. Nine individuals had been in prison in the past year. Thirteen individuals currently had partners. Eleven individuals fit the criteria for problematic drug use and 13 individuals fit the criteria for problematic alcohol use. Eighteen individuals reported being diagnosed with a mental health problem in their lifetime, with depression (72%) being the most common diagnosis.

Follow-up 2

Seventeen individuals (6.3%) fit the "high" integration category at FU2. Six individuals also had "high" integration at FU1 and one individual had "low" integration at FU1. There were 12 males and five females. The average age was 44.9 years. Fifteen individuals defined themselves a Caucasian. Individuals had lived in Ottawa for approximately 27 years and the average length of stay in one's current housing was approximately 519 days. All individuals were housed. Nine individuals had their own apartment, five were living in rooming houses, and the remainder were staying with friends or family or living in supportive housing. Six individuals had been employed in the past year and nine individuals had at least a high school education. Three individuals had been in prison in the past year. Seven individuals currently had partners. Two individuals fit the criteria for problematic drug use and three individuals fit the criteria for problematic alcohol use. Ten individuals reported being diagnosed with a mental health problem in their lifetime, with depression (80%) being the most common diagnosis.

Thirty-five (12.9%) individuals fit into the “low” integration category at FU2. Twelve individuals also had “low” integration at FU1 and four individuals did not participate at FU1. There were 22 males and 13 females. The average age was 38.8 years. Twenty-one individuals defined themselves a Caucasian and 10 individuals defined themselves as aboriginal. Individuals had lived in Ottawa for approximately 15 years and the average length of stay in one’s current housing was approximately 258 days. Twenty-five individuals were housed, with the majority living in their own apartment or rooming house. Ten individuals were homeless, with the majority living in homeless shelters with one individual couch surfing. Thirteen individuals had been employed in the past year and 14 individuals had at least a high school education. Eight individuals had been arrested in the past year. Fourteen individuals currently had partners. Twelve individuals fit the criteria for problematic drug use and sixteen individuals fit the criteria for problematic alcohol use. Twenty-three individuals reported being diagnosed with a mental health problem in their lifetime, with depression (65%) being the most common diagnosis.

Within Group Findings

The following section provides within group findings of the “high” integration group and the “low” integration group. The findings are grouped based upon the type of question asked (e.g., individual, housing, or neighbourhood level). Due to the limited variability in responses, the findings from FU1 and FU2 are combined. Tables 1c, 2c, and 3c provide the coding tables for the individual, housing, and neighbourhood sections. Proceeding this section is the between group findings.

High Integration

Individual

Coping mechanisms. Coping mechanisms centered on intrapersonal and interpersonal activities. Participants stated that they socialized with friends and family members, with fewer participants accessing counselling services. Intrapersonal activities included exercise, reading, and substance use.

Social activities. To socialize, many participants stated that they meet with their friends. One participant stated that they "watch movies" together, while another participant, "had people over for dinner." Using the Internet was also a commonly provided response.

Housing

Has the kind of housing they want. The vast majority of individuals stated they had the kind of housing they wanted. The main theme involved the attributes of the housing. Housing was described as clean, safe, quiet, comfortable, and private. Some participants attached personal meaning to their housing. One participant stated that, "I feel at home here," while another, "likes…to live independently." Lastly, some participants stated their neighbours contributed to having the kind of housing they wanted. For example, one participant said there were, "no drug users around. [It is] safe and relaxing." Another participant stated the neighbourhood, "is quiet and the neighbours are pleasant."

Does not have the kind of housing they want. Very few participants expressed that they did not have the kind of housing they wanted. The long subsidized

housing waitlist and a lack of employment were the reasons given for not having the kind of housing they wanted.

Best thing about housing. Participants appreciated having housing and a place to call home. One participant stated, "it's perfect. Exactly what I want and where I need to be." With housing came feelings of independence, freedom, and privacy. Other participants listed tangible aspects of the housing, such as building amenities, safety, proximity to resources, and the calmness. Several participants noted that their housing was in a quiet location and had good security on the premises. Participants tended to like their neighbours and other residents of their buildings as illustrated by the following quote, "The other residents in the building…are helpful and friendly."

Worst thing about housing. Participants commonly stated that there was no worst thing about their housing. For individuals that did provide answers, the main theme surrounded the attributes of the housing. Participants listed bed bugs, the poor maintenance of the building, and the lack of space as major issues. Other issues involved neighbourhood problems, which included drugs, crime, and the lack of transit.

Neighbourhood.

Safety. The vast majority of participants felt safe in their neighbourhoods. One of the main themes was the participants' familiarity with the area. Some individuals were raised in their neighbourhoods, while others had lived there for a substantial period of time. As stated by one participant, "I've lived in that area for 15 years and I am used to it." Other residents noted that they knew a lot of their neighbours. One participant stated, "I know all my neighbours and they know me." Lastly, some

participants stated there was a good security presence in their building or neighbourhood that resulted in feelings of safety.

Best thing about neighbourhood. The participants enjoyed several aspects of their neighbourhoods. Some participants liked what the location had to offer. A participant noted that, “everything is accessible to me within walking distance,” while another liked that the neighbourhood was, “close to parks and bike paths.” Some participants enjoyed the quietness of the neighbourhood, as illustrated by this quote: “It’s peaceful, tranquil, quiet. It couldn’t get any safer.” Other participants liked their neighbours and the social opportunities that were available. Some participants stated that they “fit in” neighbourhoods and felt, “like part of the community.”

Worst thing about neighbourhood. Participants commonly could not list any worst thing about their neighbourhoods. When responses were provided, they mainly focused on substance use. Participants often noted the, “crack use” in their neighbourhoods.

Low integration

Individual

Coping mechanisms. Coping mechanism were diverse, but the main themes involved substance use and intrapersonal activities. Many participants simply stated that they used drugs and alcohol and did not provide other answers. Other participants engaged in intrapersonal activities, such as exercise, reading, and multimedia engagement (watching television, listening to music, using the Internet). Less common responses involved seeking out external support via a family member, friend, or caseworker.

Social activities. Participants commonly stated that they did nothing else to socialize. The second theme involved contact with family and friends. Some participants stated that they, “visit with friends” or, “have people over for dinner.” One participant provided an insight as to why they limited their social activities: “Social activities with my daughter and granddaughter. I live a sheltered life. I don’t trust myself.”

Housing

Has the kind of housing they want. A few participants had the kind of housing they wanted. The main theme centered on the attributes of the housing. Participants enjoyed the affordability, size, cleanliness, and quietness of their living situations. For others, their housing had more intrapersonal meaning. One participant listed their housing as, “a home.” Another participant stated that living in a shelter served as motivation since, “it’s forcing me to get actual housing.”

Does not have the housing they want. The majority of participants did not have the housing they wanted, which is not surprising since many were living in homeless shelters. When asked what was keeping them from getting the housing they wanted, the dominant theme to be identified involved financial constraints. Participants stated that there were, “no affordable places” and that “places I’d want to move to all do credit checks and I don’t have a credit history.” Related to financial issues, participants listed the long wait-list for subsidized housing as a barrier. One participant stated that, “there is a long wait-list for subsidized housing. I can’t afford market rent,” and another participant said, “I want subsidized housing. I am not high on the priority list.” Although mentioned by fewer participants, intrapersonal issues, such as health or mental health

issues and substance use, also served as barriers to attaining acceptable housing. One participant stated that, “[Depression] keeps me from being able to work.” In terms of addictions, one participant said, “I spend most of my money on alcohol.”

Best thing about housing. The most pervasive theme identified was that “Nothing” was the best thing about the participants’ housing. The second major identified theme was having some type of housing or shelter. Participants stated that the best thing about their housing was that, “I’m not homeless,” or “It’s not a shelter.” For participants that were previously living on the street, one individual stated, “It’s a place inside for sleeping. Better than the streets.” Participants also listed several positive attributes of their housing. These included its affordability, the amenities provided, the cleanliness, and its location. Lastly, some participants stated the best part of their housing was that it was their own and it provided “peace and quiet.”

Worst thing about housing. The main theme identified from the data was the behavior of the other tenants or clients and the neighbourhood residents. Participants noted, “the noise, the bickering, and the fighting,” and that “tenants need to better screened.” The substance use of other tenants and those in the neighbourhood was commonly listed. One participant stated the worst thing about their housing is the, “drug traffic". "People come and go all night, bang on my door, ask to use my phone,” and another stated that there is a, “crack dealer living downstairs.” The attributes of the housing was also a common theme. Participants listed the pests (“the bed bugs.”), the lack of space, the unclean environment (“really rundown and dirty”), the lack of safety (“No security. Flimsy doors and locks.”), the poor maintenance (“Really rundown. Dirty. Landlord won’t fix anything.”), and the restrictions placed upon them (“It feels like jail

because of the locked doors and the rules.”). Lastly some participants disliked their housing situations altogether. The worst thing about their housing was that, “It’s a rooming house,” or “It’s a shelter. Pretty much everything that goes with staying in a shelter.”

Neighbourhood

Safety in the neighbourhood. The majority of participants indicated that they did not feel safe in their neighbourhoods. The lack of safety was attributed to the rampant substance use occurring in the neighbourhoods. Participants stated that there is, “too much crack". "Crack heads will attack you and steal yourself,” and “too many people taking drugs. You don’t know when they’re going to attack you.” Lack of safety also resulted from gang activity in the neighbourhood. For individuals that did feel safe in their neighbourhoods, the main theme involved intrapersonal feelings. Respondents stated that they felt safe because they were not scared of the neighbourhood or they did not have any issues thus far with it. For example, one participant said: “Having lived on the streets for so long, I feel safe anywhere. I can take care of myself.”

Best thing about neighbourhood. The main theme identified from the data was that many participants could not list one best thing about their neighbourhoods. When participants were able to provide an answer, the location of the neighbourhood was commonly listed. Participants enjoyed the parks in the area, the close proximity to resources and the availability of public transportation. Some participants enjoyed the social opportunities and the people in their neighbourhoods. One participant liked that there were, “lots of people to chill with. [I] usually play soccer with other kids at the local park.” Lastly, some participants appreciated the privacy and solitude the

neighbourhood provided them. Their neighbourhood was labelled as “less crowded and not as noisy,” by one participant, whereas another participant liked their neighbourhood because they could, “stick to [themselves].”

Worst thing about neighbourhood. Substance use was most commonly stated as the worst thing about participants’ neighbourhoods. Participants said that there were, “a lot of crack heads around,” and noted, “open drug used by others in the area.” One participant stated the worst thing was, “the crack-cocaine use and severity of addiction in the whole area.” Often related to substance use, other participants stated that the worst thing about their neighbourhood was the crime and violence.

Between Group Findings

Individuals with “high” and “low” integration had distinct profiles on their thoughts of their housing and neighbourhoods, but did share some similarities. Individuals mentioned similar coping mechanisms, which included intra- and interpersonal activities such as exercise, substance use, and socializing with friends. Although fewer “low” integration participants provided answers as to how they socialize, both “high” and “low” integration individuals listed similar answers such as socializing with friends.

Individuals with “high” integration were more likely to have the kind of housing they wanted and were generally satisfied with their housing compared to individuals with “low” integration. Several “high” integration individuals described their housing situations as “homes” and many appreciated the peace, quiet, and independence that it offered. The peace, quiet, and independence of their current housing situations speaks directly to the disruption and lack of control they may have previously experienced in the shelter system or other forms of housing. Many of the “low” integration participants

stated that “disorder” and “noise” were the worst things about their housing, both within shelters and within their own accommodations. Despite these trends, some individuals with “high” integration had issues with maintenance of their buildings and some “low” integration individuals liked the attributes of their housing.

In terms of neighbourhood factors, individuals with “low” integration particularly noted the negative influence of drug use. Drug use, specifically crack-cocaine, was often associated with violence and crime within the neighbourhoods where individuals with “low” integration were living. As a result, many “low” integration individuals did not feel safe in their neighbourhoods. Individuals with “high” integration also listed drug use as a negative aspect of their neighbourhoods, but the majority of individuals reported that they liked the attributes of their neighbourhood (i.e., quiet, close to parks, accessibility of resources) and their neighbours.

Discussion

This study represents one of the first attempts to qualitatively compare homeless and vulnerably housed individuals with “high” and “low” levels of community integration. The results demonstrated that the two groups had very different experiences, particularly in regards to housing and neighbourhood satisfaction. Individuals with “high” integration were more apt to state positive attributes of their housing and neighbourhoods than individuals with “low” integration. In fact, individuals with “low” integration often could not name a positive feature of their housing or their neighbourhood. Coping mechanisms and social interactions were relatively similar for both groups, indicating that the groups shared some attributes.

A greater number of individuals were categorized as having “low” integration than “high” integration. This result is similar to Yanos et al. (2007) who found that individuals with no meaningful activities were the most common grouping of participants in their study. These individuals also had lower social and psychological integration than individuals engaging in meaningful activities in their neighbourhoods or as a result of their employment (Yanos et al., 2007). In the current study, housing type was more salient as the majority of individuals with “high” integration were housed whereas the “low” integrated individuals were both housed and homeless.

As mentioned previously, “high” and “low” integration participants provided similar coping mechanisms and social activities. Both listed intrapersonal coping mechanisms; however “high” integration individuals also coped with hard times by socializing with family and/or friends. Socializing with family and friends is important, as individuals with high levels of social support also have high levels of community integration (Prince & Prince, 2002; Segal & Aviram, 1978). Individuals with “low” integration often stated that they did not do much socializing.

Social isolation is a problem for individuals living in states of vulnerable housing (Crystal & Beck, 1992; Elias & Innui, 1993) and of concern given that isolation was cited as a barrier to recovery for individuals participating in a supported housing program (Patterson et al., 2013). This isolation could stem from troubles adjusting to a new neighbourhood, particularly the loss of social supports from one’s previous neighbourhood (Yanos et al., 2004) or disaffiliating from one’s status as a homeless person (Patterson et al., 2013). Social isolation could also be attributed to external housing and neighbourhood factors. As demonstrated by Brodsky (1996), some

individuals prefer not to socialize within their neighbourhoods, as they may be perceived as unsafe or have neighbours who individuals consider different from them. Individuals with “low” integration in the current study may have decided to not engage within their neighbourhoods for the same reasons.

Having the housing one wanted was more common among “high” integration individuals compared to “low” integration individuals. Almost all of the “highly” integrated individuals reported that they had the housing they wanted; whereas almost all of the “low” integration individuals reported that they did not. Many of the “high” integration respondents noted their housing attributes as contributing to their satisfaction. This finding supports the work of Nemiroff, Aubry, and Klodawsky (2011) who found that having high quality housing resulted in higher psychological integration levels. In the current study, some individuals who were satisfied with their housing felt that they found “home”. This is an important finding, as feeling at home in one’s residence can be difficult for individuals living in vulnerable housing (Anucha, 2010).

For individuals with “low” integration, financial and logistic constraints often led to feelings of dissatisfaction with their current housing. Many individuals did not have the economic means to afford alternate housing and waitlists were very long for subsidized housing. As a result, “low” integration individuals could be considered in a “liminal” state of living. “Liminal” living is a transitional phase where a person moves from one category and becomes stuck in an intermediary stage before crossing over into another category (Wingate-Lewinson, Gary Hopps, & Reeves, 2010). In the current sense, “low” integration individuals may be stuck in this “liminal” phase of housing and

therefore find little benefit to socializing with or connecting to their current neighbourhoods as they are awaiting new housing.

Housing and neighbourhood dislikes were similar for each group, but the frequency of responses were very different. “High” integration individuals were often unable to name anything wrong with their housing or neighbourhoods, whereas “low” integration individuals were more likely to report nothing good about their housing or neighbourhoods. This result is quite telling of the satisfaction and dissatisfaction individuals had with their housing and neighbourhoods based upon their integration level.

In terms of what individuals did not like about their housing and neighbourhoods, substance use, housing attributes, and neighbourhood problems were the most pervasive themes. In particular, individuals with “low” integration noted substance use and the behavior of other tenants and neighbours as most problematic. Oftentimes, crack was named specifically as the substance causing problems. Yanos et al. (2004) and Brodsky (1996) also found that substance use in the neighbourhood were barriers to community integration for individuals.

Substance use was often coupled with criminal activity when discussing housing and neighbourhood problems, indicating that the housing and neighbourhoods situations of these individuals involved multiple issues. As a result, and as proposed by Brodsky (1996), some individuals may psychologically retreat from their neighbourhoods and not want to feel a part of them so as to create a barrier from the negative influences.

Individuals with “high” integration also listed substance use as a problem in their housing and neighbourhoods, but to a much lesser extent. This result demonstrates that community integration is possible within neighbourhoods where problematic behavior occurs. It could be that living in housing and/or neighbourhoods with visible substance users necessitates some individuals to seek connections with individuals not involved in substance use and finding ways to strengthen these bonds.

Other housing and neighbourhood problems included the behavior of other tenants and neighbourhood members, and housing attributes. Disruptive tenants are a common complaint from individuals living in vulnerable housing (Anucha, 2010; Mifflin & Wilton, 2005) and hinder community integration efforts as individuals may choose to socialize away from their housing due to these disruptions (Mifflin & Wilton, 2005). These disruptions may act as a catalyst for social isolation among individuals with “low” integration, since individuals may not want to encounter these disruptive individuals within their neighbourhoods. Difficulties with housing maintenance and cleanliness are also common complaints from individuals living in vulnerable housing (Anucha, 2010; Mifflin & Wilton, 2005). Similar to disruptive tenants and neighbours, poor housing quality can impede individuals from inviting others into their housing (Anucha, 2010) which can impede community integration efforts.

“High” and “low” integrated individuals had fewer similarities when considering the favourable attributes of their housing and neighbourhoods. Individuals with “high” integration put great personal meaning into their housing, as many individuals labeled their housing as a home. Highly integrated individuals also noted the feelings of independence, freedom, and privacy that resulted from living in their homes. Privacy is

a particularly salient attribute, as many individuals living in vulnerable housing note a lack of privacy as one of the worst things about their housing (Anucha, 2010; Mifflin & Wilton, 2005). Independence and freedom are also important as some housing options may enforce strict rules (Mifflin & Wilton, 2005), which can limit the opportunities for social interactions.

For individuals with "low" integration, many could not list a positive attribute about their housing. Some individuals appreciated just being housed or sheltered, as the alternative was either homeless shelters or the streets. This sentiment reflects the "liminal" housing stage referenced previously. Individuals with "low" integration may think little of their integration opportunities as they are in a non-permanent form of housing. Lastly, some individuals with "low" integration did indicate enjoying the attributes of their housing. This result may be related to the previous point, in that the attributes of their current housing are better than the alternative (e.g., the streets). It could also be that despite social isolation, some individuals are able to appreciate the housing they have.

For both the "high" and "low" groups, the positive attributes of their neighbourhoods often focused on its location. This result was also reported by Milton and Wifflin (2005). Although individuals with "low" integration were more apt to state that there was nothing good with their neighbourhoods, some of these individuals appreciated what the location of the neighbourhood had to offer. Both "high" and "low" integration individuals noted that their neighbourhoods were close to resources, parks, and transit. As the majority of individuals in the current study had limited finances, proximity to resources is important regardless of integration status. However,

individuals with “high” integration may find that accessing these resources, such as drop-in centres, facilitates opportunities for socializing and therefore contributes to their community integration. An individual far away from these resources may find themselves more isolated.

Individuals with “high” integration also appreciated the quietness of the neighbourhood and their neighbours. As many “low” integration individuals noted the disorder occurring in their neighbourhoods, finding a neighbourhood that offers peace and quiet may be essential for individuals seeking out alternative housing. Once a quiet neighbourhood is located, individuals may be more likely to interact with their neighbours and create a meaningful connection to their neighbourhood. As well, having good neighbours was important for “high” integration individuals. This finding replicates the quantitative work of Townley and Kloos (2011) and Yanos et al. (2007).

Perceptions of neighbourhood safety were vastly different among “high” and “low” integration individuals. Individuals with “high” integration viewed their neighbourhoods as safe, as they were familiar with the area and there was a security presence (e.g., security guards, secure entrances). As mentioned previously, neighbourhood safety is important for facilitating community integration (Townley & Kloos, 2011; Yanos et al., 2004). Individuals with “low” integration often did not feel safe in their neighbourhoods because of substance use and gang activity in the neighbourhood. This finding supports the work of Brodsky (1996), as individuals living in disordered communities may not interact within their neighbourhoods because of safety issues and from having different values than their neighbours.

Interestingly, many neighbourhood-level answers were provided for questions that addressed housing issues. Participants in both groups stated that neighbours and neighbourhood problems contributed to either positive or negative aspects of their housing. These examples demonstrate the importance of approaching community integration from an ecological perspective, where various levels of an individual's life are considered.

Limitations

One of the primary limitations was the indirect questions about community integration that were utilized. The interview protocol did not include qualitative questions about how individuals connect to their neighbourhoods and if they socialize with their neighbours. These types of questions would have allowed for a more in-depth analysis of community integration. As well, the structure of the questions did not allow for much follow-up questioning to occur. Participant responses were not transcribed, so the possibility of error in reporting participant responses is possible.

A second limitation was the arbitrary selection of scoring cut-offs for determining "high" and "low" integration. The scales did not have specific scoring cut-offs, so cut-offs were created for the study. The author attempted to be systematic in their creation by examining the distribution of scores. The differences in the number of "high" and "low" participants indicate the cut-offs had some merit.

A third limitation was the unequal sample sizes. There were more than double the number of "low" integration individuals compared to "high" integration individuals at both time points. As a result, the breadth of responses was greater for "low" integration individuals than "high" integration individuals resulting in a possibly narrower

interpretation of “high” integration individual responses; however, data saturation did occur when coding the responses from both groups so this issue did not have a strong impact within the current study.

Future Research

Future research should focus on further use of mixed and qualitative methods. As community integration is a subjective experience, it is important to understand an individual’s experiences of community in his or her own words. Continued research should be conducted with similar samples of homeless and vulnerably housed individuals. It is important to consider individuals that fall across all ends of the spectrum, not just individuals receiving supported housing services. A holistic or ecological perspective is also imperative for future analyses, as the current analyses revealed that individual, housing, and neighbourhood factors were often interrelated. Lastly, longitudinal analyses should be conducted in order to investigate changes in community integration over time.

Implications

The results from this study present several implications for service providers and policy advisors. Housing workers should consider the importance of housing quality and neighbourhood safety when considering housing placements. Although easier said than done, particularly with the poor stock of good quality affordable housing available, housing of high overall quality located in safe neighbourhoods should be sought. Service providers working with people who are homeless or vulnerably housed should also consider creating specific post-housing service plans to promote socialization within the neighbourhood. Since substance use in the community was such a pervasive

barrier to community integration, special attention should be given to strategies to contend with substance abuse occurring in one's environment. Providing appropriate responses to these actions, such as seeking positive influences within the neighbourhood and fostering these relationships, may increase community integration among individuals with "low" integration.

Policy implications involve a push for creating and maintaining good quality, affordable housing located in safe neighbourhoods. Good quality housing located in a variety of neighbourhoods will lead to a sense of belonging and social opportunities for individuals who may otherwise not have such opportunities. By doing so, formerly homeless and vulnerably housed individuals may find a home and remain stably housed. It is also evident that substance abuse in the community is a hindrance for many homeless and vulnerably housed individuals, regardless of integration status. It is clear that a community response to open substance use is needed so that individuals can feel comfortable within their neighbourhood. One possible community response is providing supervised spaces for substance users to engage in drug use. The most obvious model is a supervised injection site. Although a discussion of supervised injection sites are well beyond the scope of this article, they have been proven to reduce overdose fatalities (Marshall, Milloy, Wood, Montaner, & Kerr, 2011) and reduce public injection drug use (Wood et al., 2004). The reduction of public injection drug use is particularly pertinent to the current study, as homeless and vulnerably housed individuals may be more likely to interact within their neighbourhoods if drug use is brought off the street and into these supervised settings.

References

Anucha, U. (2010). Housed but homeless? Negotiating everyday life in a shared housing program. *Families in Society: The Journal of Contemporary Social Services, 91* (1), 67-75.

Aubry, T., Tefft, B., & Currie, R. (1995). Public attitudes and intentions regarding tenants of community mental health residences who are neighbours. *Community Mental Health Journal, 31,* 39-52.

Aubry, T. & Myner, J. (1996). Community integration and quality of life: A comparison of persons with psychiatric disabilities in housing programs and community residents who are neighbours. *Canadian Journal of Community Mental Health, 15* (1), 5-20.

Bradley, E.H., Curry, L.A., & Devers, K.J. (2007). Qualitative data analysis for health services research: Developing taxonomy, themes, and theory. *Health Services Research, 42* (4), 1758-1772.

Brodsky, A.E. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. *Journal of Community Psychology, 24* (4), 347-363.

Brofenbrenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.

Canadian Mortgage and Housing Corporation. (2010). Definitions: Core housing need status. Retrieved from: http://cmhc.beyond2020.com/HiCODefinitions_EN.html

Caracelli, V.J. & Greene, J.C. (1993). Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 15* (2), 195-207.

Charmaz, K. (2006). Coding in grounded theory practice. In K. Charmaz, *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis* (pp.42-71). Thousands Oaks, CA: Sage.

Cho, J. & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research, 6,* 319-340.

Crystal, S. & Beck, P. (1992). A room of one's own: The SRO and the single elderly. *The Gerontologist, 32* (5), 684-692.

Elias, C.J. & Inui, T.S. (1993). When a house is not a home: Exploring the meaning of shelter among chronically homeless older men. *The Gerontologist, 33* (3), 396-402.

Farrell, S., Aubry, T., & Coloumbe, D. (2004). Neighborhoods and neighbors: Do they contribute to personal well-being? *Journal of Community Psychology, 32* (1), 9-25.

Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research, 12,* 531-545.

Gulcur, L., Tsemberis, S., Stefancic, A., & Greenwood, R.M. (2007). Community integration of adults with psychiatric disabilities and histories of homelessness. *Community Mental Health Journal, 43* (3), 211-228.

Hall, W.H. & Callery, P. (2001). Enhancing grounded theory rigor: Incorporating reflexivity and relationality. *Qualitative Health Research, 11,* 257-272.

Marshall, C. & Rossman, G.B. (2011). Managing, analyzing, and interpreting data. In C. Marshall & G.B. Rossman, *Designing Qualitative Research* (5th Edition) (pp.205-227). Thousand Oaks, CA: Sage.

Marshall, B.D.L., Milloy, M-J., Wood, E. Montaner, J.S.G., & Kerr, T. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: A retrospective population-based study. *The Lancet, 377* (9775), 1429-1437.

Maxwell, J.A. (1998). Designing a qualitative study. In L. Bickman & D.J. Rog (Eds.), *Handbook of Applied Social Research Methods* (pp.69-100). Thousand Oaks, CA: Sage.

McMillan, D.W. & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14,* 6-23.

Mifflin, E. & Wilton, R. (2005). No place like home: Rooming houses in contemporary urban context. *Environment and Planning A, 37,* 403-421.

Nemiroff, R., Aubry, T., & Klodawsky, F. (2011). From homelessness to community: Psychological integration of women who have experienced homelessness. *Journal of Community Psychology, 39* (8), 1003-1018.

Patterson, M.L., Rezansoff, S., Currie, L., & Somers, J.M. (2013). Trajectories of recovery among homeless adults with mental illness who participated in a randomised controlled trial of Housing First: A longitudinal, narrative analysis. *BMJ Open, 3,* 1-8.

Prince, P.N. & Prince, C.R. (2002). Perceived stigma and community integration among clients of assertive community treatment. *Psychiatric Rehabilitation Journal, 25* (4), 323-331.

Saldana, J. (2009). *The coding manual for qualitative researchers.* London, UK: Sage.

Segal, S.P., & Aviram, U. (1978). *The mentally ill in community-based sheltered care: A study of community care and social integration.* New York: John Wiley & Sons.

Townley, G. & Kloos, B. (2011). Examining the psychological sense of community for individuals with serious mental illness residing in supported housing environments. *Community Mental Health Journal, 47,* 436-446.

Wingate-Lewinson, T., Gary Hopps, J., & Reeves, P. (2010). Liminal living at an extended stay hotel: Feeling “stuck” in a housing solution. *Journal of Sociology & Social Welfare, 37* (2), 9-34.

Wong, Y-L., I. & Solomon, P.L. (2002). Community integration of persons with psychiatric disabilities in supportive independent housing : A conceptual model and methodological considerations. *Mental Health Services Research, 4* (1), 13-28.

Wong, Y-L., I., Metzendorf, D., & Min, S-Y. (2006). Neighborhood experiences and community integration. *Social Work in Mental Health, 4* (3), 45-59.

Wood, E., Kerr, T., Small, W., Li, K., Marsh, D.C., Montaner, J.S.G., & Tyndall, M.W. (2004). Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *Canadian Medical Association Journal, 171* (7), 731-734.

Yanos, P.T., Barrow, S.M., & Tsemberis, S. (2004). Community integration in the early phase of housing among homeless persons diagnosed with severe mental illness: Successes and challenges. *Community Mental Health Journal, 40* (2), 133-150.

Yanos, P.T., Felton, B.J., Tsemberis, S., & Frye, V.A. (2007). Exploring the role of housing type, neighborhood characteristics, and lifestyle factors in the community integration of formerly homeless persons diagnosed with mental illness. *Journal of Mental Health, 16* (6), 703-717.

Table 1c. *Coding Table for "High" and "Low" Integration Individuals Responses on Individual-Level Questions.*

	Themes	
	"High" Integration	"Low" Integration
Individual coping mechanisms	Socializing with family and friends	Substance use
	Intrapersonal activities (exercise, reading, substance use)	Intrapersonal activities (exercise, reading, multimedia engagement)
Social activities	Friends	Nothing
	Internet	Family and friends

Table 2c. *Coding Table for "High" and "Low" Integration Individuals Responses on Housing-Level Questions*

	Themes	
	"High" Integration	"Low" Integration
Have the kind of housing they want	Housing attributes (clean, safe, quiet, comfortable, private) "Home" Neighbours	Housing attributes (affordability, size, cleanliness, quiet)
Reason does not have the kind of housing they want	Waitlist for subsidized housing Unemployment	Financial constraints Waitlist for subsidize housing
Best thing about housing	A place to call home Personal meaning (independence, freedom, privacy) Housing attributes (amenities, safety, proximity to resources, calm) Neighbours	Nothing Being housed/sheltered Housing attributes (affordability, amenities, clean, location)
Worst thing about housing	Nothing Housing attributes (bed bugs, poor maintenance, size) Neighbourhood problems (drugs, crime, lack of transit)	Behaviour of the other tenants and neighbours Substance use Housing attributes (pests, size, cleanliness, unsafe, poor maintenance, restrictive)

Table 3c. *Coding Table for "High" and "Low" Integration Individuals Responses on Neighbourhood-Level Questions*

	Theme	
	"High" Integration	"Low" Integration
Neighbourhood safety	Safe	Unsafe
	Familiarity with area	Substance use
	Security	Gang activity
Best thing about neighbourhood	Location (proximity to resources, parks)	Nothing
	Quiet	Location (proximity to resources, parks, and transit)
	Neighbours	
Worst thing about neighbourhood	Nothing	Substance use
	Substance use	Crime and violence

CHAPTER 9

Influence of Interview Location

Contributions

The data for the study presented in the manuscript were collected as part of the *Health and Housing in Transition* (HHiT) study. Mr. John Ecker developed the research presented in this manuscript and helped to conduct interviews with the participants in the study, as well as conducting the reflexive journaling and the data analysis.

Acknowledgements

Funding for the *Health and Housing in Transition* study was provided by the Canadian Institutes of Health Research (CIHR). John Ecker was supported by a grant from the Social Sciences and Humanities Research Council (SSHRC).

The effect of place on research interviews conducted with homeless and vulnerably housed individuals

John Ecker

John Ecker, Doctoral Candidate in Experimental Psychology, University of Ottawa & Centre for Research on Educational and Community Services

Abstract

This study examined the effect of location when conducting interviews with homeless and vulnerably housed individuals. The impact of interview locations has received scant attention in the community psychology literature despite the majority of research being community-based. This study provides insights into the challenges, benefits, and power relations involved in selecting a research interview site and in conducting interviews. Personal journal entries were used to analyze the effect of location on the participants and the researcher through a comparative analysis of interviews conducted in the community and a Research Centre. Results demonstrate that interview locations hold great amounts of power and can provide the opportunity for holistic understandings of research topics. Lessons learned and methodological implications are discussed.

Community-based research is a dynamic process that can place a researcher into a wide range of settings. Personally, flexibility has been a major tenet of my methodological philosophy. When planning the site for interviews and focus groups, a main consideration is the needs of the participant (e.g., accessibility issues) and not necessarily my own. As a result, I have been taken outside the halls of academia and have conducted interviews in hospitals, parks, community agencies, homeless shelters and people's homes.

The importance of interview location gained personal significance when my small Research Centre began the process of moving to a larger building. Would participants be as receptive to our new location? Would they feel as comfortable entering a building with complicated hallways and stairways? These questions led me to reflect upon what constitutes a good interview location. Are interviews conducted in the field more authentic than interviews conducted at our Research Centre? What are the power dynamics involved in deciding an interview location between 'researcher' and 'participant'?

This paper addresses the importance of interview locations for research interviewers, particularly when conducting research with individuals experiencing homelessness and vulnerable states of housing. I begin with a review of the impact of interview location. Following the literature review, my research experiences as an interviewer for a project with homeless and vulnerably housed[10] individuals are

[10] Vulnerable housing is defined using criteria developed by the Canadian Mortgage and Housing Corporation (CMHC). It includes individuals living in housing that that falls below adequacy, affordability, and suitability standards (CMHC, 2010). This involves having housing that requires major repairs (adequacy), paying more than 30% of one's income on housing (affordability), and not having enough bedrooms for the size and makeup of one's household (suitability)

described via a personal research journal. In conclusion, lessons learned from the field are discussed.

Conducting Research with Homeless and Vulnerably Housed Individuals

Conducting research with individuals experiencing homelessness or vulnerable states of housing can pose some challenges. Homeless and vulnerably housed individuals can be difficult to locate (Mowbray, Cohen, & Bybee, 1993) and gaining access to the population often requires a negotiation with social service agencies (Taylor, 1993). Once access to the population is acquired, potential research participants may not be prepared to engage in an interview due to psychological impairments or substance use (Vance, 1995) or distrust of the interviewer (Rosenthal, 1991). Others who have exited homelessness may wish to avoid reflecting on past problems and choose not to participate (Mowbray et al., 1993).

When individuals do agree to participate, several considerations require attention. Potential participants may not show up at the scheduled interview time (Hwang et al., 2011). For housed individuals, physical housing barriers may exist, such as missing buzzers or inaccurate buzzers (Hwang et al., 2011). For individuals residing in shelters, interview times are contingent upon operating hours (Hwang et al., 2011; Taylor, 1993). Despite these challenges, there are positive elements to the research process. One of the main goals of research with marginalized groups is to provide a 'voice' to participants (Cloke, Cooke, Cursons, Milbourne, & Widdowfield, 2000). In speaking with homeless young people, Ensign (2006) found that the majority of her participants reported positive experiences when involved in research projects. They

particularly enjoyed being able to tell their stories to the researchers and being listened to.

The Impact of Location on Interviews

For research conducted with homeless and vulnerably housed individuals, the selection of an interview site requires considerable thought. Locations should be determined based upon the preferences of participants; however, this may not always be feasible (Cohen, Mowbray, Bybee, Yeich, Ribisl, & Freddolino, 1993). For example, Rosenthal (1991) cites interviewing homeless individuals in parks, coffee shops, cars, boxcars, and so forth. Toro (2006) recounts sampling individuals from parks, bus stations, and other public places. These types of scenarios bring about ethical and safety concerns. Ethically, public spaces do not guarantee privacy for the interviewee. As the information that is shared during interviews is often personal, a public environment can potentially eliminate the right to confidentiality for participants. Secondly, many homeless participants will eventually become housed. This can bring about safety issues for the interviewer if the interviewee would prefer having the interview completed at their home (Cohen et al., 1993; Toro, 2006). However, it is important to consider not avoiding home interviews, as the interviewers in the Cohen et al. (1993) study noted that interviews where the participants had control (e.g., their own home or apartment) differed from those where participants did not have control (e.g., a group home, a relative's home).

In general, the literature has focused solely on the practical limitations of interview locations. Noticeably absent from the discussions of interview locations were the power dynamics involved in selecting an interview location. The power dynamics

among researchers and research participants are important considerations, particularly for community-based research with marginalized groups. The relationship between research investigator and participant can impact the quality of the data that is collected (Kelly, 1990). Therefore, the research process should involve a collaborative framework between investigator and participant (Kelly, 1990). Unfortunately, due to the constraints of the scientific method, collaboration is difficult to achieve. The positivist-informed scientific method enables control of the research process by the researcher (Brodsky, 2001; Walsh, 1987) and strives to limit subjectivity inquiry (Newbrough, 1992). As a result, research participants are viewed as subjects under the control of the research demands and the researcher, and the imbalance of power between the researcher and the participant is promoted. This power imbalance can impact the selection of an interview location, as laboratory-based research is viewed as superior to community-based methods (Kelly, 1990; Newbrough, 1992).

Elwood and Martin (2000) have conducted the most compelling analysis of interview location, not specific to homelessness research, in the field of geography. The authors state that interview locations represent "microscales of sociospatial relations, manifesting the intersection of broader power dynamics – at multiple scales, such as the neighbourhood, city, region, and so on- with the social relations constructed in the interview setting itself" (Elwood & Martin, 2000). They define interview locations as "microgeographies" where the multiple scales defined above intersect with the research process. "Microgeographies" involve several different reciprocal relationships, including researcher and participant, the participant with the interview location, and the location within a broader sociocultural context.

The process of selecting an interview location can provide meaningful data before the interview even takes place. When choice is involved in determining the interview location, Elwood and Martin (2000) encourage researchers to reflect upon the location choice in terms of its meaning to the community and the individual. Researchers should also consider how this choice can influence data collection and the interview experience. Available interview locations, proposed by both the interviewer and interviewee, and their selection can be indicative of the importance of certain locations, highlight a lack of available locations, and provide an understanding of potential social divisions within the community. The choice of location and who decides on the location is also an important consideration in the power dynamics involved between the interviewer and the interviewee. Certain locations may situate participants differently in terms of their responses and contribution to the research (e.g., interview conducted in an area familiar with the participant opposed to one that they are unfamiliar with).

The Current Study

The current study aims to expand on the work of Elwood and Martin (2000), but with a focus on conducting interviews with individuals experiencing homelessness and vulnerable housing.

The Research Project

The Health and Housing in Transition study[11] is a multi-site (Ottawa, Toronto, and Vancouver), longitudinal project following approximately 1200 homeless and vulnerably housed individuals. The current research focuses exclusively on the Ottawa site. The sample includes men and women over the age of 18 who were recruited from

[11] For details about the Health and Housing in Transition study please see Hwang et al. (2011).

homeless shelters, meal programs, and rooming houses or similar type of marginal housing. The HHiT study received ethical approval by the Research Ethics Board at the University of Ottawa.

The Researcher

I am a graduate student in community psychology at the University of Ottawa. My dissertation research uses data from the HHiT study and I became involved with data collection at the third stage of data collection, or the second follow-up year. I have had previous experience conducting research with marginalized populations.

Data collection

During the third year of data collection, and my first year of involvement in the study, I began to reflect upon whether my interviews differed in quality, authenticity, and comfort depending upon the interview site. I had been to several different locations to conduct interviews, including the Research Centre (which served as the administrative hub for the study), homeless shelters, drop-in centres, and individuals' homes. As each of these sites were quite different, I was curious as to how each interview location brought something new to the interview process.

Based upon my inquiry into the importance of interview location, I began a process of reflexivity. Reflexivity is a common practice within qualitative inquiries. Definitions vary, but it can be loosely defined as an, "explicit, self-aware meta-analysis of the research process" (Finlay, 2002, p. 531). It recognizes the subjectivity involved in research process and challenges researchers to locate themselves in data collection and analysis (Hall & Callery, 2001). Therefore, reflexivity is a process that continues throughout the research process. One method of reflexivity involves autoethnography

(Dowling, 2006). This involves the use of autobiography and narrative inquiry via personal research diaries. Research diaries can also help a researcher to explore methodological issues within their studies, add to the interview data, aid in the organization of the study, and allow the researcher to reflect on his or her interviewing style (Nadin & Cassell, 2006). As research diaries have been used for similar analyses (e.g., Cloke et al., 2000), it was determined that this method was the most fitting for the current reflexive analysis.

Before the start of the third year of data collection, I began journaling my experiences after each individual interview so as to capture the subjective influence of interview location. The research diary not only served as a means for personal reflection, but it also allowed for an ethnographic analysis to be conducted, something that extended past the goals of the HHiT project. Without having strict limits as to what to journal, I decided to reflect upon: a) interview quality; b) assessment of the location; c) the impact of location on the quality and authenticity of the interview; d) the comfort of the interviewer or interviewee; and e) general comments. Journaling would ideally take place immediately after the interview had finished, but sometimes due to time constraints, this immediate journaling did not occur; however, journaling was always completed the same day of the interview.

Journal entries were conducted for a total of 43 interviews. Some interviews were excluded due to researcher inability to journal (e.g., time constraints) or interview type (e.g., phone interview). The length of the interviews varied from 30 to 90 minutes. The gender of participants was skewed based upon my gender, as I predominantly interviewed male participants with the exception of three females. It was thought that

female participants may not feel comfortable answering some of the more sensitive questions asked during the interview with me. Interview locations were varied and included the Research Centre, community drop-ins, parks, homeless shelters, a hospital, and an individual's home.

Data Analysis

The journal entries were compiled into one document. All journal entries were labeled with the date, the interview location, and the gender of the participant. I reviewed this document before any thematic coding was conducted. This was undertaken to become reacquainted with interviews that had been conducted months prior. After this initial review, I coded the journal entries. Following this, I shared my coded document with another interviewer involved in the project. This discussion served as a peer review function, as well as a reflective opportunity. The discussion led to the verification of the themes that were developed. During the analysis process, the journal entries were continuously referenced and reviewed to ensure accuracy of the codes and themes. The final list of themes was reviewed several times to ensure accuracy.

It should be noted that throughout the research process, the two interviewers were in regular contact and discussions often emerged about how their interviews were going. This served as a time of reflection and debriefing for both of them, but also undoubtedly improved or enhanced the journaling process of the author. Through regular contact, they were able to learn from the other's experiences and think about issues that they may not had previously considered. As systematically considering the

impact of location was a new process, these interactions strengthened the data collection and data analysis methods.

Results

Results are separated into three sections and discuss the influence of location on: a) the interview process; b) the interviewee; and c) the interviewer. Within each section, the interview location site (e.g., in the Research Centre or the community) is compared and contrasted.

The Interview Process

Power dynamics. For interviews conducted at the Research Centre, great power imbalances emerged. This imbalance greatly favoured me, since I was engaged in the unidirectional sharing of information with the participants. Conducting the interviews in the Research Centre perpetuated a traditional, positivistic research approach. Despite the Research Centre being atypical from that of most other Research centres (e.g., those located in a laboratory environment), it still has an academic and research connotation attached to it. For example, it: a) is located on the periphery of the university campus; b) houses professors, graduate students, and research assistants; c) has several offices, the majority equipped with computers and scholastic texts; and d) has university insignia on the front door.

For interviews conducted in the field, I felt greater equality between the participants and myself. Although the power imbalance was always in my favour, I felt that interviews conducted in participants' own homes or locations in the community (e.g., a shelter, community centre, a park) lessened the imbalance. This was particularly evident during home interviews.

Therefore, community interviews involved two power dynamics – one as researcher, where power was maintained, but also one as guest, where power was relinquished. These competing influences helped to lessen my control of the interviews, particularly in comparison to the interviews conducted in the Research Centre.

Confidentiality and Distractions. Interviews conducted at the Research Centre involved greater situational control than interviews conducted in the field. Some difficulty was encountered during interviews conducted in open-air spaces. For interviews conducted in the home, there were instances where other residents interrupted the interview. As a result, greater emphasis was placed on ensuring the participants' confidentiality and the interview was halted when other parties were in close proximity. Theses distractions led to more disjointed and lengthy interviews, invariably affecting the interview process. Interviews conducted in community settings (e.g., homeless shelters, day programs, parks) were also subject to similar issues as home interviews. The main theme to be identified was the lack of control I had in situations outside the Research Centre.

Physical Assessments. One of the benefits of conducting interviews in the field was the opportunity to conduct informal assessments of participants' living situations and their neighbourhoods. The survey included several questions about satisfaction with the participants' housing and neighbourhood in which they lived. Conducting the interview at the participants' homes or current place of residence provided a much richer interpretation of their responses. Although these assessments were not necessarily included within formal analyses of the data, it provided me with an opportunity to acquire a greater understanding of the lives of the participants.

Effect on the Interviewees

Realities of housing situations. Having the option of conducting interviews at the Research Centre proved to be beneficial for participants without housing or with unstable and unsafe housing. One research participant stated that his current roommate was a “junkie” and that he sometimes found syringes lying on the ground. Another participant noted that an assault recently occurred in his building and that I would probably not have felt comfortable conducting the interview there. Other participants spoke of the lack of privacy in their apartments or rooms and the possibility of bed bugs being present. Across these examples, the participants brought in their own ideas of what an appropriate research environment is and preferred the interview to be conducted at the Centre.

Choice. Having the participants choose where they wanted the interview to take place was a lost opportunity within the initial interviews. I did not ask the participants where they would like the interview to be conducted. This resulted from my lack of recognition of the power that interview locations could hold and my being trapped in a positivistic way of thinking. When offered the choice in location, participants did not exclusively choose one setting more than others.

Participants who chose to conduct the interview at the Centre had varying rationales for this choice. For participants currently residing in the shelter system, the Research Centre was a suitable location since it was located very close to the three main shelters in the city. Participants were familiar with the area and could easily locate the building. Some participants were also residing quite close to the centre, so travel was not an issue.

Individuals who chose to have the interview conducted in their homes or within the community provided some practical and personal reasons for not wanting to conduct the interview at the research centre. Some participants preferred not to travel and felt more comfortable in their homes. Other participants may not have felt comfortable with me coming into their home and suggested an alternate location in the community.

A limited number of participants preferred not to travel to the Centre since it was located in the downtown core of the city. For participants in recovery from substance abuse, being downtown served as an area that could trigger substance use. These participants had removed themselves from the downtown core and preferred not to return.

Social opportunity. Some participants appeared to view the interview as a social opportunity, regardless of setting. For participants that came to the Centre, some stated that this was a, “chance to get out of the house” and that they enjoyed the interview. For interviews conducted in the home, having a guest enter their apartment also served an important social function. Often times, the participants were very hospitable and offered some sort of beverage to me.

Effect on the Interviewer

Safety. My personal safety was a recurring theme within my journal entries. I noted that I was glad some interviews were conducted at the Centre or within community settings (e.g., shelters, community agencies) since some participants were irritable and others used mildly threatening language. During these situations, I was comfortable knowing that I could stop the interview and ask for assistance from

employees of the Centre. Had these types of interviews been conducted in the participants' homes, I would not have felt entirely safe.

Safety issues were also present when I conducted interviews in the homes of participants. Although the majority of situations were very positive, I felt that they did place me in potentially compromising situations. For example, during one interview I did not realize that there was someone else present in the apartment. The individual only came out once the interview was finishing. In another instance, a large dog came into the room during the interview. Luckily the dog was friendly, but I was unaware that there was an animal present. As a safeguard, I always had my cell phone on me, so I was prepared to notify the study co-ordinator if I felt uncomfortable during the home interviews.

Hospitality. An unexpected theme that was identified was the hospitality of the interviewed individuals and the lack of hospitality that I was offering at the research centre. When conducting interviews in the field, I noted that some form of beverage was often offered by the participant. This same kind of behaviour was not present when I was conducting interviews at the centre. Eventually, I began to offer participants water at the outset of the interview, but I felt it was less meaningful than when a participant offered something.

Lessons Learned and Implications

This introspective study highlights the importance of location when conducting research with homeless and vulnerably housed individuals. Through the use of personal research diaries, it validated Elwood and Martin's (2000) work and demonstrated that "micro-geographies" are important factors to consider when

conducting research interviews. These locational impacts affect the research process, the collected data, the interviewees, and the interviewers.

As evident in the data, interview sites hold immense amounts of power on the research process. The differential power distributions based upon the interview site replicates previous work with homeless and vulnerably housed populations (Cohen et al., 1993). The greater power imbalance at the Research Centre may reflect my training as a research psychologist. Psychological research often follows a positivist framework in which researchers engage in a unidirectional relationship with their participants (Brodsky, 2001). At the Research Centre, I was in control of the research process and dictated the course of the interview. As a result, my delivery of the survey material may have been more systematic, eliciting more formal responses from the interviewees and perhaps stronger internal validity for the study. For interviews conducted in the field, this power was relinquished. This could have resulted from my awareness of the multiple identities and roles that participants were exhibiting (Elwood & Martin, 2000). In the field, I was able to witness the participants as apartment dwellers, rooming house residents, shelter inhabitants, and social service users. Their roles became more expansive than that of just a research participant, which disrupted my positivist training. This may have affected my interviewing technique, as I may have been less formal in my delivery and invested greater interest in my surroundings than the survey.

Confidentiality issues only arose outside of the Research Centre. Choosing private interview locations is a concern for homelessness research (Hwang et al., 2011). Interviews conducted in the field are subjected to external influences that can be controlled within a more formal research setting. This may affect the data collection

process, as interviewers may focus their attention on potential for threats to the ethical integrity of the interview. To remedy this, it may be beneficial to scout out suggested locations prior to conducting field interviews to ensure that the location is suitable, although this may not be possible if participants set up same day interviews.

Field interviews allowed for a deeper understanding of the lives of the participants than those conducted at the Research Centre. An assessment of interview locations can lead to a deeper understanding of information discussed during the interview (Elwood & Martin, 2000). As many of the interview questions in the current study focused on the housing and neighbourhood experiences of the participants, it was extremely beneficial to actually witness the environments they were assessing. The same information could not be gleaned from interviews conducted in the Research Centre. Therefore, the external validity of the information provided during field interviews may have more merit than interviews conducted at the Research Centre.

Providing choice in determining the interview location was a missed opportunity for some of the interviews. Reflecting upon the interview choices brought forth the participants serves an important function, since the choices may highlight locations important to the participant (Elwood & Martin, 2000). Interview location selection may also have reasons that are more personal for homeless and vulnerably housed individuals. Self-imposed sanctions affected interview location decisions for some participants. For example, individuals in recovery from substance use found certain locations unhealthy for their recovery. For other participants, the interview served as a social opportunity, whether it be at the Research Centre or within their home. This is an important consideration given the social isolation that many marginalized group's

experience. Therefore, it is imperative that choice is provided to homeless and vulnerably housed research participants.

In respecting participants' choice, researchers must also be cognizant of their own safety. As highlighted in previous research, interviewer safety is a particularly important considerations for interviews conducted in the field (Cohen et al., 1993; Toro, 2006). Therefore, the training of interviewers is especially important so that they are made aware of the potential situations that may arise during a community-based interview. Such measures as conducting interviews in pairs and having access to a cell phone should be taken when conducting interviews in the field (Toro, 2006).

This study also sheds light on the importance of physical space for individuals who are homeless or who have experienced homelessness. Few studies have investigated the importance of the sociospatial dynamics of homelessness (Snow & Mulcahy, 2001). Homelessness "forces individuals, whose claims to community citizenship or membership are routinely contested, to continuously negotiate and survive in spatial domains of a community that were neither designed nor intended for basic resident … and constitutes a rupture of or threat to the modern urban order" (Snow & Mulcahy, 2001). Homeless individuals may be barred from certain public places, such as shopping centres, public institutions, or parks, as they disrupt the social order of mainstream society. Therefore, the interview location a homeless individual chooses may be in direct response to the civil sanctions that are imposed on them.

Lastly, this study calls for a methodological shift in how community-based research is reported. It is clear that many empirical articles neglect to report on the importance of the interview locations in which their studies are conducted. This is

puzzling given that much community psychology research is conducted in the community. By extending methods sections to include greater context on the interview location, richer analyses will undoubtedly follow. Reflections of location may also enhance interviewer competencies, as it certainly did for me. These reflections can convert a positivist-informed interview into a holistic analysis of a participant's life. Reflections on location can also help with a more meaningful interpretation of the data (Elwood & Martin, 2000). Techniques such as research diaries are one means to facilitative this reflexive process.

In conclusion, this study has highlighted the importance of interview locations when conducting research with homeless and vulnerably housed individuals. The results demonstrate that it is important for interview locations to be given priority upon the development and implementation of community-based research projects. In doing so, the research process will be enhanced and both participants and researchers will benefit. It is also clear that each type of interview site possessed strengths and weaknesses for the collection of data. Interviews conducted in the Research Centre benefitted from methodological control, but they were not able to tap into the participant's housing and neighbourhood experiences as explicitly as the field interviews. Field interviews were subject to the potential confounds, such as distractions and concern for confidentiality, but provided an opportunity for an in depth understanding of their housing and neighbourhood experiences. Recognizing the needs of the participants and being aware of safety concerns should take precedent when deciding upon an interview location, however it must be acknowledged that the

chosen location may have differential impacts on interviewers, interviewees, and the collected data.

References

Brodsky, A.E. (2001). More than epistemology: Relationships in applied research with underserved communities. *Journal of Social Issues, 57* (2), 323-335.

Canadian Mortgage and Housing Corporation. (2010). Definitions: Core housing need status. Retrieved from: http://cmhc.beyond2020.com/HiCODefinitions_EN.html

Cloke, P., Cooke, P., Cursons, J., Milbourne, P., & Widdowfield, R. (2000). Ethics, reflexivity and research: Encounters with homeless people. *Ethics, Place and Environment, 3* (2), 133-154.

Cohen, E.H., Mowbray, C.T., Bybee, D., Yeich, S., Ribisl, K., & Freddolino, P.P. (1993). Tracking and follow-up methods for research on homelessness. *Evaluation Review, 17* (3), 331-352.

Dowling, M. (2006). Approaches to reflexivity in qualitative research. *Nurse Researcher, 13* (3), 7-21.

Elwood, S.A., & Martin, D.G. (2000). "Placing" interviews: Location and scales of power in qualitative research. *Professional Geographer, 52* (4), 649-657.

Ensign, B.J. (2006). Perspectives and experiences of homeless young people. *Journal of Advanced Nursing, 54* (6), 647-652.

Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research, 12,* 531-545.

Hall, W.H., & Callery, P. (2001). Enhancing grounded theory rigor: Incorporating reflexivity and relationality. *Qualitative Health Research, 11,* 257-272.

Hwang, S., Aubry, T., Palepu, A., Farrell, S., Nisenbaum, R., Hubley, A.M., … Chambers, C. (2011). The health and housing in transition study: A longitudinal study of the health of homeless and vulnerably housed adults in three Canadian cities. *International Journal of Public Health, 56*, 609-623.

Kelly, J.G. (1990). Changing contexts and the field of community psychology. *American Journal of Community Psychology, 18* (6), 769-792.

Mowbray, C.T., Cohen, E., & Bybee, D. (1993). The challenge of outcome evaluation in homeless services: Engagement as an intermediate outcome measure. *Evaluation and Program Planning, 16,* 337-346.

Nadin, S. & Cassell, C. (2006). The use of a research diary as a tool for reflexive practice: Some reflections from management research. *Qualitative Research in Accounting & Management, 3* (3), 208-217.

Newbrough, J.R. (1992). Community psychology in the postmodern world. *Journal of Community Psychology, 20,* 10-25.

Rosenthal, R. (1991). Straighter from the source: Alternative methods of researching homelessness. *Urban Anthropology and Studies of Cultural Systems and World Economic Development, 20* (2), 109-126.

Snow, D.A. & Mulchay, M. (2001). Space, politics, and the survival strategies of the homeless. *American Behavioral Scientist, 45,* 149-169. doi: 10.1177/00027640121956962

Taylor, C. (1993). On the conduct of homelessness research: Lessons from a qualitative study of women diagnosed with chronic mental illness. *Issues in Mental Health Nursing, 14,* 425-432.

Toro, P.A. (2006). Trials, tribulations, and occasional jubilations while conducting research with homeless children, youth, and families. *Merrill-Palmer Quarterly, 52* (2), 343-364.

Vance, D. (1995). Barriers and aids in conducting research with older homeless individuals. *Psychological Reports, 76,* 783-786.

Walsh, R. T. (1987). The evolution of the research relationship in community psychology. *American Journal of Community Psychology, 15* (6), 773-788.

CHAPTER 10

Discussion and Conclusion

This thesis presented predictive models of two distinct facets of community integration and a comparative mixed methods analysis of community integration among a sample of homeless and vulnerably housed individuals. It also presented a reflexive piece on the interview process and the impact of location on the interviews conducted by the author of this thesis. The first model predicted psychological integration, which was defined as one's psychological sense of community, in which an individual feels a belonging and connection to their community (Wong & Solomon, 2002). The second model predicted social integration, which was defined as one's interactions with members of the community (Wong & Solomon, 2002) and the social contact that occurs among neighbours (Aubry & Myner, 1996). The mixed methods analysis qualitatively compared individuals with "high" levels of psychological and social integration to individuals with "low" levels of psychological and social integration. The two models, the mixed methods analysis, and the reflexive piece were presented in separate articles within the thesis, accompanied by a review of the literature.

The models of community integration presented in this thesis were based upon the work Aubry and Myner (1996), Wong and Solomon (2002), and Yanos et al. (2007). The models were also guided by an ecological framework theory as proposed by Brofenbrenner (1979). Aubry and Myner (1996) and Wong and Solomon (2002) both advocate measuring community integration as a multidimensional approach instead of a single concept. In the current studies, two of the three types of community integration were examined – psychological and social integration. The ecological framework

proposed by Brofenbrenner (1979) stresses the importance of assessing social issues from various levels extending beyond the individual-level of analysis. Wong and Solomon (20002) and Yanos et al. (2007) apply this logic to their analyses and include individual, housing, and neighbourhood variables when analyzing community integration.

The two quantitative articles in this thesis predicted models of psychological and social integration. Both articles utilized the same individual, housing, and neighbourhood level predictors. Individual-level predictors were: age, gender, social support, employment, mental and physical health functioning, and drug and alcohol abuse. Housing level-predictors were: current housing status, length of stay in current housing, number of homeless episodes, and housing quality. The neighbourhood-level predictors were: socioeconomic status, percentage of residential stability, percentage of households requiring repairs, percentage of high-rise apartments, and subjective neighbourhood impact. The third article was a mixed methods analysis that compared individuals with “high” integration to those with “low” integration on a variety of questions involving individual, housing, and neighbourhood factors. The fourth article was a qualitative analysis that used personal journal entries to reflect on the importance of interview location when conducting interviews with homeless and vulnerably housed individuals.

The results of the two quantitative studies and the mixed methods study exhibited several important insights into the psychological and social integration of homeless and vulnerably housed individuals. In general, participants demonstrated moderate levels of psychological integration and slightly lower levels of social

integration. Within the mixed methods analysis, substantially more individuals were classified into the “low” integration category compared to the “high” category. These results indicate that developing a sense of belonging in one’s neighbourhood is feasible for some homeless and vulnerably housed individuals, but developing social ties with individuals in the neighbourhood may be challenging.

The predictive models of psychological and social integration were partially supported. The model of psychological integration was particularly well supported, as the full model accounted for 46% of the variance in integration scores at FU1 and 53% of the variance at FU2. The model of social integration was less successful, as the full model accounted for 24% of the variance in integration scores at FU1 and 25% at FU2. These results demonstrate that there may be different sets of variables that affect the variability in participant scores for social integration. Results from the mixed methods analysis provide some insight as to other variables that may be affecting social integration levels. The majority of participants stated that drug use in one’s housing and/or neighbourhood was particularly detrimental aspects of their current situations. This could be an important consideration for future research on social integration.

The variable with the most pervasive influence on psychological and social integration was social support. High levels of social support was significantly related to higher levels of psychological and social integration at both time points in the quantitative articles and was mentioned as an important coping mechanism among individuals with “high” integration. As previously mentioned in articles 1 and 2, these finding are supported by the work of Prince and Prince (2002) and Segal and Aviram (1978). It is clear that social support and psychological and social integration tap into

similar domains. The social support that many respondents receive may be from individuals located in their neighbourhoods. Individuals with high levels of social support may also be more apt to interact within their neighbourhoods since they are likely to stronger social skills. These social supports may also exist outside of their neighbourhoods, indicating the importance of more relational types of communities (Dalton, Elias, & Wandersman, 2001). The relational ties may not be bound by interactions with neighbours, but instead supports may exist in the larger community, such as drop-in centres and meal programs.

Social support is very important for individuals experiencing homelessness and vulnerable housing. Several studies have reported social supports linkage with exiting homelessness (Thompson et al., 2004; Zlotnick et al., 2003). For individuals in the current study who exited homelessness or were in the process of exiting homelessness, they may be more likely to recognize the continued importance of social support and reach out to their neighbours and establish a sense of belonging with their communities. Social support has also been associated with improved quality of life among homeless individuals with severe mental illness (Lam & Rosenheck, 2000) and improved access to medical services (Lam & Rosenheck, 1999).

It is also important to consider those individuals that did not have high levels of social support. Social isolation is a problem for individuals living in states of vulnerable housing (Crystal & Beck, 1992; Elias & Innui, 1993) and concerning given that isolation was cited as a barrier to recovery for individuals participating in a supported housing program (Patterson et al., 2013). This isolation could stem from troubles adjusting to a new neighbourhood, particularly the loss of social supports from one's previous

neighbourhood (Yanos et al., 2004) or disaffiliating from one's status as a homeless person (Patterson et al., 2013). As demonstrated by Brodsky (1996), some individuals prefer not to socialize within their neighbourhoods, as they may be unsafe. This piece is particularly salient to the participants with "low" integration in the third article, as these individuals reported similar neighbourhood concerns as Brodsky's (1996) participants and may have decided not to engage within their neighbourhoods.

Interestingly, the interview process may have served a social function for some of the participants. Some individuals preferred to head to the Research Centre to conduct the interview, as it was an opportunity to leave their place of residence and engage in a social exchange with me. For others, the preference was for the interview to be conducted in their homes. Once in the home, I was often offered some form of beverage and was made to feel welcome. These results indicate that participants in the current study were often open to social encounters, even if they were initiated as part of the research process.

Several other individual-level predictors contributed to the variability in psychological and social integration scores. Older age significantly predicted psychological integration at both time points and approached significance at both time points for social integration. The significance of older age replicates findings from Brodsky et al. (1999) regarding psychological integration but contrasts the work of Segal and Aviram (1978) regarding social integration. Brodsky et al. (1999) found that older individuals, regardless of length of stay in their residence, develop strong commitments to their neighbourhoods. Older individuals in the current study may also have a stronger association to their neighbourhoods than younger individuals. As older age

only approached significance for social integration, it may mean that older individuals are able to create a sense of belonging with their neighbours without necessarily socializing within them. Older individuals may be less likely to socialize in their neighbourhoods for a multitude of reasons, including physical health and mobility issues.

The two other individual-level variables that influenced psychological and social integration were physical and mental health functioning. Higher physical health functioning approached significance at FU2 for just psychological integration scores. The sample in the current study demonstrated lower than average physical health functioning which is in line with previous research (Hwang, 2001). Interestingly, the acquisition of housing does not always translate into health improvements among homeless individuals (Aubry, Klodawsky, Nemiroff, Birnie, & Bonetta, 2007). In fact, Schanzer, Dominguez, Shrout, and Caton (2007) found that newly homeless individuals' visual and dental health improved over time while they remained homeless. Schanzer et al. (2007) suggested that this was a result of the improved access to care at the homeless shelters than what the participants were receiving prior to becoming homeless. As it relates to the current study, since many of the participants were currently homeless or at one time homeless, they may have also established health care connections within the homelessness sector.

In terms of psychological integration, individuals with better physical health may be more apt to explore their neighbourhoods than individuals with poor health who may be too ill to leave their housing. This was evident in the mixed methods article, as individuals with "high" integration noted physical activities (e.g., walking, exercising,

biking) as ways they cope with rough times. Related to this point, some individuals with "high" integration noted the importance of parks and green space in their neighbourhoods. The intersection of the availability of parks, exercising, and physical health, may be an important factor for the psychological integration of homeless and vulnerably housed individuals and something that requires further investigation.

Mental health functioning was related to both psychological and social integration, but in opposite directions. Better mental health functioning leading to improved psychological integration approached significance at FU2 and poorer mental health functioning leading to improved social integration approached significance at FU1. These results have some support from the literature. Gulcur et al. (2007) found that poorer mental health functioning resulted in lower psychological integration, but higher social integration. Yanos et al. (2011) also found an inverse relationship with mental health functioning and social integration.

For psychological integration, individuals with higher mental health functioning may feel a sense of belonging to their neighbourhoods as they view themselves as similar to those that live around them. They may also feel more confident to explore their neighbourhoods than people with poorer mental health functioning. Mental health stigma could also be a determining factor. Prince and Prince (2002) found that individuals with poorer mental health functioning often felt stigmatized in their communities and this led to decreased psychological integration. However, Gulcur et al. (2007) found that stigma did not influence psychological integration scores within their formerly homeless sample. This lack of certainty regarding improved mental

health functioning and improved psychological integration therefore warrants further investigation.

When considering social integration, individuals with poorer mental health functioning were more likely to interact within their neighbourhoods. As stated in the introduction, individuals with higher levels of psychological disability may be more likely to need and attract the support of others and may be more satisfied with these sought out social interactions (Gulcur et al., 2007). Individuals with poor mental health functioning in the current study may also be seeking out housing situations located in areas where they know support is readily available (e.g., drop-in centres) and are more apt to access these resources than individuals with better mental health functioning.

The second most pervasive theme to emerge from the three articles was the importance of housing quality on psychological integration and on social integration. Good quality housing was significantly related to better psychological integration at both FU1 and FU2. For social integration, good quality housing had a significant association at FU2 and approached significance at FU1. Having good quality housing was also a pervasive theme among “high” integration participants. This result has support within the literature. Nemiroff et al. (2011) found that good quality housing resulted in higher psychological integration among their sample of formerly homeless women. Among rooming house residents, poor housing conditions are a major concern (Mifflin & Wilton, 2005) and poor housing quality has been linked to poor health conditions (Hwang et al., 2003). Difficulties with housing maintenance and cleanliness are common complaints from individuals living in vulnerable housing (Anucha, 2010; Mifflin & Wilton, 2005). Housing quality is also important for areas outside of the integration literature, as Wells

and Harris (2007) found poor housing quality led to negative social outcomes and Aubry et al. (2007) found good quality housing led to improved mental health outcomes.

Housing quality can affect an individual's willingness and comfort to establish social connections. Poor housing quality can impede individuals from inviting others into their housing (Anucha, 2010). Mifflin and Wilton (2005) found that rooming house residents often preferred to socialize away from their building and did not want to invite friends to their building due to space constraints and the quality of the building. "High" integration individuals in the mixed methods study often noted that their housing was a "home" to them, which could be directly related to its quality. As a result, they may have been more apt to invite neighbours and friends into their home, facilitating a sense of belonging to the neighbourhood and increasing social contacts. For individuals with "low" integration, they may not have wanted visitors to enter their homes due to its poor quality.

As housing status was not a significant predictor of either psychological or social integration, it is important to consider the quality of homeless shelters as well. Unfortunately, homeless shelter quality has received little attention in the literature. One study found that some older, "hard to house" individuals preferred shelter living to residing in poor quality housing accommodations and received more social support in the shelter compared to when they were housed (Elias & Inui, 1993). This has two ramifications. It may indicate that in some cases, some affordable housing is in such disrepair and of poor quality that individuals would prefer to live in emergency shelter settings. It may also indicate that homeless individuals may have difficulties with disaffiliating from their status as a homeless individual upon the acquisition of housing.

As a result, some individuals may find a sense community within the homeless shelter system and feel comfortable socializing with individuals in similar circumstances as their own.

The reflexive piece allowed for further investigation into housing quality. When interviews were conducted within the community, it allowed for a physical scan of the environment to take place. This was true for interviews conducted in the home as well as interviews conducted at homeless shelters or drop-in centres. When participants spoke about what they liked and did not like about their housing, I could immediately witness why they provided such answers. The interviews also took me to locations I had not previously been, so it provided me insights which I would not have experienced had all the interviews been conducted at the Research Centre. As a result, the journaling process assisted in my interpretation of the findings from the entire sample, both in the quantitative and mixed methods articles.

The second significant housing-level predictor of psychological and social integration was increased length of stay in one's current housing. It approached significance at FU2 for psychological integration. For social integration, it was significantly related at FU2 and approached significance at FU1. Individuals with longer stays in their housing having higher levels of psychological integration is in contrast to Nemiroff et al. (2011) who found that shorter housing stays resulted in improved psychological integration. This difference may be attributed to Nemiroff et al. (2011) only sampling females. In the current study, it makes sense for length of housing to be significant or approach significance at FU2, as longer housing tenancies may have allowed for individuals to engage with their neighbourhoods at a greater level than

during their transitory periods between baseline and FU1. It could also indicate that developing a sense of community takes time for some individuals. When moving into a new neighbourhood, individuals may be cautious to create immediate bonds or they may be unaware of the resources available to them. It may also take time for the disaffiliation from homelessness to occur.

Length of housing appeared to have a greater effect on social integration. Yanos et al. (2012) also found that longer housing stays resulted in higher levels of social integration. Longer housing tenancies may allow for individuals to engage with their neighbourhoods at a greater level than individuals with shorter tenancies. It also allows for a sense of familiarity to develop in the neighbourhood, which may facilitate social interactions (Yanos et al., 2012). Just as with psychological integration, it may take time for some individuals to feel comfortable enough to interact with others in their neighbourhoods. This may be why social integration only approached significance at FU1 but became significant at FU2. Familiarity with one's neighbourhood is important, as some individuals in the mixed methods article stated that they felt safe in their neighbourhoods as a result of being familiar with the area and having lived there a long time.

The third most pervasive contributor to psychological and social integration was the subjective impact of the neighbourhood on the participants. A positive neighbourhood impact was significantly related to higher levels of psychological integration at both time points. For social integration, a positive neighbourhood impact approached significance at FU1. Townley and Kloos (2011) report similar findings in that individuals more satisfied with their neighbourhoods had greater psychological

integration. Townley and Kloos (2011) did not measure social integration. A positive neighbourhood impact resulting in higher levels of psychological, and to a lesser extent, social integration makes sense. Individuals who feel positively impacted by their neighbourhoods should feel a sense of belonging to it and feel comfortable to socialize within it. Results from the mixed methods study highlight this, as "high" integration individuals were often unable to name anything wrong with their neighbourhoods, whereas "low" integration individuals were more likely to report nothing good about their neighbourhoods. This result is quite telling of the satisfaction and dissatisfaction individuals had with their neighbourhoods based upon their integration level.

The last predictor to have an effect on integration levels was the neighbourhood variable, "rental housing impact". This predictor only approached significance for social integration at FU2 and was not related to psychological integration at either time point. A trend emerged in the direction of individuals living in neighbourhoods with higher rates of mobility, more high-rise apartments, and more residences requiring major repairs having higher levels of social integration. This result appears to contradict previous work that found that decreased residential stability led to increased social integration (Farrell et al., 2004) and living in low-rise apartment buildings (4 floors or less) led to lower social integration levels (Weening et al., 1990); however, it is line with the work of Trute and Segal (1978) who found that individuals living in neighbourhoods with a greater proportion of renters resulted in higher social integration. Neighbourhoods with a greater proportion of renters may be located in areas with more high-rise apartments and increased residential mobility. The participants in the current study may be accustomed to this type of neighbourhood dynamic and therefore be more willing to

approach new neighbours moving into their buildings or residences. Interestingly, participants in the mixed methods study did not mention these neighbourhood attributes when describing what they did or did not like about their neighbourhoods.

The relatively small impact of the neighbourhood variables is in contrast to the hypotheses proposed in the current thesis. It is also in contrast to what has been reported in previous studies (Brodsky et al., 1999; Segal & Aviram, 1978; Segal et al., 1980; Townley & Kloos, 2011; Yanos et al., 2004; Yanos et al., 2007; Yanos et al., 2011). As psychological integration is a subjective experience (McMillan & Chavis, 1986), perhaps objective indicators based upon socioeconomic neighbourhood indicators are less salient than how individuals feel about their neighbourhoods. Instead, subjective indicators based upon objective indicators (e.g., "What impact does the unemployment rate in the neighbourhood have on you?") may provide greater insights.

For social integration, many of the studies reporting the significance of neighbourhood-level variables were conducted in the 1970s and 1980s (e.g., Segal & Aviram, 1978; Segal et al., 1980). These temporal differences could be attributed to the societal shifts resulting from the urbanisation of our society. This shift, occurring in the first half of the 20th century, resulted in "a social order in which the traditional ties of community – shared space, close kinship links, shared religious and moral values – were being replaced by anonymity, individualism, and competition" (Forrest & Kearns, 2001). Neighbourhood interactions may be less important for individuals today than in the past.

The lack of neighbourhood significance could further be attributed to the lack of housing choice and financial limitations experienced by the participants in the current study. As part of the supported housing models used in the other studies (e.g., Yanos et al., 2004), individuals often received a rent subsidy and choice in where they live (Aubry, Ecker, & Jetté, 2014). For individuals in the current study, subsidies were not as common (37% of the sample in housing received a subsidy at FU1 and 39% at FU2) and choice in housing may have been limited due to financial resources. As a result, individuals without housing subsidies in the current study may have been more accustomed to certain neighbourhood conditions (e.g., high rates of low-income households, high unemployment, high concentration of immigrants, and high rates of individuals without high school educations) where affordable housing is present. This familiarity with lower socioeconomic neighbourhoods may therefore negate its impact on psychological and social integration.

Lastly, the neighbourhood variables selected may not have been the most appropriate for studying psychological and social integration. O'Campo et al. (2015) argue that there has been an over-reliance on census-based measures when conducting research on the effects of neighbourhoods. They suggest a broader range of indicators coming from several sectors including justice, transportation, housing, and subjective accounts. They also argue that sampling techniques should be broadened so that neighbourhoods, rather than individuals, are targeted in order to ensure significant representation within each neighbourhood (O'Campo et al., 2015). As it stands now, and what was utilized in the current study, most studies sample individuals first and then link them to their neighbourhoods.

The mixed methods analysis provides several insights into the neighbourhood-level variables that were of greater significance than the objective neighbourhood indicators used in the quantitative analyses. In particular, individuals with “low” integration noted substance use and the behavior of other tenants and neighbours as most problematic. Oftentimes, crack was named specifically as the substance causing problems. Yanos et al. (2004) and Brodsky (1996) also found that substance use in the neighbourhood were barriers to community integration for individuals. Substance use was often coupled with criminal activity when discussing housing and neighbourhood problems, indicating that the housing and neighbourhoods situations of these individuals involved multiple problems.

Individuals with “high” integration also listed substance use as a problem in their housing and neighbourhoods, but to a much lesser extent. This result demonstrates that psychological and social integration are possible within neighbourhoods where problematic behavior occurs. It could be that living in housing and/or neighbourhoods with visible substance users necessitates some individuals to seek connections with individuals not involved in substance use and finding ways to strengthen these bonds.

Other housing and neighbourhood problems that were identified from the mixed methods study included the behavior of other tenants and neighbourhood members. Disruptive tenants are common complaints from individuals living in vulnerable housing (Anucha, 2010; Mifflin & Wilton, 2005) and hinder community integration efforts as individuals may choose to socialize away from their housing due to these disruptions (Mifflin & Wilton, 2005). These disruptions may act as a catalyst for social isolation

among individuals with “low” integration, since individuals may not want to encounter these disruptive individuals within their neighbourhoods.

The reflexive piece also briefly touched upon the impact of neighbourhood substance use and disruptive neighbours. One of the participants stated that he did not want to conduct the interview at our Research Centre since it was downtown. The downtown location served as a trigger for him, as he was in recovery from substance use. His current neighbourhood was far removed from the downtown core, which aided in his recovery. Regarding neighbours and roommates, one participant noted that his roommate was a drug addict and that his place would not be a safe environment for us to conduct the interview. Another participant stated that a stabbing recently occurred in his apartment complex and that I would not have wanted to come to his place. These examples provide further evidence of the role that substance use and neighbourhood relations can play in determining community integration for homeless and vulnerably housed individuals.

The predictive models utilized within the current studies were partially supported, with the mixed methods analysis and reflective piece confirming some of these results and providing new areas for inquiry. The results from the studies highlight the importance of approaching psychological and social integration in ways that extend beyond the individual, especially among homeless and vulnerably housed individuals. In particular, the subjective experience of one’s housing and neighbourhood appeared to have some of the most significant impacts on psychological and social integration.

Limitations

A primary limitation of the studies presented in this thesis was the lack of neighbourhood variability. Approximately 60% of individuals were living in four neighbourhoods, one of which housed the majority of the city's main homeless shelters and drop-in services. These neighbourhoods also displayed similar trends on the objective indicators, creating a relatively homogeneous sample from the standpoint of neighbourhood location. This is in part a limitation of the sampling frame used and a reality of where individuals who experienced homelessness or are vulnerably find themselves living. As a result, the findings of this study may not be generalizable to larger cities where low-income housing is present in greater dispersion.

A second limitation is the exclusion of individuals who moved to a different city. Individuals that were coded in a neighbourhood demonstrated several differences to those not living in the city on a variety of individual and housing variables[12]. At FU2, individuals coded in neighbourhoods reported significantly lower levels of psychological integration than individuals not living in Ottawa. This difference could indicate that individuals left the city to seek out support from family or friends or seek areas where they feel more comfortable or similar to those that live there. Qualitative methods may serve as a better method to explore the experiences of these individuals.

A third limitation was the exclusion of an objective neighbourhood safety variable in the two quantitative articles. Neighbourhood safety is associated with increased psychological integration (Townley & Kloos, 2011) and the participants in the mixed methods analysis stated that they had safety concerns about their housing and

[12] These calculations were not presented within the article due to relevancy to the research question and length.

neighbourhoods. The crime rates within each neighbourhood were to be included in the analyses. Unfortunately, the crime rate statistics were based upon different neighbourhood boundaries than the Ottawa Neighbourhood Study, making it not possible to examine this variable as a predictor. Future analyses should include this variable.

For the quantitative articles, the self-report data may have been vulnerable to the effects of bias or inaccuracy due to memory lapses or defensiveness. In particular, questions about alcohol and drug use may have been underreported. The psychological integration questions may have been particularly difficult for individuals residing in a homeless shelter as trying to define who a neighbour is could be difficult. Prompts were provided in the questioning to ensure that fellow shelter residents were not to be considered neighbours, but this exclusionary wording may have been in contrast to how they would define a neighbour.

One of the primary limitations of the mixed methods article was the indirect questions about community integration. The interview protocol did not include open-ended questions about how individuals connect to their neighbourhoods and if they socialize with their neighbours. These types of questions would have allowed for a more in-depth analysis of community integration. As well, the structure of the questions did not allow for much follow-up questioning to occur. Participant responses were not transcribed, so the possibility of error in reporting participant responses is possible.

A second limitation of the mixed methods analysis was the arbitrary selection of scoring cut-offs for determining “high” and “low” integration. The scales did not provide scoring cut-offs, so cut-offs were created by the author. The author attempted to be

systematic in their creation and the differences in “high” and “low” participant responses indicate the cut-offs had some merit.

Future Research

Future research on psychological and social integration for homeless and vulnerably housed individuals should take several directions. Firstly, psychological and social integration scales tailored to this population should be created in consultation with the population. Integration, neighbourhood, and neighbours may have different connotations for individuals experiencing housing transitions compared to the general public.

Secondly, there should be attempts to sample individuals from a wide range of neighbourhoods. Of the 107 possible neighbourhood locations, 37 were represented at FU1 and 38 at FU2; however, approximately 60% of the participants lived in four designated neighbourhoods and one of these neighbourhoods housed three of the city’s main homeless shelters. A recent report released by the Wellesley Institute highlighted the growth of rooming houses in inner suburban areas in Toronto (Freeman, 2014). The experiences of rooming house residents in the suburbs compared to the downtown core may be very different and one that requires further investigation.

It is clear that holistic and ecological models should continue to be utilized when investigating psychological and social integration. This is particularly salient for psychological integration as the blocks of predictors all significantly contributed to the variability in psychological integration scores. The variability in social integration scores was attributed mostly to the individual-level block of predictors, indicating that the ecological model was not as salient; however, this could be attributed to the type of

neighbourhood variables utilized. As previously mentioned, it is important to include both objective and subjective indicators when conducting neighbourhood-level analyses (O'Campo et al., 2015). It may also be prudent to include environmental scans of the participants' housing and neighbourhoods. Hwang et al. (2003) utilized a variable of exterior rooming house quality in their analyses based upon objective indicators. My own personal reflective work helped in my understanding of the environments that some people were living in. Future analyses should take these matters into consideration when selecting predictor or independent variables.

Continued research should be conducted with similar samples of homeless and vulnerably housed individuals. It is important to consider individuals that fall across all ends of the socioeconomic spectrum, not just individuals residing in stable housing. Much of the previous research focused on individuals once they were housed (e.g., Gulcur et al., 2007; Yanos et al., 2004) and neglected to consider their experiences prior to this event. As evident from the current analyses, housing status did not predict psychological integration or social integration. Thus, homeless individuals were also forming psychological and social bonds within their neighbourhoods. Therefore, homeless individuals should be included within future analyses.

Future research should also consider mixed and qualitative methods. Psychological integration is a subjective experience (McMillan & Chavis, 1986). Social integration is contingent upon an individual's engagement within the community (Wong & Solomon, 2002) and should therefore be defined by the individual him or herself, as community engagement for one individual may drastically differ from that of another. It is therefore important to understand an individual's experiences of community in his or

her own words. Qualitative and mixed methods are suitable to elicit such responses and help the research participants guide the structuring of the results.

The types of methods presented in the current thesis should be expanded to other cities and municipalities. Other cities and municipalities may have vastly different homeless and vulnerably housed populations and dispersions of each population. At the same time, consistencies may emerge among different cities that could enhance the reliability and validity of the findings in the current studies.

Lastly, longitudinal analyses should be conducted in order to investigate changes in community integration over time. The focus of the current thesis was to determine the most pervasive and salient predictors of psychological and social integration based upon longitudinal data. Future analyses should focus on what factors help individuals maintain psychological and social integration over time and what factors impede individuals from maintaining psychological and social integration.

Implications and Conclusions

The results from this study present several implications for service providers and policy advisors. Younger and socially isolated homeless and vulnerably housed individuals should be encouraged to engage with their neighbours and neighbourhoods. By developing bonds within their communities and acquiring social support, they may reduce the risk of entering homelessness again. One way to facilitate this is to create community events, such as community dinners or mixers, to allow for positive social opportunities to occur. It is also important for housing workers to consider the importance of housing quality when considering housing placements. Although easier

said than done, particularly with the poor stock of good quality affordable housing available, housing of high overall quality should be sought.

Service providers should also consider creating specific post-housing service plans to promote socialization within the neighbourhood. Service plans should be reviewed to see what is currently being offered in terms of psychological and social integration supports. Clients should be asked if their integration needs are being met and how this process can be facilitated through assistance from community support workers. It could also be an opportunity for peer support workers to engage with socially isolated individuals. Having lived experience of homelessness, peer support workers may be able to offer skills and mechanisms that worked for their integration efforts.

Attempts should also be made to leverage the social support homeless individuals receive in their neighbourhoods. Since housing status did not significantly impact either psychological or social integration, it demonstrates that homeless individuals are also finding a sense of belonging and socializing within their neighbourhoods. It may be important for some homeless individuals to acquire housing that is located relatively close to their social support networks and where they feel integrated.

Since substance use in the community was such a pervasive barrier to community integration, special attention should be given to strategies to contend with substance abuse occurring in one's environment. Providing appropriate responses to substance abuse in one's environment, such as seeking out non-substance using individuals within the neighbourhood and fostering these relationships, may increase

community integration among individuals with “low” integration. In relation to this point, it is clear that a community response to open substance use is needed so that individuals can feel comfortable within their neighbourhood. One possible community response is providing supervised spaces for substance users to engage in drug use, the most obvious model being a supervised injection site. Although a discussion of supervised injection sites are well beyond the scope of this thesis, they have been proven to reduce overdose fatalities (Marshall, Milloy, Wood, Montaner, & Kerr, 2011) and reduce public injection drug use (Wood et al., 2004). The reduction of public injection drug use is particularly pertinent to the current thesis, as homeless and vulnerably housed individuals may be more likely to interact within their neighbourhoods if drug use is brought off the street and into these supervised settings.

There also needs to be a greater emphasis on creating and maintaining affordable housing that is safe, comfortable, provides adequate living space and privacy, in a friendly environment and of high overall quality. It is clear that housing is more than just the physical space it provides. Good quality housing located in a variety of neighbourhoods will lead to a sense of belonging and social opportunities for individuals who may otherwise not have such opportunities. By doing so, formerly homeless and vulnerably housed individuals may find a home and remain stably housed.

References

Anucha, U. (2010). Housed but homeless? Negotiating everyday life in a shared housing program. *Families in Society: The Journal of Contemporary Social Services, 91* (1), 67-75.

Arrigo, B.A. (1994). Rooms for the misbegotten: Social design and social deviance. *Journal of Sociology & Social Welfare, 95,* 95-113.

Aubry, T. & Myner, J. (1996). Community integration and quality of life: A comparison of persons with psychiatric disabilities in housing programs and community residents who are neighbours. *Canadian Journal of Community Mental Health, 15* (1), 5-20.

Aubry, T., Ecker, J., & Jetté, J. (2014). “Supported housing as a promising Housing First approach for people with severe and persistent mental illness”. *Homelessness and Health in Canada*. Guirguis, M., MacNeil, R., & Hwang, S. (Eds.), Ottawa, ON, University of Ottawa Press. 155-188.

Aubry, T., Tefft, B., & Currie, R. (1995). Public attitudes and intentions regarding tenants of community mental health residences who are neighbours. *Community Mental Health Journal, 31,* 39-52.

Aubry, T., Klodawsky, F., Nemiroff, R., Birnie, S., & Bonetta, C. (2007). *Panel study on persons who are homeless in Ottawa: Phase 2 results.* Ottawa, ON: University of Ottawa, Centre for Research on Community Services.

Bashir, S.A. (2002). Home is where the harm is: Inadequate housing as a public health crisis. *American Journal of Public Health, 92* (5), 733-738.

Bassuk, E.L. & Lamb, H.R. (1986). Homelessness and the implementation of deinstitutionalization. *New Directions for Mental Health Services, 30,* 7-14.

Baumgartner, J.B. & Herman, D.B. (2012). Community integration of formerly homeless men and women with severe mental illness after hospital discharge. *Psychiatric Services, 63* (5), 435-437.

Bradley, E.H., Curry, L.A., & Devers, K.J. (2007). Qualitative data analysis for health services research: Developing taxonomy, themes, and theory. *Health Services Research, 42* (4), 1758-1772.

Brodsky, A.E. (1996). Resilient single mothers in risky neighborhoods: Negative psychological sense of community. *Journal of Community Psychology, 24* (4), 347-363.

Brodsky, A.E. (2001). More than epistemology: Relationships in applied research with underserved communities. *Journal of Social Issues, 57* (2), 323-335.

Brodsky, A.E., O'Campo, P.J., & Aronson, R.E. (1999). PSOC in community context: Multi-level correlates of a measure of psychological sense of community in low-income, urban neighborhoods. *Journal of Community Psychology, 27* (6), 659-679.

Brofenbrenbrenner, U. (1979). *The ecology of human development*. Harvard University Press.

Canadian Mortgage and Housing Corporation. (2010). Definitions: Core housing need status. Retrieved from: http://cmhc.beyond2020.com/HiCODefinitions_EN.html

Caracelli, V.J. & Greene, J.C. (1993). Data analysis strategies for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 15* (2), 195-207.

Carling, P.J. (1995). *Return to community: Building support systems for people with psychiatric disabilities*. New York: Guilford Press.

Caton, C.L., Dominguez, B., Schanzer, B., Hasin, D.S., Shrout, P.E., Felix, A., … Hsu, E. (2005). Risk factors for long-term homelessness: Findings from a longitudinal study of first-time homeless single adults. *American Journal of Public Health, 95* (10), 1753-1759.

Charmaz, K. (2006). Coding in grounded theory practice. In K. Charmaz, *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis* (pp.42-71). Thousands Oaks, CA: Sage.

Cho, J. & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research, 6,* 319-340.

Cloke, P., Cooke, P., Cursons, J., Milbourne, P., & Widdowfield, R. (2000). Ethics, reflexivity and research: Encounters with homeless people. *Ethics, Place and Environment, 3* (2), 133-154.

Cocco, K.M & Carey, K.B. (1998). Psychometric properties of the Drug Abuse Screening Test in psychiatric outpatients. *Psychological Assessment, 10*(4), 408-414.

Cohen, E.H., Mowbray, C.T., Bybee, D., Yeich, S., Ribisl, K., & Freddolino, P.P. (1993). Tracking and follow-up methods for research on homelessness. *Evaluation Review, 17* (3), 331-352.

Crystal, S. & Beck, P. (1992). A room of one's own: The SRO and the single elderly. *The Gerontologist, 32* (5), 684-692.

Cutrona, C., & Russell, D. (1987). The provisions of social relationships and adaptation to stress. In W. H. Jones, & D. Perlman (Eds.), *Advances in personal relationships* (pp. 37–67). Greenwich, CT: JAI Press.

Cutrona, C.E., Russell, D., & Rose, J. (1984). Psychosocial factors and physical and mental health among the elderly. Unpublished manuscript.

Daeppen, J-B., Yersin, B., Landry, U., Pécoud, A., & Decrey, H. (2000). Reliability and validity of the Alcohol Use Disorders Identification Test (AUDIT) imbedded within a general health risk screening questionnaire: Results of a survey in 332 primary care patients. *Alcoholism: Clinical and Experimental Research, 24*(5), 659-665.

Dalton, J.H., Elias, M.J., & Wandersman, A. (2001). *Community psychology: Linking individuals and communities.* Stamford, CT: Wadsworth.

Dilks, S.L.E. & Shattock, L. (1996). Does community residence mean more community contact for people with severe, long-term psychiatric disabilities? *British Journal of Clinical Psychology, 35,* 183-192.

Dowling, M. (2006). Approaches to reflexivity in qualitative research. *Nurse Researcher, 13* (3), 7-21.

Dworsky, A.L. & Piliavin, I. (2000). Homeless spell exits and returns: Substantive and methodological elaborations on recent studies. *Social Service Review, 74* (2), 193-213.

Ekeland, T-J. & Bergem, R. (2006). The negotiation of identity among people with mental illness in rural communities. *Community Mental Health Journal, 42* (3), 225-232.

Elias, C.J. & Inui, T.S. (1993). When a house is not a home: Exploring the meaning of shelter among chronically homeless older men. *The Gerontologist, 33* (3), 396-402.

Elwood, S.A., & Martin, D.G. (2000). "Placing" interviews: Location and scales of power in qualitative research. *Professional Geographer, 52* (4), 649-657.

Ensign, B.J. (2006). Perspectives and experiences of homeless young people. *Journal of Advanced Nursing, 54* (6), 647-652.

Evans, G.W., Wells, N.M., & Moch, A. (2003). Housing and mental health: A review of the evidence and a methodological and conceptual critique. *Journal of Social Issues, 59* (3), 475-500.

Farrell, S., Aubry, T., & Coloumbe, D. (2004). Neighborhoods and neighbors: Do they contribute to personal well-being? *Journal of Community Psychology, 32* (1), 9-25.

Faul, F., Erdfelder, E., Land, A-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175-191.

Fauth, R.C., Leventhal, T., & Brooks-Gunn, J. (2008). Seven years later: Effects of a neighborhood mobility program on poor black and latino adults' well-being. *Journal of Health and Social Behavior, 49* (2), 119-130.

Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research, 12,* 531-545.

Flynn, R.J. & Aubry, T. D. (1999). Integration of persons with development or psychiatric disabilities: Conceptualization and measurement. In R.J. Flynn & R. Lemay (Eds.), *A quarter century of normalization and social role valorization: Evolution and impact* (pp.271-303). Ottawa, Canada: University of Ottawa Press.

Forrest, R. & Kearns, A. (2001). Social cohesion, social capital and the neighbourhood. *Urban Studies, 38,* 2125-2143.

Freeman, L. (2014). Toronto's suburban rooming houses: Just a spin on a downtown "problem"? The Wellesley Institute: Toronto, ON.

Gaetz, S. (2010). The struggle to end homelessness in Canada: How we created the crisis, and how we can end it. *The Open Health Services and Policy Journal, 3,* 21-26.

Gulcur, L., Tsemberis, S., Stefancic, A., & Greenwood, R.M. (2007). Community integration of adults with psychiatric disabilities and histories of homelessness. *Community Mental Health Journal, 43* (3), 211-228.

Gurstein, P. & Small, D. (2005). From housing to home. Reflexive management for those deemed hard to house. *Housing Studies, 20* (5), 717-735.

Hall, W.H. & Callery, P. (2001). Enhancing grounded theory rigor: Incorporating reflexivity and relationality. *Qualitative Health Research, 11,* 257-272.

Hubley, A.M., Russell, L.B., Gadermann, A.M., & Palepu, A. (2009). *Quality of Life for Homeless and Hard-to-House Individuals (QoLHHI) Inventory: Administration and Scoring Manual.* Vancouver, BC: Authors.

Hwang, S. W. (2001). Homelessness and health. *Canadian Medical Association Journal, 164* (2), 229-233.

Hwang, S.W., Martin, R.E., Tolomiczenko, G.S. & Hulchanski, J.D. (2003). The relationship between housing conditions and health status of rooming house residents in Toronto. *Canadian Journal of Public Health, 94* (6), 436-440.

Hwang, S., Aubry, T., Palepu, A., Farrell, S., Nisenbaum, R., Hubley, A.M., … Chambers, C. (2011). The health and housing in transition study: A longitudinal study of the health of homeless and vulnerably housed adults in three Canadian cities. *International Journal of Public Health, 56*, 609-623.

Kelly, J.G. (1990). Changing contexts and the field of community psychology. *American Journal of Community Psychology, 18* (6), 769-792.

Kennedy, C. (1989). Community integration and well-being: Toward the goals of community care. *Journal of Social Issues, 45* (3), 65-77.

Kreindler, S.A. & Coodin, S. (2010). Housing histories of Assertive Community Treatment clients: Program impacts and factors associated with housing stability. *Canadian Journal of Psychiatry, 55* (3), 150-156.

Kruzich, J.M. (1985). Community integration of the mentally ill in residential facilities. *American Journal of Community Psychology, 13* (5), 553-564.

Lam, J.A. & Rosenheck, R.A. (1999). Social support and service use among homeless persons with serious mental illness. *International Journal of Social Psychiatry, 45* (1), 13-16.

Lam, J.A. & Rosenheck, R.A. (2000). Correlates of improvement in quality of life among homeless persons with serious mental illness. *Psychiatric Services, 51* (1), 116-118.

Linhorst, D.M. (1991). The use of Single Room Occupancy (SRO) housing as a residential alternative for persons with a chronic mental illness. *Community Mental Health Journal, 27* (2), 135-144.

Maisto, S.A., Carey, M.P., Carey, K.B., Gordon, C.M., & Gleason, J.R. (2000). Use of the AUDIT and the DAST-10 to identify alcohol and drug use disorders among adults with severe and persistent mental illness. *Psychological Assessment, 12,* 186-192.

Maisto, S.A., Conigliaro, J., McNeil, M., Kraemer, K., & Kelley, M.E. (2000). An empirical investigation of the factor structure of the AUDIT. *Psychological Assessment, 12*(3), 346-353.

Mallik, K., Reeves, R.J., & Dellario, D.J. (1998). Barriers to community integration for people with severe and persistent psychiatric disabilities. *Psychiatric Rehabilitation Journal, 22* (2), 175-180.

Manuel, J., Hinterland, K., Conover, S., & Herman, D. (2012). "I hope I can make it out there": Perceptions of women with severe mental illness on the transition from hospital to community. *Community Mental Health Journal, 48*, 302-308.

Marshall, C. & Rossman, G.B. (2011). Managing, analyzing, and interpreting data. In C. Marshall & G.B. Rossman, *Designing Qualitative Research* (5th Edition) (pp.205-227). Thousand Oaks, CA: Sage.

Marshall, B.D.L., Milloy, M-J., Wood, E. Montaner, J.S.G., & Kerr, T. (2011). Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: A retrospective population-based study. *The Lancet, 377* (9775), 1429-1437.

Maxwell, J.A. (1998). Designing a qualitative study. In L. Bickman & D.J. Rog (Eds.), *Handbook of Applied Social Research Methods* (pp.69-100). Thousand Oaks, CA: Sage.

McColl, M.A., Carlson, P., Johnston, J., Minnes, P., Shue, K., Davies, D., & Karlovits, T. (1998). The definition of community integration: Perspectives of people with brain injuries. *Brain Injury, 12* (1), 15-30.

McMillan, D.W. & Chavis, D.M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14,* 6-23.

Mifflin, E. & Wilton, R. (2005). No place like home: Rooming houses in contemporary urban context. *Environment and Planning A, 37,* 403-421.

Mowbray, C.T., Cohen, E., & Bybee, D. (1993). The challenge of outcome evaluation in homeless services: Engagement as an intermediate outcome measure. *Evaluation and Program Planning, 16,* 337-346.

Nadin, S. & Cassell, C. (2006). The use of a research diary as a tool for reflexive practice: Some reflections from management research. *Qualitative Research in Accounting & Management, 3* (3), 208-217.

Nelson, G. (2010). Housing for people with serious mental illness: Approaches, evidence, and transformative change. *Journal of Sociology & Social Welfare, 37* (4), 123-146.

Nelson, G., Brent Hall, G., Squire, D., & Walsh-Bowers, R.T. (1992). Social network transactions of psychiatric patients. *Social Science Medicine, 34* (4), 433-445.

Nelson, G., Brent Hall, G., & Walsh-Bowers, R. (1997). A comparative evaluation of supportive apartments, group homes, and board-and-care homes for psychiatric consumer/survivors. *Journal of Community Psychology, 25* (2), 167-188.

Nemiroff, R., Aubry, T., & Klodawsky, F. (2011). From homelessness to community: Psychological integration of women who have experienced homelessness. *Journal of Community Psychology, 39* (8), 1003-1018.

Newbrough, J.R. (1992). Community psychology in the postmodern world. *Journal of Community Psychology, 20,* 10-25.

Nowell, B. & Boyd, N. (2010). Viewing community as responsibility as well as resource: Deconstructing the theoretical roots of psychological sense of community. *Journal of Community Psychology, 38* (7), 828-841.

Ottawa Neighbourhood Study. (2014). Retrieved from http://neighbourhoodstudy.ca/neighbourhood-maps-2011/

Patterson, M.L., Rezansoff, S., Currie, L., & Somers, J.M. (2013). Trajectories of recovery among homeless adults with mental illness who participated in a randomised controlled trial of Housing First: A longitudinal, narrative analysis. *BMJ Open, 3,* 1-8.

Patterson, M.L., Moniruzzaman, A., & Somers, J.M. (2014). Community participation and belonging among formerly homeless adults with mental illness after 12 months of Housing First in Vancouver, British Columbia: A randomized controlled trial. *Community Mental Health Journal, 50,* 604-611.

Piliavin, I., Wright, B., Mare, R., & Westerfelt, A. (1996). Exits from and returns to homelessness. *The Social Service Review, 70,* 33-37.

Pollio, D.E., North, C.S., Thompson, S., Paquin, J.W., & Spitznagel, E.L. (1997). Predictors of achieving stable housing in a mentally ill homeless population. *Psychiatric Services, 48* (4), 528-530.

Prince, P.N. & Prince, C.R. (2002). Perceived stigma and community integration among clients of assertive community treatment. *Psychiatric Rehabilitation Journal, 25* (4), 323-331.

Quigley, J.M. & Raphael, S. (2004). “Is housing unaffordable? Why isn’t it more affordable?“ *Journal of Economic Perspectives, 18* (1), 191-214.

Reinert, D.F. & Allen, J.P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism: Clinical and Experimental Research, 26*(2), 272-279.

Rosenthal, R. (1991). Straighter from the source: Alternative methods of researching homelessness. *Urban Anthropology and Studies of Cultural Systems and World Economic Development, 20* (2), 109-126.

Saldana, J. (2009). the *coding manual for qualitative researchers.* London, UK: Sage.

Salyers, M.P., Bosworth, H.B., Swanson, J.W., Lamb-Pagone, J., & Osher, F.C. (2000). Reliability and validity of the SF-12 Health Survey among people with severe mental illness. *Medical Care, 38*(11), 1141-1150.

Sarason, S.B. (1974). The psychological sense of community: Prospects for community psychology. San Francisco, CA: Jossey Bass.

Schanzer, B., Dominguez, B., Shrout, P.E., & Caton, C.L. (2007). Homelessness, health status, and health care use. *American Journal of Public Health, 97* (3), 464-469.

Segal, S.P., & Aviram, U. (1978). *The mentally ill in community-based sheltered care: A study of community care and social integration.* New York: John Wiley & Sons.

Segal, S.P., Baumohl, J., & Moyles, E.W. (1980). Neighborhood types and community reaction to the mentally ill: A paradox of intensity. *Journal of Health and Social Behavior, 21,* 345-359.

Shelton, K.H., Taylor, P.J., Bonner, A., & van den Bree, M. (2009). Risk factors for homelessness: Evidence from a population-based study. *Psychiatric Services, 60* (4), 465-472.

Skinner, H.E. (1982). The Drug Abuse Screening Test. *Addictive Behaviors, 7,* 363-371.

Snow, D.A. & Mulchay, M. (2001). Space, politics, and the survival strategies of the homeless. *American Behavioral Scientist, 45,* 149-169.

Statistics Canada. (2007). Census definitions. Retrieved from: http://www12.statcan.ca/census-recensement/2006/ref/dict/azindex-eng.cfm

Stergiopoulos, V., Gozdzik, A., O'Campo, P., Holby, A.R., Jeyaratnam, J., & Tsemberis, S. (2014). Housing First: Exploring participants' early support needs. *BMC Health Services Research, 14,* 167.

Tabachnick, B.G. & Fidel, L.S. (2006). Using multivariate statistics (5th edition). Pearson: New York, NY.

Taylor, C. (1993). On the conduct of homelessness research: Lessons from a qualitative study of women diagnosed with chronic mental illness. *Issues in Mental Health Nursing, 14,* 425-432.

Thompson, S.J., Pollio, D.E., Eyrich, K., Bradbury, E., & North, C.S. (2004). Successfully exiting homelessness: Experiences of formerly homeless mentally ill individuals. *Evaluation and Program Planning, 27,* 423-431.

Toro, P.A. (2006). Trials, tribulations, and occasional jubilations while conducting research with homeless children, youth, and families. *Merrill-Palmer Quarterly, 52* (2), 343-364.

Toro, P.A., Bellavia, C., Daeschler, C., Owens, B., Wall, D.D., Passero, J.M., & Thomas, D.M. (1995). Distinguishing homelessness from poverty: A comparative study. *Journal of Consulting and Clinical Psychology, 63,* 280-289.

Toro, P.A., Passero Rabideau, J.M., Bellavia, C.W., Daeschler, C.V., Wall, D.D., & Thomas, D.M. (1997). Evaluating an intervention for homeless persons: Results of a field experiment. *Journal of Consulting & Clinical Psychology, 65* (3), 476-484.

Townley, G. & Kloos, B. (2011). Examining the psychological sense of community for individuals with serious mental illness residing in supported housing environments. *Community Mental Health Journal, 47,* 436-446.

Trute, B., & Segal, S.P. (1976). Census tract predictors and the social integration of the sheltered-care residents. *Social Psychiatry, 11,* 153-161.

Tsai, J. & Rosenheck, R.A. (2012). Conceptualizing social integration among formerly homeless adults with severe mental illness. *Journal of Community Psychology, 40* (4), 456-467.

Tsai, J., Mares, A.S., & Rosenheck, R.A. (2012). Does housing chronically homeless adults lead to social integration? *Psychiatric Services, 63* (5), 427-434.

Tsemberis, S. (1999). From streets to homes: An innovative approach to supported housing for homeless adults with psychiatric disabilities. *Journal of Community Psychology, 27* (2), 225-241.

Tsemberis, S., McHugo, G., Williams, V., Hanrahan, P., & Stefancic, A. (2007) Measuring homelessness and residential stability: The residential time-line follow-back inventory. *Journal of Community Psychology*, *35*, 29-42.

Unger, D.G. & Wandersman, A. (1985). The importance of neighbors: The social, cognitive, and affective components of neighboring. *American Journal of Community Psychology, 13* (2), 139-169.

Vance, D. (1995). Barriers and aids in conducting research with older homeless individuals. *Psychological Reports, 76,* 783-786.

Walsh, R. T. (1987). The evolution of the research relationship in community psychology. *American Journal of Community Psychology, 15* (6), 773-788.

Ware, Jr., J.E., Kosinski, M., & Keller, S.D. (1996). A 12-Item Short-Form Health Survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care, 34*(3), 220-233.

Ware, N.C., Hooper, K., Tugenberg, T., Dickey, B., & Fisher, D. (2007). Connectedness and citizenship: Redefining social integration. *Psychiatric Services, 58* (4), 469-474.

Ware, N.C., Hooper, K., Tugenberg, T., Dickey, B., & Fisher, D. (2008). A theory of social integration as quality of life. *Psychiatric Services, 59* (1), 27-33.

Weening, M.W.H., Schmidt, T., & Midden, C.J.H. (1990). Social dimensions of neighbourhoods and the effectiveness of information programs. *Environment and Behavior, 22,* 27-54.

Wells, N. & Harris, J. (2007). Housing quality, psychological distress, and the mediating role of social withdrawal: A longitudinal study of low-income women. *Journal of Environment Psychology, 27,* 69-78.

Wiesenfeld, E. (1996). The concept of "we": A community social psychology myth? *Journal of Community Psychology, 24* (4), 337-345.

Wingate-Lewinson, T., Gary Hopps, J., & Reeves, P. (2010). Liminal living at an extended stay hotel: Feeling "stuck" in a housing solution. *Journal of Sociology & Social Welfare, 37* (2), 9-34.

Wolfensberger, W. (1972). *The principle of Normalization in human services*. Toronto: National Institute on Mental Retardation.

Wolfensberger, W. (1998a). A brief introduction to Social Role Valorization: A higher-order concept for addressing the plight of societally devalued people, and for structuring human services (3rd ed.). Syracuse, NY: Syracuse University, Training Institute for Human Service Planning, Leadership and Change Agentry.

Wolfensberger, W. (1998b). "Mainstreaming" and "inclusion" versus real integration. *International Social Role Valorization Journal, 3* (1), 58-60.

Wolfensberger, W. & Thomas, S. (1983). PASSING (Program Analysis of Service Systems' Implementation of Normalization Goals): Normalization criteria and ratings manual. (2nd ed.) Toronto: National Institute on Mental Retardation.

Wong, Y-L., I. & Solomon, P.L. (2002). Community integration of persons with psychiatric disabilities in supportive independent housing: A conceptual model and methodological considerations. *Mental Health Services Research, 4* (1), 13-28.

Wong, Y-L., I., Metzendorf, D., & Min, S-Y. (2006). Neighborhood experiences and community integration. *Social Work in Mental Health, 4* (3), 45-59.

Wong, Y-L., I. & Stanhope, V. (2009). Conceptualizing community: A comparison of neighborhood characteristics of supportive housing for persons with psychiatric and developmental disabilities. *Social Science & Medicine, 68,* 1376-1387.

Wong, Y-L., I., Sands, R.G., & Solomon, P.L. (2010). Conceptualizing community: The experience of mental health consumers. *Qualitative Health Research, 20* (5), 654-667.

Wood, E., Kerr, T., Small, W., Li, K., Marsh, D.C., Montaner, J.S.G., & Tyndall, M.W. (2004). Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *Canadian Medical Association Journal, 171* (7), 731-734.

Yanos, P.T., Barrow, S.M., & Tsemberis, S. (2004). Community integration in the early phase of housing among homeless persons diagnosed with severe mental illness: Successes and challenges. *Community Mental Health Journal, 40* (2), 133-150.

Yanos, P.T., Felton, B.J., Tsemberis, S., & Frye, V.A. (2007). Exploring the role of housing type, neighborhood characteristics, and lifestyle factors in the community integration of formerly homeless persons diagnosed with mental illness. *Journal of Mental Health, 16* (6), 703-717.

Yanos, P.T., Stefancic, A., & Tsemberis, S. (2011). Psychological community integration among people with psychiatric disabilities and nondisabled community members. *Journal of Community Psychology, 39* (4), 390-401.

Zlotnick, C., Robertson, M.J., & Lahiff, M. (1999). Getting off the streets: Economic resources and residential exits from homelessness. *Journal of Community Psychology, 27* (2), 209-224.

Zlotnick, C., Tam, T., & Robertson, M.J. (2003). Disaffiliation, substance use, and exiting homelessness. *Substance Use & Misuse, 38* (3-6), 577-599.

Appendix A

Housing History (Dartmouth Follow-Back Calendar)

1.1 Housing History (Dartmouth Follow-Back Calendar)

The first question I'll be asking has to do with where you have been living for the last while… *(Ask these questions even if the participant is sleeping anywhere outside.)*

I want you to think about where you have been living **since our last interview**. Let's look at this calendar together [**REFER TO CALENDAR**], and I'll make notes as you talk. This is (current date), so the time we'll be talking about is between (date of last interview) and today. We will start with where you are living now and work backwards from there, month by month.

***(Prompts for type of residence - only read if necessary**: Own house, apartment, temporary stay with friends and/or relatives, homeless shelter, homeless (on the streets, in the park/ravine, in a car or other vehicle, abandoned buildings, public places such as bus/train stations), rooming house, boarding home, group home, single room occupancy unit, medical hospital, psychiatric hospital, substance abuse treatment facility, halfway house, nursing home, motel or hotel, jail or prison.)*

1.1.1 Current Location			N/A	Refused	DK
A	Location *(If participant doesn't know the address ask for major intersection or neighbourhood)*		996	997	998
B	Type of residence		996	997	998
C	Date moved in (dd/mm/yyyy)	___ ___ / ___ ___ / ___ ___ ___ ___	996	997	998
(If type of residence is a shelter, street, treatment facility, hospital or jail go to G)					
D	Is this …	1. Your own place 2. A place belonging to friends or family → Do you pay rent? 1. Yes 2. No → **go to G**	996	997	998
E	How much do YOU pay for rent? *(participants share of rent - monthly amount)*		996	997	998

F	Is this subsidized housing?**	1. Yes 2. No	996	997	998
G	Why did you move to this place? (I*f participant hasn't moved in the past 12 months, skip to* ***1.2***) _____ _____ _____ _____		996	997	998

*** If participant does not know whether their housing is **subsidized**, ask: "Is part or all of your rent being paid by the government, a community agency, or another organization? In other words, you are receiving support to pay your rent above and beyond any income you have."*

Appendix B

Housing Quality (Toro's Instrument)

1.13 Housing Quality (Toro's Instrument)

(Ask these questions even if the participant is sleeping anywhere outside, in a car or other vehicle, abandoned building, bus station or other public place, or place of business.) **[REFER TO SCALE]**

		Very bad	Bad	Somewhat bad	Neither good or bad	Somewhat good	Good	Very good	N/A	Refused	DK
A	How would you rate the place where you currently live in terms of **comfort**?	1	2	3	4	5	6	7	996	997	998
B	How would you rate the place where you currently live in terms of **safety**?	1	2	3	4	5	6	7	996	997	998
C	How would you rate the place where you currently live in terms of **spaciousness***?	1	2	3	4	5	6	7	996	997	998
D	How would you rate the place where you currently live in terms of **privacy****?	1	2	3	4	5	6	7	996	997	998
E	How would rate the place where you currently live in terms of **friendliness***** ?	1	2	3	4	5	6	7	996	997	998
F	How would you rate the place where you currently live in terms of overall **quality**?	1	2	3	4	5	6	7	996	997	998

* Spaciousness: Feeling like you have enough space to live comfortably.

** Privacy: Feeling like you have your own space where you will not be disturbed by other people.

***Friendliness: Feeling like you are in a pleasant and welcoming atmosphere and you are comfortable in these surroundings.

Appendix C

Neighbourhood Impact (Quality of Life for Homeless and Hard-to-House Individuals)

You've talked about some things that described your neighbourhood. Now I'd like you to rate the kind of <u>impact/effect</u> that your neighbourhood has on you.

1	2	3	4	5	6	7	
Large negative impact/effect	Moderate negative impact/effect	Small negative impact/effect	No impact/effect	Small positive impact/effect	Moderate positive impact/effect	Large positive impact/effect	996: N/A 997: Refused 998: Don't know

Appendix D

Physical and Mental Health (SF-12)

2.1 (SF-12) These next questions are about your health status. Please try to answer every question as accurately as you can. [**REFER TO SCALE**]		
A	In general, would you say your health is... **1** Excellent **2** Very good **3** Good **4** Fair **5** Poor	996. N/A 997. Refused 998. Don't know
The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? **[REFER TO SCALE]**		
B	…moderate activities such as moving a table. Does your health now limit you a lot, limit you a little, or not limit you at all?(*If participant says s/he does not do activity, probe: Is that because of your health?)* **1** Yes, limited a lot **2** Yes, limited a little **3** No, not limited at all	996. N/A 997. Refused 998. Don't know
C	…climbing several flights of stairs. Does your health now limit you a lot, limit you a little, or not limit you at all? *(If participant says s/he does not do activity, probe: Is that because of your health?)* **1** Yes, limited a lot **2** Yes, limited a little **3** No, not limited at all	996. N/A 997. Refused 998. Don't know
The following questions that I will ask you are about your physical health and your daily activities during the **past 4 weeks**.		
D	During the **past 4 weeks**, have you accomplished less than you would like as a result of your physical health? **1** Yes **2** No	996. N/A 997. Refused 998. Don't know
E	During the **past 4 weeks**, were you limited in the kind of work or other regular daily activities you do as a result of your physical health? **1** Yes **2** No	996. N/A 997. Refused 998. Don't know
The following questions that I ask you are about your emotions and your daily activities during the **past 4 weeks**.		
F	During the **past 4 weeks**, have you accomplished less than you would like as a result of any emotional problems, such as feeling depressed or anxious? **1** Yes **2** No	996. N/A 997. Refused 998. Don't know

G	During the **past 4 weeks**, did you not do work or other regular daily activities as carefully as usual as a result of any emotional problems, such as feeling depressed or anxious? **1** Yes **2** No	996. N/A 997. Refused 998. Don't know
The next questions are also about your physical and emotional health during the **past 4 weeks**. **[REFER TO SCALE]**		
H	During the **past 4 weeks**, how much did pain interfere with your normal work, including both outside and inside the home? Did it interfere. ... *(Pain refers to physical pain only)* **1** Not at all **2** Slightly **3** Moderately **4** Quite a bit **5** Extremely	996. N/A 997. Refused 998. Don't know
The next questions are about how you feel and how things have been with you during the **past 4 weeks**. As I read each statement, please give me the answer that comes closest to the way you have been feeling: Is it all of the time, most of the time, a good bit of the time, some of the time, a little of the time, or none of the time? **[REFER TO SCALE]**		
I	How much of the time during the **past 4 weeks**...have you felt calm and peaceful? **1** All of the time **2** Most of the time **3** A good bit of the time **4** Some of the time **5** A little of the time **6** None of the time	996. N/A 997. Refused 998. Don't know
J	How much of the time during the **past 4 weeks**...did you have a lot of energy? **1** All of the time **2** Most of the time **3** A good bit of the time **4** Some of the time **5** A little of the time **6** None of the time	996. N/A 997. Refused 998. Don't know
K	How much of the time during the **past 4 weeks**...have you felt down? **1** All of the time **2** Most of the time **3** A good bit of the time **4** Some of the time **5** A little of the time **6** None of the time	996. N/A 997. Refused 998. Don't know
L	During the **past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities like visiting with friends or relatives? **[REFER TO SCALE]** **1** All of the time **2** Most of the time **3** Some of the time **4** A little of the time **5** None of the time	996. N/A 997. Refused 998. Don't know

Appendix E

Drug Use (Drug Abuse Screening Test)

9.1 DAST

The following questions concern information about your potential involvement with drugs NOT including alcoholic beverages during the **past 12 months**. When the words "drug use" are utilized, they refer to the use of prescribed or over-the-counter drugs in excess of the directions, and any nonmedical use of drugs. The various classes of drugs may include cannabis (marijuana, hashish), solvents (paint thinner), tranquilizers (Valium), barbiturates, cocaine, stimulants (speed), hallucinogens (LSD), or narcotics (heroin). Remember that the questions do not include alcoholic beverages.

		Yes	No	N/A	Refused	DK
A	In the **past 12 months**, have you used drugs other than those required for medical reasons?	1	2 **(go to 9.3)**	996	997	998
B	In the **past 12 months**, did you use more than one drug at a time?	1	2	996	997	998
C	In the **past 12 months**, were you always able to stop using drugs when you wanted to?	1	2	996	997	998
D	In the **past 12 months**, have you had 'blackouts' or 'flashbacks' as a result of drug use?	1	2	996	997	998
E	In the **past 12 months**, did you ever feel bad or guilty about your drug use?	1	2	996	997	998
F	In the **past 12 months**, have you had any contact with your partner (or spouse or parents)?	1	2 **(go to H)**	996	997	998
G	If **YES**, did your partner (or spouse or parents) ever complain about your involvement with drugs?	1	2	996	997	998
H	In the **past 12 months**, have you neglected your family because of your use of drugs?	1	2	996	997	998
I	In the **past 12 months**, have you engaged in illegal activities - other than buying the drugs - in order to obtain drugs?	1	2	996	997	998
J	In the **past 12 months**, have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	1	2	996	997	998
K	In the **past 12 months**, have you had medical problems as a result of your drug use (e.g., memory loss, convulsions, bleeding)?	1	2	996	997	998

Appendix F

Alcohol Use (Alcohol Use Disorders Identification Test)

9.3 Now I am going to ask you some questions about use of alcoholic beverages such as beer, wine, vodka, during the **past 12 months**. Please remember that one drink is: ½ pint average strength beer OR one glass of wine OR one single measure of spirits. *Record how they spent the majority of the last 12 months. If they spent 7 months drinking, and 5 months not drinking at all, then ask about the 7 months when they were drinking. If they spent 6 months heavily drinking and 6 months sober ask them what they would identify as the majority of their time in the last 12 months, and then record those responses.*

A	During the **past 12 months**, how often did you have a drink containing alcohol? **[REFER TO SCALE]**	1 Never **(Go to 9.3K)**	2 Monthly/less than monthly	3 2-4 times per month	4 2-3 times per week	5 4 or more times per week	996. Not applicable 997. Refused 998. Don't know
B	During the **past 12 months**, how many drinks containing alcohol did you have on a typical day when you were drinking? **[REFER TO SCALE]**	1 1-2	2 3 or 4	3 5 or 6	4 7-9	5 10 or more	996. Not applicable 997. Refused 998. Don't know
C	During the **past 12 months**, how often did you have six or more drinks on one occasion?**[REFER TO SCALE]**	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know
D	How often during the **past 12 months** have you found that you were unable to stop drinking once you started?	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know
E	How often during the **past 12 months** have you failed to do what was normally expected of you because of drinking?	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know
F	How often during the **past 12 months** have you needed a first drink in the morning to get yourself going after a heavy drinking session?	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know
G	How often during the **past 12 month** have you felt guilt or remorse after drinking?	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know
H	How often during the **past 12 months** have you been unable to remember what happened the night before because of drinking?	1 Never	2 Less than monthly	3 Monthly	4 Weekly	5 Daily or almost daily	996. Not applicable 997. Refused 998. Don't know

I	Have you or someone else been injured as a result of your drinking? **[REFER TO SCALE]** 1 No 2 Yes, but not in the **past 12 months** 3 Yes, during the **past 12 months**	996. Not applicable 997. Refused 998. Don't know
J	Has a friend, or relative, or doctor or other health worker been concerned about your drinking or suggested you cut down? **(go to 9.4)** 1 No 2 Yes, but not in the **past 12 months** 3 Yes, during the **past 12 months**	996. Not applicable 997. Refused 998. Don't know
K	Looking back **before the past 12 months**, have you or someone else been injured as a result of your drinking? **[REFER TO SCALE]** 1 No 2 Yes, but not in the **past 12 months**	996. Not applicable 997. Refused 998. Don't know
L	Has a friend, or relative, or doctor or other health worker been concerned about your drinking or suggested you cut down? 1 No 2 Yes, but not in the **past 12 months**	996. Not applicable 997. Refused 998. Don't know

Appendix G

Psychological Integration (Psychological Integration Scale)

10.2 Psychological Integration Scale. Next I want to ask you about your beliefs about the people who live in the neighbourhood and about the neighbourhood itself. By neighbourhood, we mean the surrounding area within normal walking distance of where you are currently living. These next questions I'm interested in knowing how much you agree or disagree with the following statements when it comes to your neighbourhood. **[REFER TO SCALE]**

		Strongly disagree	Disagree	Neither	Agree	Strongly agree	N/A	Refused	DK
A	Compared to other neighbourhoods, I view this neighbourhood as a safe place	1	2	3	4	5	996	997	998
B	I like to think of myself as similar to the people who live in this neighbourhood.	1	2	3	4	5	996	997	998
C	If I had an emergency, even people I do not know in this neighbourhood would be willing to help.	1	2	3	4	5	996	997	998
D	I plan to remain a resident of this neighbourhood for a number of years.	1	2	3	4	5	996	997	998
E	There are people in this neighbourhood who really care about me.	1	2	3	4	5	996	997	998
F	People in this neighbourhood don't get too friendly with each other	1	2	3	4	5	996	997	998

Appendix H

Social Integration (Social Integration Scale)

10.3 Contact with neighbours. An important aspect of neighbourhood life involves the contact that goes on between residents of a neighbourhood. In this next set of questions, I would like to find out how often you have had the following kinds of contact with your present neighbours. By neighbours, we mean people who live near where you are presently living but not with you. Neighbour does NOT include other shelter residents or other residents in residential treatment, but it does include anyone they share an apartment building with (non-roomies), an SRO or rooming house with and everyone else in their neighbourhood. Please indicate the frequency of your contact with neighbours according to the following scale. Please tell me the word that best describes how much you have of each kind of contact with your neighbours. **[REFER TO SCALE]**

		Never	Rarely	Occasionally	Fairly Often	Frequently	N/A	Refused	DK
A	How often have you said hello or waved to a neighbour when seeing them on the street ?	1	2	3	4	5	996	997	998
B	How often have you gone with a neighbour on a social outing such as shopping, to a movie, eating or other similar kind of event?	1	2	3	4	5	996	997	998
C	How often have you discussed neighbourhood issues and problems with a neighbour?	1	2	3	4	5	996	997	998
D	How often has a neighbour invited you into their home for coffee, drink, or other kind of socializing?	1	2	3	4	5	996	997	998
E	How often have you assisted a neighbour with a household task such as minor house repair, shoveling snow, or moving heavy items?	1	2	3	4	5	996	997	998
F	How often have you talked with a neighbour about personal issues such as housing concerns or health?	1	2	3	4	5	996	997	998
G	How often have you had a conversation with a neighbour when seeing them on the street?	1	2	3	4	5	996	997	998

Appendix I

Social Support (Social Provisions Scale)

11.1 Social Provisions Scale

I'm going to read you some statements about your relationships with others. For each, could you please tell me whether you strongly disagree, disagree, agree, or strongly agree? **[REFER TO SCALE]**

		Strongly agree	Agree	Disagree	Strongly disagree	N/A	Refused	DK
A	If something went wrong, no one would help me.	1	2	3	4	996	997	998
B	I have family and friends who help me feel safe, secure and happy.	1	2	3	4	996	997	998
C	There is someone I trust whom I could turn to for advice if I were having problems.	1	2	3	4	996	997	998
D	There is no one I feel comfortable talking about problems with.	1	2	3	4	996	997	998
E	I lack a feeling of intimacy with another person.	1	2	3	4	996	997	998
F	There are people I can count on in an emergency.	1	2	3	4	996	997	998
G	I provide support to my friends and/ or my family.	1	2	3	4	996	997	998
H	I have a lot of serious disagreements and arguments with my family.	1	2	3	4	996	997	998