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Canada

CORRELATES OF HOUSING STABILITY AMONG PSYCHIATRIC CONSUMER/SURVIVORS

by

Stephanie Anne Brown

Bachelor of Science, University of Western Ontario, 2003

THESIS

Submitted to the Faculty of Social Work

in partial fulfilment of the requirements for

Master of Social Work

Wilfrid Laurier University

2006

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Abstract

Deinstitutionalization, lack of affordable housing, and the rise in shelter use and homelessness highlight the need for housing stability among psychiatric consumer/survivors. This secondary analysis was carried out with three goals: (1) to determine the relationship between the utilization of health and social services and housing stability, (2) to determine the relationship between housing stability and quality of life, and (3) to compare three continuums of housing stability. Data collected through the Utilization of Hospital and Community Services Form, Brief Version of the Lehman Quality of Life Interview, and Housing History Form from 601 psychiatric consumer/survivors in London, Ontario were analyzed. Correlational analyses did not support a relationship between the utilization of health and social services and housing stability; however a significant relationship between housing stability and quality of life was revealed. The continuums of number of moves, number of undesirable moves, and number of nights homeless were shown to be measuring different aspects of housing stability. Implications for social work practice and future direction for housing stability research are discussed.

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Chapter 1: Introduction

Rationale

"Homelessness is a rapidly growing social problem in Canada" (Layton, 2000, p. 3). The number of homeless individuals in Canada began to increase in the late 1980s and has been on the rise ever since (Hargrave, 2004). According to the 2001 Census published by Statistics Canada, 14,150 individuals resided in shelters across Canada in 2001. For the purposes of the Census the term "shelters" included shelters for persons lacking a fixed address, and lodging and rooming homes with assistance services (Statistics Canada, 2001). Of the 14,150 shelter users across Canada, 8,780 were male and 5,370 were female. Six thousand one hundred of the shelter users in Canada resided in Ontario. More specifically, emergency shelter use in London, Ontario increased by 22% between 1995 and 1999 (City of London Task Force Report, 2000), and according to the 2001 Census a total of 365 individuals, 255 males and 110 females, resided in London shelters in 2001 (Statistics Canada).

However, shelter users are not the only individuals who are homeless. Homeless individuals also reside on the streets, in abandoned buildings and cars, on park benches, in cheap hotels, and temporarily with friends and relatives. Homelessness is often hidden and thus, difficult to assess (Caragata, 2003). Attempts at counting homeless individuals have failed predominantly due to a lack of consistency with respect to the definition of homelessness (Hargrave, 2004). Absolute homelessness includes people living on the street with no physical shelter, whereas relative homelessness includes those residing in substandard living conditions (Hargrave). However, neither of these definitions considers individuals living in the shelter system or those living temporarily with friends or

relatives. In October of 1998, there was an estimated 200,000 homeless people in Canada (Caragata), that is, 200,000 individuals across Canada with no private space and residing solely in public places. However, given the discrepancies in defining homelessness, it is likely that the prevalence of homeless Canadians is highly underestimated, and thus a larger social problem than has been previously reported.

To further complicate the social problem of homelessness, researchers report that the population of homeless individuals is often characterized by the presence of mental health issues. Stuart and Arboleda-Florez (2000) conducted semi-structured interviews with 250 homeless shelter users in Calgary, Alberta. In this study, individuals indicated from a list of nine key symptoms associated with depression, anxiety, and psychosis the number of symptoms they had experienced. Participants reporting four or more symptoms were classified as having a significant mental health problem. The researchers indicated that three quarters of the sample reported some psychiatric symptomatology and that nearly one third of the sample reported significant psychiatric symptomatology. Similarly, Goering, Tolomiczenko, Sheldon, Boydell, and Wasylenki (2002) found that two thirds of their sample of homeless persons in Toronto, Ontario reported a mental health issue. Moreover, Ducq, Guesdon, and Roelandt (1997) reviewed the literature from United States of America, Great Britain, Australia, and Canada and found that the research from these countries indicates that one-third of homeless adults have a prior history of psychiatric hospitalization. Therefore, psychiatric consumer/survivors make up an important subgroup of the homeless population.

Since many studies report that a large proportion of the homeless population consists of psychiatric consumer/survivors, deinstitutionalization is often targeted as an

explanation for the increased prevalence of homelessness. Sealy and Whitehead (2004) state: "Deinstitutionalization of psychiatric services is a fact in Canada" (p. 256). According to Sealy and Whitehead, deinstitutionalization is composed of three processes: 1) the shift away from dependence on psychiatric facilities; 2) the shift towards an increase in the number of psychiatric beds in general hospitals; and 3) the growth of community mental health services. These authors report that between 1965 and 1981 the bed capacity of psychiatric hospitals dropped 70.6% across Canada. More specifically, in Ontario the percent decrease in bed capacity between 1965 and 1981 was 66.9%. Similarly, between 1985 and 1999 there was a 36.9% decrease in the days of care in psychiatric hospitals across Ontario.

However, this shift away from dependence on psychiatric facilities was not accompanied by a corresponding growth in community mental health services. Only roughly 25% of total expenditures on psychiatric services were dedicated to community-based mental health services in Ontario, and this fund allocation experienced a mere 1.6% increase between 1994 and 1999. Thus, deinstitutionalization has been occurring continuously for the past 40 years across Canada (Sealy & Whitehead, 2004), and this deinstitutionalization combined with inadequate spending on community-based services, may be contributing to the growing problem of homelessness, by rendering an increasing number of deinstitutionalized individuals homeless.

Similarly, lack of affordable housing in Canada has also been targeted as a contributor to the increasing number of homeless individuals. As of March 2000, 3,225 households were waiting for social housing on the City of London and Middlesex County Social Housing Waiting List (City of London Task Force Report, 2000). However, Shinn

et al. (1998) report that loss of affordable housing is only one factor among many that has contributed to homelessness in Canada, and that provision of housing alone leading to long-term housing stability is unlikely.

Although deinstitutionalization and lack of affordable housing are often targeted as factors that contribute to the homelessness problem, there is no single causal factor that can be used to explain homelessness. On the contrary, a multitude of factors have been found to influence the loss of stable housing. Homelessness has been framed as "a prism that refracts the failures of society's key sectors, especially housing, welfare, education, health care, and corrections" (O'Connell, 2004, p. 1251). Similarly, low income, lack of employment and education, history of abuse, addictions, mental health issues, and involvement with the law, combined with rising rents, declining rental construction, reduced vacancy rates, high purchase prices, and the cessation of construction of non-profit housing have contributed to the homeless crisis that Canada is now experiencing (Caragata, 2003).

Furthermore, a study by Morrell-Bellai, Goering, and Boydell (2000) examined the factors related to becoming and remaining homeless in a sample of homeless individuals residing in Toronto, Ontario. These authors conducted in-depth, semi-structured qualitative interviews with 29 homeless adults from 18 to 61 years of age. Through qualitative data coding and the identification of themes, this study indicated that micro and macro level factors contribute both to becoming and remaining homeless. The authors reported that in becoming homeless participants identified loss of employment and loss of housing as macro level factors that contributed to homelessness. In addition, the authors reported that participants identified childhood abuse and mental health issues

as micro level factors leading to homelessness. In relation to remaining homeless, the sample used by Morrell-Bellai et al. reported a lack of supportive counselling, decent employment, acceptable wages, and affordable housing as macro level factors. These authors also reported impoverished social support networks and chronic substance abuse issues as micro level factors that contributed to remaining homeless. Therefore, this study indicated that both micro and macro factors are related to both becoming and remaining homeless, supporting the notion that multiple factors contribute to the loss of stable housing.

Although many factors have been targeted as contributors to the homelessness problem in Canada, shelter use, which is associated with many physical health risks, continues to rise. Shelter use has been reported to be associated with an increased risk of hypothermia, sleep deprivation, nutritional problems, and skin diseases (Daly, 1990). Although individuals who utilize the shelter system are protected from the harsh realities of the environment during the night, they are often required to leave the shelter early in the morning, putting them at risk for hypothermia and heat stroke throughout the day. Also, since individuals are required to leave the shelters early in the morning, their natural sleep patterns are disrupted, resulting in sleep deprivation. In addition, homeless shelter users often lack the nutrients required for a healthy diet, since they cannot store healthy food and resort to eating solely at food banks and soup kitchens. Moreover, individuals who use shelter services are prone to skin diseases. These skin diseases result from infrequent bathing, soiled clothing, and the use of clothing items that do not adequately fit.

Shelter use also increases the exposure of homeless individuals to viruses, including Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS, Daly, 1990), and other communicable diseases, such as tuberculosis (O'Connell, 2004). Furthermore, the use of homeless shelters is associated with emphysema, asthma, diabetes, as well as physical and psychological stress, resulting in high blood pressure (Daly). These chronic conditions are compounded by the inability to properly manage them in the shelter setting and on the streets, and are complicated by a lack of regular medical attention (Daly).

In addition to the physical health problems experienced by homeless persons, researchers have reported that homelessness is also associated with increased risk for suicidal behaviours. Eynan et al. (2002) conducted structured comprehensive interviews with 330 homeless adults in Toronto, Ontario. The researchers indicated that 61% of the sample reported suicidal ideation and 34% of individuals had attempted suicide (Eynan et al.). Moreover, Eynan et al. report that 72% of the participants diagnosed with a psychotic disorder, 43% of those diagnosed with a mood disorder, 40% of those diagnosed with substance abuse issues, and 33% of those diagnosed with post traumatic stress disorder had attempted suicide. Furthermore, a study conducted in the United States reported that the lifetime prevalence of suicidal ideation in a sample of homeless psychiatric consumer/survivors was 66.2% (Desai, Liu-Marea, Dausey, & Rosenheck, 2003). In addition, 51.3% of the persons in this sample reported that they had attempted suicide at one point during their lives. Based on the findings from their study, Desai et al. concluded that homeless psychiatric consumer/survivors are at high risk for suicidal behaviour. Moreover, Eynan et al. report that longer periods of homelessness are

associated with higher rates of lifetime suicidal ideation. Therefore, extended periods of housing instability increase the risk of suicidal behaviours in psychiatric consumer/survivors using the shelter system.

In addition to greater physical health problems and suicidal behaviours, homeless shelter users are also at increased risk for premature death. Layton (2000) reports that one homeless person dies every six days in Toronto. In addition, the mortality rate for male and female homeless shelter users in Toronto, Ontario is greater than that of the general population (Cheung & Hwang, 2004; Hwang, 2000). Although the mortality rate is not significantly different between male and female homeless shelter users between the ages of 18 and 44 years, a significant difference exists between the mortality rate of men and women ages 45 to 64, with men exhibiting a higher mortality rate than women (Cheung & Hwang). Thus, shelter users are at risk for premature death, which may potentially result from the increased prevalence of physical ailments and suicidal behaviours observed in this vulnerable population.

The findings regarding the inherent risks associated with homelessness are restricted to the population of individuals who use shelter services. However, as previously mentioned homelessness is characterized not only by persons who reside in shelters, but also by those who inhabit public spaces, such as benches, parks, bridges, and abandoned buildings. For the purpose of data collection, the access of researchers to individuals who use the shelter system is greater than the access of researchers to individuals who live in public places. Thus, those residing under bridges, in abandoned buildings, or on park benches are more difficult to interview and examine. Since the population of individuals who do not utilize the shelter system reside in harsh open

spaces, it is likely that these individuals are at greater risk for physical health problems, suicidal behaviour, and premature death than those housed in shelters.

The relationship between homelessness and increased physical ailments, suicidal behaviours, and mortality rates highlights the pressing need for housing stability in Canada. Moreover, since psychiatric consumer / survivors compose a large portion of the homeless population, a deeper understanding of the correlates of housing stability among these individuals is warranted. Furthermore, deinstitutionalization, the lack of affordable housing, and the rise in shelter usage across Canada and in London, Ontario specifically, underscore the value of further comprehending the correlates of housing stability in order to inform the practice of social workers in the field of mental health and housing.

Implications for Social Work Practice

The identification of the relationship between the housing stability and the utilization of health and social services, as well as the relationship between housing stability and quality of life would inform social work practice in shelters and mental health care facilities. Social work practice in these settings often involves discharge planning, which includes helping psychiatric consumer/survivors secure and maintain housing. The discharge planner is commonly caught between the agency directives to empty beds and an acute shortage of affordable and suitable housing in the community (Lightman, 1997). Thus, information regarding the correlates of housing stability would inform the practice of social work in shelters and psychiatric facilities.

Overview of Thesis

The following chapter will include a brief explanation of the original study and a review of the literature that is relevant to the current secondary analysis. Chapter 3 will

describe the methodology used for both the original study and the current analysis. The results of the data analysis will be presented in Chapter 4, and Chapter 5 will reveal a discussion of the findings, implications, limitations, and conclusions.

Chapter 2: Literature Review

Original Study

The original study is a Community University Research Alliance (CURA) entitled *Partnerships in Capacity Building: Housing, Community Economic Development, and Psychiatric Consumers/Survivors.* The Social Sciences and Humanities Research Council of Canada funds this program. The purposes of this CURA are to promote the understanding of the housing situation for psychiatric consumers/survivors at individual, community, and systemic levels, and to improve the capacity of the community to provide appropriate housing through a participatory research approach. The current study is a secondary analysis of the data collected by the CURA.

The CURA uses a participatory research approach. A participatory research approach requires the participation of oppressed people in the development of research questions, the determination of research tools, and the collection of information (Nelson, Ochocka, Griffin, & Lord, 1998). The CURA was created as an initiative from community organizations and, consistent with the participatory research approach, aspires to create opportunities for individuals to participate in and contribute to the project development and implementation. The program of activities of the CURA includes research, popular education, training for CURA partners and students, curriculum development, and dissemination of findings.

The participatory research approach used by the CURA assures the involvement of stakeholders throughout the process of the research. Communication with stakeholders is maintained throughout the project through monthly and bi-monthly meetings. These meetings help guide the research and allow the team to review assumptions and evaluate

progress. These meetings also help attain one of the main aims of the CURA, which is to establish long-lasting relationships within the community.

Many individuals, families, groups, and organizations are stakeholders of the CURA and are involved in the *Partnerships in Capacity Building: Housing, Community Economic Development, and Psychiatric Consumers/Survivors* project. Mental health consumer/survivors are invested in both the process and the outcomes of this research. In addition to fulfilling the role of research participants, psychiatric consumer/survivors are valued members of the various CURA committees, guiding the development of this research project. For example, Can-Voice is a consumer group that provides peer support for the education and empowerment of mental health consumers/survivors. Consumers/survivors affiliated with Can-Voice sit on the various committees and contribute to the writing of journal articles that emerge from the CURA's work. Family members of psychiatric consumers/survivors also have a prominent stake in the project and have been directly involved in qualitative focus groups and annual conference hosted by the CURA.

Similarly, mental health and health care providers are also involved in the project. The housing advocate for the Canadian Mental Health Association (CMHA) provides short-term support to help individuals with mental health issues find, secure, and maintain housing. This advocate is also involved with the CURA through presence at various meetings. In addition, the London Intercommunity Health Centre, which provides sensitive and equitable services to those who experience barriers to care, informs their clients of potential participation in the study and allows space for the interviews to take place. The Victorian Order of Nurses (VON) Middlesex-Elgin was also involved in the

development of the CURA and participated in various committees that guide the research process.

Also, housing providers are involved in the process and outcome of the CURA. The Homes for Special Care (HSC) program provides long-term and permanent residential care to persons discharged from psychiatric hospitals that require supervision or assistance with activities of daily living. The HSC program is involved in the project through their willingness to inform their clients of the study and allow the researchers to interview participants in HSC homes. Similarly, Western Ontario Therapeutic Community Hostel (WOTCH) workers informed the clients living in their permanent, transitional, and supportive housing of the potential to participate in the study.

In addition to housing providers, emergency shelter providers are involved with this CURA. Mission Services, Salvation Army, Rotholme Women's and Family Shelter, and Unity Project allow the researchers to enter their facilities and interview interested individuals. Often these emergency shelter providers will inform their clients of the study and provide the researchers with a list of interested clients. Staff from these shelters also attended CURA meetings and contributed to the development of the research project.

In addition there are numerous academic institutions that have a vested interest in the outcomes of the CURA. Faculty affiliated with the School of Nursing at the University of Western Ontario, the School of Social Work at King's University College at the University of Western Ontario, the Planning School at the University of Waterloo, the Department of Community Psychology at Wilfrid Laurier University, and the Centre for Continuing Education at Concordia University compose the team of CURA researchers that are involved in the conceptualization and development of the project.

With respect to the involvement of government, at the municipal level the City of London, Housing Division Planning and Development is directly involved in the CURA. There is a staff member from this division who attends the various CURA committees and provides input to the research team regarding future directions for research. Also, the CURA was previously involved with the Mental Health Reform branch of the provincial government.

The individuals, families, groups, and organizations involved in the process and outcome of the CURA were identified through the combined efforts of the academic director and the community director of the CURA. The community director of the CURA primarily recruited individuals from various community organizations with a vested interest in the housing of psychiatric consumer/survivors. The academic director was primarily involved in the recruitment of researchers from various disciplines with vested interests in housing and mental health issues. Combined, this large group of academics and community members formed the Community University Research Alliance that has been actively researching issues related to mental health and housing for the past five years.

Current Secondary Analysis

Literature Review

The correlates of housing stability among psychiatric consumer/survivors are of interest for the purpose of the current secondary analysis. The following is a review of the literature regarding the relationship between housing stability and both the utilization of health and social services, as well as the overall quality of life of psychiatric consumer/survivors.

Psychiatric consumer/survivor

The term psychiatric consumer/survivor was used to refer to individuals with a mental health issue. Although not all individuals with a mental health issue prefer the term consumer/survivor, it has been reported that individuals in Ontario who participate in self help organizations use this term to describe themselves (Nelson et al., 1998). Thus, this term was used to identify individuals who have experienced a mental health issue over the course of their lifetime.

Utilization of health and social services

A relationship between housing stability and the provision of health and social services provided by an assertive community treatment (ACT) team has been reported in previous literature (Bond, Drake, Mueser, & Latimer, 2001; Tsemberis, Gulcur, & Nakae, 2004). The ACT model of care emerged in the late 1960's from the work of Arnold Marx, Leonard Stein, and Mary Ann Test (Assertive Community Treatment Association, 2004). Since its emergence, ACT has been widely implemented in Canada, United States of America (USA), and Great Britain.

ACT is an intensive mental health program model in which a team of health and social service professionals serve psychiatric consumer/survivors in the community. The team of professionals includes individuals whose backgrounds and training include social work, nursing, psychiatry, rehabilitation, and counselling (Assertive Community Treatment Association, 2004). Therefore, professionals on the team usually include social workers, nurses, psychiatrists, occupational therapists trained in rehabilitation (Krupa, Radloff-Gabriel, Whippey, & Kirsh, 2002), and psychologists trained in counselling techniques.

The functions of an ACT team include: case management; crisis assessment and intervention; symptoms assessment, management and individual supportive therapy; medication prescription, administration, monitoring, and documentation; provision of substance abuse services; work related services; support in learning and completing activities of daily living; social, interpersonal relationship and leisure time skills; income and housing support services; and education, support and consultation to clients' families and other major supports (Government of Ontario, 1999). It is important to note that assertive community treatment teams emphasize relationship building, individualized services, and client choice (Government of Ontario).

Although, Dixon, Weiden, Torres, and Lehman (1997) did not find that assertive community treatment for homeless individuals significantly increased days spent in permanent housing, more recent literature supports a positive relationship between housing stability and ACT team services. For example, a review of the literature on the effectiveness of Assertive Community Treatment revealed that ACT team services increase housing stability for individuals with serious mental health concerns (Bond et al., 2001). Moreover, a research study by Goering, Wasylenki, Lindsay, Lemire, and Rhodes (1997), conducted in Toronto, Ontario examined the effect of a hostel outreach program on housing stability of psychiatric consumer/survivors who were homeless at the outset of the program. The outreach program was operated by the Community Occupational Therapy Associates and included rehabilitation-oriented case management, similar to the services offered through ACT. Fifty-five participants were interviewed at baseline, nine-month follow-up, and 18-month follow-up. The results of the study indicated that at both 9-month and 18-month follow-ups the participants involved in the

hostel outreach program showed significantly less number of moves, less weeks in shelter, and a greater number of weeks in permanent housing. Thus, the authors concluded that case management, provided by health and social service professionals, had increased housing stability for psychiatric consumer/survivors with histories of chronic homelessness. Similarly, a study conducted in Baltimore, USA found that ACT services significantly increased stable community housing (Lehman, Dixon, Kernan, DeForge, & Postrado, 1997).

Furthermore, Tsemberis et al. (2004) recently conducted a study in New York, USA that compared the ability of the Continuum of Care and Housing First models to decrease homelessness and increase housing stability among psychiatric consumer/survivors with a history of homelessness. The Continuum of Care model begins with outreach to homeless individuals with a mental health issue, focussing next on treatment and transitional housing, and culminating in permanent supportive housing. In contrast, the Housing First model allows consumers to define their own goals and needs, and provides individuals with independent housing and assertive community treatment (ACT) team services.

The sample consisted of a random assignment of 119 individuals to the Continuum of Care model, the control condition, and 87 individuals to the Housing First model, the experimental condition. The researchers reported that no significant differences existed between the control and experimental groups on baseline measures of age, gender, education, race, psychiatric diagnosis, or amount of time spent homeless. Participants in both groups were interviewed every six months over a two-year period by

interviewers who were blind to participants' assignment to the control or experimental condition.

The researchers reported that homelessness decreased and housing stability increased significantly faster in the experimental group than in the control group. Moreover, individuals in the experimental group spent significantly less time homeless and more time stably housed than controls at 6, 12, 18, and 24-month follow-ups. Therefore, Tsemberis et al. (2004) concluded that the Housing First model, which included ACT team services, is more effective than the Contiuum of Care model at increasing housing stability among previously homeless individuals with severe mental health issues. Thus, the researchers demonstrated a positive relationship between ACT team services and housing stability in a sample of psychiatric consumer/survivors.

ACT teams directly provide long-term treatment, rehabilitation services, and support to individuals with "clear and persistent mental illnesses" (Government of Ontario, 1999, p. 35). Moreover, persons served by ACT often have co-existing problems such as homelessness, substance abuse problems, or involvement with the judicial system (Assertive Community Treatment Association, 2004). However, ACT team services are not provided to psychiatric consumer/survivors with less severe mental health issues. Moreover, there is a gap in the literature regarding the relationship between housing stability and the general utilization of health and social services provided by psychiatrists, social workers, occupational therapists, nurses, and psychologists available in the community. Thus, the current secondary analysis seeks to repair this gap in the literature, proposing to examine the relationship between housing stability and the utilization of

health and social services provided by the community and by outpatient departments of mental health care facilities to psychiatric consumer/survivors.

In addition, previous research has shown that peer support services can effectively fill some of the gaps in the mental health service delivery system (Solomon, 2004), one of which could potentially be the maintenance of housing stability. Also, the importance of family doctors in the management of mental health issues has been demonstrated (Craven, Cohen, Campbell, Williams, & Kates, 1997); however the relationship between visits to the family doctor and housing stability has not yet been determined. Therefore, in addition to the impact of services provided by social workers, nurses, occupational therapists, psychologists, and psychiatrists, the relationship between housing stability and services provided by both peer supporters and family doctors will also be examined for the purpose of the current secondary analysis. In sum, in an attempt to identify correlates of housing stability, the current analysis will examine the relationship between housing stability and the general utilization of health and social services provided by psychiatrists, social workers, nurses, occupational therapists, psychologists, family doctors, and peer supporters.

Quality of life

Previous research has focused on the relationship between quality of life of psychiatric consumer/survivors and current living environment. In 1991, Lehman, Slaughter, and Myers reported the observation of a gradient of quality of life for psychiatric consumer/survivors residing in various living environments in Baltimore, USA. Lehman et al. interviewed 469 consumer survivors living in psychiatric hospitals, large residential care facilities, small group homes, and supported apartments. These

authors reported that individuals with mental health issues living in psychiatric hospitals reported the lowest quality of life. In addition, individuals living in large residential care facilities reported a greater quality of life than persons living in psychiatric institutions. Similarly, it was observed that individuals living in small group homes reported greater quality of life than those living in large residential care facilities. Furthermore, psychiatric consumer/survivors living in supported apartments reported greater quality of life than individuals living in small group homes, and those living in supported apartments reported the highest quality of life among the sample of psychiatric consumer/survivors (Lehman et al.). Therefore, this study indicated that the smaller and less restrictive the living environment, the greater the quality of life of psychiatric consumer/survivors.

Brunt and Hansson (2004) attempted to replicate the findings of Lehman et al. (1991) in southern Sweden. These authors examined the subjective quality of life of 52 individuals living in supported community residences and that of 24 individuals living in psychiatric inpatient settings. Brunt and Hansson report that no significant differences between groups were present with respect to clinical characteristics, employment, income, or contact with relatives or friends. However, the inpatient group was significantly younger than the community group. The results of this study indicated that individuals residing in psychiatric inpatient settings reported a lower overall satisfaction with life than individuals living in the community, supporting the gradient hypothesis reported by Lehman et al.

Similarly, Mares and Rosenheck (2004) examined the quality of life of individuals 12 months after the implementation of a program that included intensive case

management for persons with mental health issues living in Connecticut, USA. The sample consisted of 5,325 case management clients with a history of homelessness, a severe mental health issue, and limited involvement with continuous community treatment prior to entry into case management. The researchers expected that independently housed individuals would be more likely to report a higher overall life satisfaction than dependently housed and homeless individuals.

Living arrangement was operationalized as independently housed, consisting of those living alone or in their own place with others, dependently housed, consisting of those living in someone else's house, in an institution, or in multiple places, or not housed, consisting of those who were literally homeless during the past 60 days. Overall satisfaction with life was assessed using the Lehman Quality of Life Interview, in which satisfaction is assessed on a 7-point scale (1 = "terrible" and 7 = "delighted").

Consistent with their hypothesis, the authors found that clients who were independently housed reported greater overall satisfaction with life than their homeless counterparts, who reported the lowest overall satisfaction with quality of life. These findings by Mares and Rosenheck (2004) support the gradient reported by Lehman et al. (1991), and further the gradient hypothesis by adding homeless psychiatric consumer/survivors to the spectrum.

Previous literature regarding quality of life of psychiatric consumer/survivors has focused on the relationship between the current type of housing and quality of life. However, there is a gap in past literature with respect to the nature of the relationship between quality of life and the continuum of housing stability. An examination of the relationship between quality of life and the continuum of housing stability, as opposed to

current housing type, may offer a deeper understanding of the experience of psychiatric consumer/survivors. Moreover, most previous literature reflects the experience of those living in large urban centres in the USA and may have limited applicability to Canadians. Thus, the objective of the current study is to determine the relationship between the continuum of housing stability and the quality of life of psychiatric consumer/survivors in a Canadian setting.

Past research has reported that the relationship between current housing and quality of life can be influenced by intervening variables. For example, Mares, Young, McGuire, and Rosenheck conducted a study in 2002 that examined the quality of life reported by individuals in board and care homes in Connecticut, USA. The purpose of their research was to compare the relative importance of individual and environmental characteristics in predicting overall satisfaction with life. Individual characteristics included psychiatric symptomatology, cognitive functioning, and overall level of functioning. Environmental characteristics were objective and subjective in nature. Objective characteristics included income, size, attractiveness, and level of activity, whereas subjective characteristics included positive perception and conflict in the home. The overall satisfaction with life was measured using a subscale of the Brief Version of the Lehman Quality of Life Interview. Information on individual characteristics, environmental characteristics, and quality of life were obtained through structured interviews with a sample of 164 seriously mentally ill veterans living in 26 privately owned board and care homes in Los Angeles, California.

In this study, a three-stage regression model was used to compute the predictive nature of individual and both objective and subjective environmental characteristics on

quality of life. The results indicated that individual characteristics accounted for 26% of the variance in overall satisfaction with life. The proportion of the variance increased by 2% when objective environmental characteristics were added, and by 1% when subjective environmental characteristics were added to the regression model. Therefore, the researchers concluded that most of the variance in quality of life was explained by individual characteristics, most notably psychiatric symptomatology, which accounted for slightly less than 16% of the variance.

Although the findings of Mares et al. (2002) indicate that psychiatric symptomatology influences the relationship between current housing and quality of life and previous research corroborates the inverse relationship between symptomatology and quality of life (Anderson & Lewis, 2000; Ho, Nopoulos, Flaum, Arndt, & Andreasen, 1998), other studies have not indicated the same conclusions. For example, the relationship between quality of life and living environment in the study by Brunt and Hasson (2004) was maintained when controlling for psychopathology. Thus, the extent of the influence of psychiatric symptomatology on the relationship between housing and quality of life remains uncertain.

In addition to the potential of psychiatric symptomatology to influence the relationship between quality of life and housing stability, Stuart and Arboleda-Florez (2000) found that individuals from Alberta, Canada who reported lower quality of life were more likely to have been unmarried and poorly educated. Moreover, lower income has been found to be associated with decreased quality of life (Wilton, 2004), and thus may also play a role in the relationship between housing stability and quality of life.

Therefore, the finding that intervening variables may affect the relationship between current housing type and quality of life indicates that there is a need to examine what effect potential intervening variables have on the relationship between the continuum of housing stability and quality of life. Therefore, the current study further proposes to examine the effect of variables such as age, gender, income, education, symptomatology, and marital status on the relationship between housing stability and quality of life.

Chapter 3: Methodology

Original Study

Research Design

A survey design was used in the original analysis in order to determine what type of housing works best for which individuals. Individual interviews were conducted using a variety of instruments that were previously used by other researchers, instruments that were modified from their original versions, and instruments that were created for the purposes of this study. In addition, consumer/survivor and family focus groups were conducted. Therefore, a combination of quantitative and qualitative methods was used in the original study.

Sampling

Three hundred psychiatric consumers/survivors were surveyed in each of three consecutive years (2001, 2002, & 2003), for a total of 900 participants. In order to collect both cross-sectional and longitudinal data, participants were permitted to complete the survey in each year, however they were restricted to participating only once per year. Each year, an equal number of males and females were interviewed, for a total of 450 males and 450 females. The sample was also stratified by housing type. Participants living in 18 Homes for Special Care, 4 temporary shelters, 18 supportive housing units and over 80 independent living settings were included in the sample. Quotas for participants from each housing type were set according to the proportion of beds occupied in each setting. The quota for participants living independently was determined by asking two community mental health agencies for the percent of clients that they served that were living independently. Participants were randomly selected to participate

until the quotas were achieved. If a participant declined to participate, a substitute was chosen from the same living environment.

Data collection was centered in the City of London, in Middlesex County of Ontario. However, data was also collected from Homes for Special Care and Western Ontario Therapeutic Community Hostels in communities from Southwestern Ontario surrounding London. In order to be included in the study, participants had to be able to provide informed consent to participate, have a history of mental illness for a minimum of one year, and to be proficient in English to the degree necessary to participate in an interview. Participants were excluded from the study if they were under the age of 18 years or had been diagnosed with an organic brain disease to the extent that it interfered with the ability to participate in the interview.

Procedure

Participants were interviewed about demographic information, psychiatric history and diagnoses, housing preferences, housing history, quality of life, utilization of services, personal resources, severity of psychiatric symptoms, and childhood trauma. Interviewers consisted of research staff and university students. All interviewers completed a two-day training session. This training session contained information about the instruments used, how to administer the instruments and in-depth training on the Colorado Client Assessment Record, in order to attain interrater reliability. Interviewers also observed an interview in progress and were observed completing an interview prior to interviewing participants autonomously. Interviews took approximately one to two hours to complete, and participants received $20 in Canadian funds as compensation for the time they had devoted to completing the interview. Interviews were most often

completed at the participants' current residence, unless the participant requested to be interviewed at an alternate location.

It is important to note that although the current study consists of a secondary analysis, I fulfilled the role of volunteer research assistant for the CURA in 2001 and fulfilled a paid position in 2002 and 2003, allowing me to interview many of the research participants included in the sample. I was also involved in the data entry process and transferred the data from Microsoft ACCESS to the Statistical Package for the Social Sciences (SPSS).

Ethical considerations

Ethics approval was obtained from The University of Western Ontario Research Ethics Board (REB) in 2001. The REB approved a letter of information, a consent form, all instruments administered, and participant compensation in the amount $20 CAN for time spent completing the survey. Participants indicated their name on the consent form only. A code, consisting of letters and numbers, was created with information provided by the participant in order to protect the individual's identity. However, this code was reproducible by the participant at each point of interview, allowing the researchers to track the individual's participation in each year of the study. Consent forms were removed from the interview files and stored in a separate locked cabinet, thus removing any identifying information from the file.

Current Secondary Analysis

Research design

The current study consists of a secondary analysis of a portion of the quantitative data collected by the CURA entitled *Partnerships in Capacity Building: Housing, Community Economic Development, and Psychiatric Consumers/Survivors.*

Purpose, Objectives, and Hypotheses

The purpose of this research is to identify the correlates of housing stability among psychiatric consumer/survivors in order to inform social work practice in the field of mental health and housing. This purpose is to be fulfilled through the pursuit of the following objectives and corresponding hypotheses:

1. To determine whether or not a relationship exists between the utilization of health and social services and housing stability.
    a. It is hypothesized that a statistically significant inverse relationship exists between each the following variables: number of contacts with psychologists, psychiatrists, social workers, nurses, occupational therapists, family doctors, and peer supporters and number of moves; number of contacts with the aforementioned health and social service providers and number of undesirable moves; and number of contacts with health and social services providers and number of nights homeless.
    b. It is hypothesized that a statistically significant inverse relationship exists between each of the following sets of variables: total duration of contact with health and social service providers and number of moves, total duration of contact with health and social service providers and number of undesirable moves, and total duration of contact with health and social service providers and number of nights homeless.

Thus, it is expected that as the utilization of health and social services increases, housing stability will be observed to increase.

2. To determine whether or not the relationship found between housing stability and the utilization of health and social services is mediated by an intervening variable.
    a. It is hypothesized that the relationship between the utilization of health and social services and housing stability will not be influenced by age, gender, education, income, marital status, or severity of psychiatric symptomatology.
3. To determine whether or not a relationship exists between housing stability and quality of life.
    a. It is hypothesized that a statistically significant inverse relationship exists between the following sets of variables: number of moves and overall quality of life, number of undesirable moves and overall quality of life, and number of nights homeless and overall quality of life.

Thus, it is expected that as housing stability increases, the overall quality of life score will increase.

4. To determine whether or not the relationships found between housing stability and quality of life is mediated by an intervening variable.
    a. It is hypothesized that the relationship between housing stability and quality of life will be affected by severity of psychiatric symptomatology, marital status, income, and education.
    b. It is hypothesized that the relationship between housing stability and quality of life will not be affected by age or gender.

5. To determine if the three measures of housing stability (i.e. number of moves, number of undesirable moves, and number of nights homeless) are measuring the same construct.
    a. It is hypothesized that number of moves, number of undesirable moves, and number of nights homeless measure different aspects of housing stability, and that no perfect correlations will exist between these three variables.

Sampling

Data was selected from the 900 interviews collected by the CURA between 2001 and 2003. Of the 900 interviews, only one interview per individual was selected for the current analysis. Only one interview per person was chosen, because the housing history form reports moves over the past two years. Therefore, if a participant had completed the interview more than once during this three-year time period, the data would be replicated in the analysis. Moreover, only the first interview completed by an individual was chosen for analysis in order to control for confounding due to repeated testing. Thus, all the data collected in 2001 was used, 153 interviews from 2002 were used, and 148 interviews from 2003 were used for the current analysis, for a total sample of 601 individuals.

Definitions and Measures

Demographic information

Demographic data regarding consumer/survivors' psychiatric diagnoses were recorded on the Demographic Questionnaire, developed for the purposes of the CURA (see Appendix A). A range of methods for obtaining psychiatric diagnoses can be found in the mental health literature. One study defined a mental health issue as an Axis I

diagnosis from the Diagnostic and Statistical Manual IV (DSM IV) or as a label given to a client following an interview with a psychiatrist (Tsemberis et al., 2004). Other studies have identified psychiatric diagnoses using previous outpatient mental health records (Mares et al., 2002) or self-report methods (Stuart & Arboleda-Florez, 2000).

Given that there is no single method employed by researchers to identify a sample of individuals with a mental health issue, for the purposes of the current analysis individuals identifying as consumers of mental health services for a minimum of one year were classified as having a mental health issue and indicated their psychiatric diagnosis by self-report. In situations where access to medical records was permitted and in which verbal consent to view the records was received from the participants, self-reported diagnoses were cross-referenced with medical records. Cross-referencing of diagnoses occurred primarily in emergency shelter settings and in Homes for Special Care, since both residential staff and client records were available on site. If the self-reported diagnosis did not match that noted on the medical record, the diagnosis listed on the medical record was used and the self-reported diagnosis was dismissed. Psychiatric consumer/survivors included in the study reported diagnoses of schizophrenia, mood disorders, anxiety disorders, unknown, and other.

Demographic data regarding gender, age, marital status, and highest level of education was also collected using the Demographic Questionnaire. Participants reported their sex as male or female and their age in years. Participants reported their marital status by choosing one of the following options: "single/never married", "separated/divorced", "widowed", "married/common law" or "other". Highest level of education was reported as having completed grade school, high school, or community

college/university. In addition, demographic information regarding level of income was collected using the Utilization of Hospital and Community Services Form (Modified from Browne et al., 1990), in which participants indicated their average monthly income in Canadian dollars.

Severity of psychiatric symptomatology

The Colorado Client Assessment Record (CCAR, Richard, Wilson, & Foster, 1984) was used to measure the psychiatric symptomatology of psychiatric consumer/survivors. Research interviewers assessed the overall degree of problem severity of the participants on a nine-point scale with five anchors. A score of one indicates that no problem is present; functioning is consistently average or better than what is typical for this person's age, sex, and subculture. A score of three indicates that the person has a slight problem. The slight problem may be intermittent or may persist at a low level and has little impact on the person's life. Also, a score of three is used when the problem is not urgent but may require therapeutic intervention in the future. A score of five indicates the presence of a moderate problem; a problem that may persist at a moderate level or become severe on occasion. Also, a moderate problem may be present in one or more domains of the person's life and does require therapeutic intervention. A score of seven indicates a severe problem. A score of seven is used when the problem is acute and severe or subacute but chronic. A severe problem extends across domains and is likely to involve other persons in interpersonal or social contexts. Moreover, a severe problem indicates that hospitalization or some other form of external control is often needed in addition to other therapeutic interventions. A score of nine indicates an extreme problem; behaviour or situation is out of control, unacceptable, and potentially life-

threatening. The extreme problem is immediate and the need to control is urgent. Lastly, a score of two, four, six, and eight are used when the problem severity falls between no problem and slight, slight and moderate, moderate and severe, and severe and extreme, respectively.

Utilization of health and social services

For the purposes of the current study, utilization of health and social services was defined as the frequency of contacts with a psychiatrist, social worker, occupational therapist, nurse, psychologist, peer supporter, or family doctor during the previous month. Similarly, the utilization of health and social services was also defined as the total duration of contact per month with the service providers listed above.

The Utilization of Hospital and Community Services Form was used to measure participants' utilization of health and social services. This form was modified from Browne, Arpin, Corey, Fitch, and Gafni (1990). Participants indicated whether or not they had had contact with a psychiatrist, social worker, occupational therapist, nurse, psychologist, peer supporter, and family doctor in the past month. If there had been contact, the number of visits was recorded. Also, the total length of contact (in minutes) with each health and social service provider was recorded.

Quality of life

For the purposes of this secondary analysis, quality of life was defined as the overall well-being of psychiatric consumer/survivors. The overall quality of life of individuals is commonly measured using the subjective response to a general question regarding life satisfaction. This operationalization of quality of life has been employed by

previous authors such as Anderson and Lewis (2000), Dixon, Goldberg, Lehman, and McNavy (2001), and Mares et al. (2002).

Quality of life was measured using the Brief Version of the Lehman Quality of Life Interview (QOLI-B, Lehman, Postrado, Roth, McNary, & Goldman, 1994). The QOLI-B was derived from the QOLI-Full Version (Lehman, 1988) and measures both objective and subjective quality of life. This 74-item interview schedule has been previously employed to assess the quality of life of individuals with mental health issues (e.g. Nelson, Hall, & Forchuk, 2003; Unger & Pardee, 2002). This instrument measures life conditions in the eight following domains: living situation, daily activities and functioning, family, social relations, finances, work and school, legal and safety issues, and health. The QOLI-B also provides a subjective global measure of life satisfaction, used in the current analysis. At the beginning and at the end of the interview participants were asked: "How do you feel about your life in general?" The preceding question was scored on a scale from 1 ("terrible") to 7 ("delighted"). The average global measure of quality of life was determined by calculating the mean of these two scores.

Housing stability

Stable housing has been previously defined as having one's own apartment, having a room in a supportive housing program, a boarding home, a long-term transitional housing program or a group home, or living long-term with a parent, family member or friend (Tsemberis et al., 2004). Similarly, stable housing has also been defined as living in a registered staff group or nursing home as well as both in supported and unsupported shared or independent housing (Killapsy, Ritchie, Greer, & Robertson, 2004).

Although there is a general consensus in the literature regarding a definition for stable housing, there is no common definition for housing stability. Housing stability has been previously operationalized as the proportion of time spent in stable housing. This method consists of dividing the number of days spent in stable housing by the total number of days of residency reported (Tsemberis et al., 2004). An alternate and more common definition of housing stability includes residing in stable housing and having experienced no moves during a defined period of time. However, the defined period of time over which no moves occurs varies across studies. For example, researchers have defined housing stability as having experienced no moves during the previous 12 months (Shinn et al., 1998) as well as no moves during the previous 60 days (Mares & Rosenheck, 2004).

Since previous literature does not indicate a common length of time during which no moves reflects housing stability, for the purposes of the current analysis housing stability was operationalized as a continuum. More specifically, housing stability was operationalized as the continuum of number of moves over the two-year time period prior to the interview. Thus, the underlying assumption is that as number of moves increases, housing stability decreases.

In addition, previous literature fails to recognize that some moves can be positive and beneficial to individuals. For example, an individual may move from a psychiatric inpatient facility, to a shelter in the community, to a transitional housing unit, to a supportive group living environment, and finally to an independent residence. For the purposes of the current analysis, the difference between number of moves and number of undesirable moves is an important distinction. Therefore, in addition to defining housing

stability as number of moves, housing stability was also defined as the number of undesirable moves over a two-year period. Thus, in the current study it was assumed that as the number of undesirable moves increases, housing stability decreases.

In addition to the continuum of number of moves and number of undesirable moves experienced by psychiatric consumer/survivors, the continuum of number of nights homeless was also used as a measure of housing stability. Persons with lived experiences of homelessness have been defined in various ways in the literature. Homelessness has been operationalized as street homelessness, living in temporary accommodations, and living in hostels and shelters (Killaspy et al., 2004). In addition, some authors have defined homeless individuals as those with no home who reside in shelters (Stuart & Arboleda-Florez, 2000). Other authors have defined persons with lived experiences of homelessness as those living on the streets, in public places or in shelter type accommodations (Tsemberis et al., 2004). Thus, no common definition of homelessness has been found in the literature.

In their review of the literature from the USA, Great Britain, Australia, and Canada, Ducq et al. (1997) reported that the lack of a consensual definition of homelessness has complicated results in this field of research. However, a common element throughout the abovementioned definitions of homelessness is that individuals with lived experiences of homelessness have spent nights in an emergency shelter or on the streets. Thus, for the purposes of the current study, a homeless night was defined as spending the night in a shelter type accommodation or on the streets.

Similar to the time constraint surrounding number of moves, housing stability with relation to homelessness has also been defined using time constraints. Poor housing

stability has been defined as living in shelters, outdoors, or in public or abandoned buildings for seven of the previous 14 days (Mares & Rosenheck, 2004). Alternatively, poor housing stability has previously been operationalized as being without housing for seven nights or more in the prior month, with no prospect of housing in the next month (Eynan et al., 2002). Therefore, no common time constraint of homelessness as a measure of housing stability has been found in the literature. Thus, for the purposes of the current analysis, in addition to the continuum of number of moves and number of undesirable moves, a continuum of nights spent homeless over the previous two years was also used as a scale of housing stability, the assumption being that as number of night homeless increases, housing stability decreases.

Housing stability was measured using a housing history form developed for the purposes of the CURA (see Appendix B). This housing history form has been cited in previous literature (Nelson et al., 2003). Participants reported all moves within the past two years, the type of living situation, and the length of time spent at each residence. Participants also indicated whether each move was a desired change, perceived as self-motivated, or an undesired change, perceived as being caused by external forces.

Variables

Housing stability is the intermediary variable. The three measures of this variable are at the ratio level. Housing stability was used as the dependent variable in correlation with the number and total duration of health and social service contacts, both ratio variables, and as the independent variable when correlated with quality of life, an interval variable.

The intervening variables in the current analysis were age, gender, income, education, marital status, and severity of psychiatric symptomatology. Age and income are ratio level variables, gender and marital status are nominal level variables, education is an ordinal level variable, and severity of psychiatric symptomatology is an interval variable.

Ethical considerations

Permission to use the CURA's data set for the current secondary analysis was granted by Cheryl Forchuk, the Academic Director of the CURA. Any identifying information pertaining to participants remained in the locked research office. However, a copy of the data set intended for statistical analyses was made and permission was granted for this information to leave the office, as it contains no identifying information.

Statistical analysis strategy

The following descriptive statistics related to individual characteristics of the sample were calculated: mean age, age range, gender distribution, distributions of various levels of education, mean income, income range, distributions of marital status, distribution of psychiatric diagnoses, and mean and range of severity of psychiatric symptomatology. In addition, the mean and range of the following variables were computed: number of moves, number of undesirable moves, number of nights homeless, overall quality of life, and number and total duration of contacts with psychiatrists, social workers, occupational therapist, nurses, psychologists, peer supporters, and family doctors. In order to ensure precision of descriptive statistics, outliers were removed from results with a large range and calculations of the mean and standard deviation were

repeated. Outliers were determined by multiplying the interquartile range by 1.5 to identify outer limits, and values beyond this range were removed.

Pearson correlation coefficient (r), designed to measure the strength of the relationship between two continuous variables, was used for the current analysis and a correlation matrix was created. The correlation coefficient between the number and total duration of contacts with psychiatrists, social workers, occupational therapists, nurses, psychologists, peer supporters, and family doctors and number of moves was determined. In addition, the correlation coefficient between the number and total duration of contacts with health and social service providers and the number of undesirable moves was determined. The correlation coefficient between the number and total duration of contacts with service providers and the number of nights homeless was also computed (see Table 1). Correlation analyses were also conducted to determine the relationships between the three measures of housing stability and the global quality of life rating (see Table 2). In addition, in order to test whether the three measures of housing stability are measuring the same construct, Pearson correlations were run between number of moves and number of undesirable moves, number of moves and number of nights homeless, and between number of nights homeless and number of undesirable moves. In order to ensure the accuracy of the significant correlational results, outliers and influential observations were removed and correlations were repeated. Outliers were removed by identifying standardized residuals greater than 3 or less than –3 and influential observations were removed by multiplying the mean leverage by 2 and omitting data that fell above this critical value.

In order to partial out the effects of potential intervening variables, partial correlations were performed. Partial correlations were computed to determine the impact of education, age, gender, marital status, income, and severity of psychiatric symptomatology on the relationship between the number and total duration of contacts with health and social service providers and the three measures of housing stability. Similarly, partial correlations were computed to determine the impact of the aforementioned intervening variables on the relationship between the measures of housing stability and the quality of life ratings. Statistical analyses were computed using SPSS Version 11.5.

Chapter 4: Results

Description of the Sample

Characteristics of the sample are described in Table 3. The mean age of the sample was 40 with a range from 15 to 78 years of age. Fifty three percent of the sample was male and 47 percent of the sample was female. Ninety five percent of the sample reported not having a partner at the time of interview. More specifically, 62% had never been married and 33% were separated, divorced, or widowed. Fifty-one percent of the sample reported that they had completed grade school, 34% had completed high school, and 13% had completed community college or university. The mean monthly income of the sample was 716.86 ± 414.75 $ CAN with a range from 0 to 4050.00 $ CAN.

Nearly three quarters of the sample had a primary diagnosis of schizophrenia (37.9%) or mood disorder (35.3%), with the remaining quarter reporting anxiety disorders, other, and unknown. The mean severity of psychiatric symptomatology was 4.05 ± 1.22, indicating slight to moderate problem severity, with a range of 1 ("no problem") to 7 ("severe problem"). In addition, the mean quality of life (N = 601) was 4.23 ± 1.60 ("neutral") with a minimum of 1 ("terrible") and a maximum of 7 ("delighted").

Indicators of housing stability among the sample are described in Table 4. The mean number of moves over the two years prior to the interview was 3.44 ± 8.73 with a range from 0 to 152. Removal of outliers resulted in a mean of 2.22 ± 2.24 with a range from 0 to 9 (n= 571). The mean number of undesirable moves was 1.46 ± 2.73 (range: 0 – 31), however removal of outliers modified the results to include a mean of 0.97 ± 1.25 undesirable moves with a range from 0 to 4 (n = 565). In addition, the mean number of

nights homeless was much higher than the mean number of moves and the range was much larger ($M = 71.01$, $SD = 162.41$, range: 0 – 728). However, removal of outliers resulted in a mean of 52.83 ± 31.09 nights homeless and narrowed the range from 17 to 126 ($n = 135$).

Table 5 describes the characteristics of the utilization of health and social services among the sample during the previous month. The number of contacts during the previous month with nurses was the greatest ($M = 2.21$, $SD = 7.60$), followed by contacts with social workers ($M = 1.62$, $SD = 4.10$). In contrast, the number of contacts was least with psychologists ($M = 0.10$, $SD = 0.53$), followed by occupational therapists ($M = 0.14$, $SD = 0.85$). The total duration of contact (in minutes) with health and social service providers over the past month was greatest with social workers ($M = 17.03$, $SD = 29.79$), followed by psychiatrists ($M = 14.28$, $SD = 26.28$) and family doctors ($M = 13.03$, $SD = 21.64$). Overall, the lowest total duration of contact reported was with psychologists (1.99 ± 10.54), followed by peer supporters ($M = 2.84$, $SD = 17.36$).

Tests of Hypotheses

Hypotheses one and two: Relationship between utilization of health and social services and housing stability.

The relationships between the measures of the utilization of health and social services and the measures of housing stability can be found in Table 6. It was hypothesized that as number of contacts with health and social service providers increased, housing stability would increase. The results, however, indicate no significant relationship between the number of contacts with psychiatrists, social workers, occupational therapists, nurses, psychologists, peer supporters, or family doctors and any

of the three measures of housing stability (i.e. number of moves, number of undesirable moves, or number of nights homeless during the previous two years). Furthermore, the absence of significant relationships was maintained when controlling for age, gender, education, income, marital status, or severity of psychiatric symptomatology. Thus, these results do not support the hypothesis, indicating no significant relationship between number of contacts with health and social services providers and housing stability.

It was further hypothesized that as total duration of contact with health and social service providers during the previous month increased, housing stability would increase. Results of correlational analyses indicate that no significant relationships were found between the total duration of contact with psychiatrists, occupational therapists, psychologists or peer supporters and any measure of housing stability (see Table 6). Moreover, these relationships continued to be non significant when controlling for each intervening variable.

Although no relationship was found between total duration of contact with a social worker and number of moves or number of undesirable moves, a significant very weak inverse relationship was found between total duration of contact with a social worker during the previous month and number of nights homeless during the previous two years, $r(599) = -.07$, $p = .045$ (see Figure 1a). This relationship was unaffected by each of the intervening variables, with the exception of gender, which resulted in a non significant relationship, $r(594) = -.06$, $p = .067$, *ns*. Moreover, the relationship between total duration of contact with a social worker and number of nights homeless became non significant when 26 outliers and 23 influential observations were removed from the analysis, $r(550) = -.004$, $p = .467$, *ns* (see Figure 1b).

In addition, a significant very weak relationship was found between number of moves and total duration of contact with nurses, $r(600) = .12, p = .002$ (see Figure 2a). However, no relationship was found between total duration of contact with a nurse and either number of undesirable moves or number of nights homeless. The relationships between duration of contact with nurses and the various measures of housing stability were unaffected when controlling for each of the intervening variables. Moreover, the weak direct relationship between total duration of contact with nurses and number of moves was inverted when the seven outliers and eight influential observations were removed, $r(585) = -.11, p = .006$ (see Figure 2b), however the relationship remained very weak.

Finally, a very weak relationship was observed between total duration of contact with family doctors and number of moves, $r(600) = .09, p = .012$ (see Figure 3a), as well as between total duration of contact with family doctors and number of undesirable moves, $r(600) = .08, p = .023$ (see Figure 4a). These relationships were unchanged when controlling for each of the intervening variables. More importantly, the relationships between total duration of contact with family doctors and number of moves over the past two years was non significant when the 4 outliers and 34 influential observations were removed from the analysis, $r(561) = .006, p = .448$, *ns* (see Figures 3b). Similarly, the relationship between total duration of contact with family doctors and number of moves during the previous two years was also non significant when the 8 outliers and 34 influential observations were removed from the analysis, $r(558) = -.27, p = .261$, *ns* (see Figure 4b). The lack of strong significant relationships between total duration of contact with health and social service providers and measures of housing stability does not

support the proposed hypotheses. Thus, no strong significant relationships were found between measures of the utilization of health and social services and measures of housing stability.

Hypotheses three and four: Relationship between housing stability of quality of life.

It was hypothesized that as housing stability increased quality of life would increase. Results of correlational analyses indicate a statistically significant weak inverse relationship between number of moves and quality of life, $r(600) = -.14, p = .151^{-3}$, number of undesirable moves and quality of life, $r(600) = -.20, p = .289^{-6}$, and number of nights homeless and quality of life, $r(600) = -.15, p = .910^{-4}$ (see Table 7). In addition, removal of outliers and influential observations did not change the correlation coefficients to a large degree. Therefore, an increase in number of moves, number of undesirable moves, and number of nights homeless, all measures of decreasing housing stability, are significantly related to a weak decrease in quality of life. Thus, the results provide weak support for the proposed hypothesis. However, it is important to note that these results must be interpreted with caution, as skewed distributions were observed using raw data and logarithm transformations of number of moves (see Figures 5a & 5b, respectively), number of undesirable moves (see Figures 6a & 6b, respectively), and number of nights homeless (see Figures 7a & 7b, respectively).

Further, partial correlations reveal that the relationship between housing stability and quality of life remained unchanged when controlling for each of the following intervening variables: age, gender, income, marital status, education, and severity of psychiatric symptoms (see Table 7). Thus, the results did not support the hypothesis that

severity of psychiatric symptomatology, marital status, income, or education affects the relationship between housing stability and quality of life. However, as was predicted, age and gender did not affect the relationship between housing stability and quality of life.

Hypothesis five: Relationship between three measures of housing stability.

Finally, it was hypothesized that number of moves, number of undesirable moves, and number of nights homeless measure different aspects of housing stability. For results of this analysis see Table 8. A statistically significant strong positive relationship was found between number of moves and number of undesirable moves, $r(600) = .66, p = .692^{-76}$. In addition, a statistically significant weak relationship was found between number of moves and number of nights homeless, $r(600) = .19, p = .251^{-5}$, and between number of undesirable moves and number of nights homeless, $r(600) = .25, p = .135^{-9}$. Removal of 7 outliers and 23 influential observations resulted in a strong positive relationship between number of moves and number of undesirable moves, $r(570) = .67, p = .199^{-75}$. Removal of 7 outliers and 44 influential observations revealed a moderate positive relationship between number of moves and number of nights homeless, $r(549) = .47, p = .771^{-31}$, and removal of 7 outliers and 41 influential observations revealed a weak positive relationship between number of undesirable moves and number of nights homeless, $r(552) = .33, p = .119^{-14}$. The lack of perfect correlations between these three measures of housing stability supports the proposed hypothesis and indicates that number of moves, number of undesirable moves, and numbers of nights homeless do not measure the same aspects of housing stability.

Chapter 5: Discussion

The final chapter includes a discussion of the findings, limitations and implications for future research, and conclusions and implications for social work regarding the relationships between the utilization of health and social services and housing stability, between housing stability and quality of life, and amongst the three measures of housing stability. This examination is followed by concluding remarks.

Utilization of Health and Social Services and Housing Stability

Findings

In the current analysis, it was hypothesized that increased utilization of health and social services would be directly related to an improvement in housing stability reported by psychiatric consumer/survivors. The results, however, do not strongly support this hypothesis. With the exception of a weak relationship between housing stability and total duration of contact with nurses, neither number of contacts nor total duration of contact with psychiatrists, social workers, occupational therapists, psychologists, family doctors, or peer supporters were significantly associated with any of the three measures of housing stability. These relationships continued to be non significant when controlling for potential intervening variables.

Although previous research has shown that the utilization of assertive community treatment (ACT) team services, which include services provided by psychiatrists, social workers, occupational therapists, nurses, and psychologists, increases housing stability for psychiatric consumer/survivors (Bond et al., 2001; Lehman et al., 1997), the current research does not strongly support a relationship between the general utilization of

hospital and community health and social services and housing stability. However, these findings may have been influenced by the limitations of the current analysis.

Limitations and implications for future research

The lack of overwhelming evidence in support of a relationship between housing stability and the utilization of health and social services may have been limited by the comparison of housing stability over a two-year period with the utilization of health and social services over a one-month period. This comparison was made in the current secondary analysis due to the nature of the data that had previously been collected. Moreover, there was an assumption made that number of contacts with health and social service providers over a one-month period would be representative of overall usage of services, and that utilization would vary little from month to month. However, it is recommended that future research focus on the relationship between housing stability and the utilization of health and social services over a comparable time period, in order to validate the findings of the current study.

In addition, the current analysis may have been limited by focusing solely on the number and total duration of contact with health and social service providers. Considerable research supports the hypothesis that it is the quality of the therapeutic alliance that is most important to the practice of many health and social service professionals (Coady, 1993; Peplau, 1997), including those who work on ACT teams. Moreover, ACT teams emphasize relationship building (Government of Ontario, 1999), which is key in the formation of a quality therapeutic alliance. Thus, perhaps more attention needs to be paid to the quality of the therapeutic alliance, rather than number and total duration of contacts with general health and social service professionals.

Previous studies have begun to investigate the effects of the quality of the therapeutic alliance in housing stability research. For example, studies regarding the housing outcomes of the ACT program have shown that stronger alliances with case managers resulted in greater levels of functioning, fewer psychiatric symptoms (Goering et al., 1997), and reduced risk of homelessness (Clarke et al., 2000). Although, these studies demonstrated the importance of the quality of the therapeutic alliance for psychiatric consumer/survivors, there is a gap in the literature regarding the direct relationship between the quality of the therapeutic alliance and housing stability. As the current study focused only the number and total duration of contact with health and social service providers, it is suggested that future research investigate the relationship between the quality of the therapeutic alliance between psychiatric consumer/survivors and psychiatrists, social workers, occupational therapists, nurses, psychologists, family doctors, and peer supporters and a continuum of housing stability.

Similarly, the exclusive focus on number and total duration of contacts with health and social service providers may have limited the results of the current analysis, as previous research has identified other potential contributing factors. Tsemberis et al. (2004) reported that homeless psychiatric consumer/survivors assigned to a Housing First model of support experienced increased housing stability as compared to individuals assigned to a Continuum of Care model. Although both groups received services from health and social service providers, only the Housing First group received services from an ACT team. Although the specific services provided by ACT might have contributed to the effect observed in housing stability, it is important to note that the Housing First model also included an empowerment perspective, which focused on allowing the clients

to define their own needs and assert control of their personal life circumstances. The increase in housing stability may be a result of the increased sense of empowerment instilled in psychiatric consumer/survivors by ACT team members. Thus, future research may endeavour to address this issue, directly studying the effects of sense of empowerment facilitated by helping professionals on housing stability among psychiatric consumer/survivors.

Finally, the current study focused solely on psychiatric consumer/survivors in London, Ontario and surrounding areas, limiting the generalizability of the findings to the larger Canadian context. Thus, it is recommended that future research endeavours similar to the current analysis collect data from other regions across Canada.

Conclusion and implications for social work

The current study supplemented previous research on the relationship between housing stability and the utilization of assertive community treatment services by analyzing the relationship between housing stability and the general utilization of health and social services. The findings revealed that housing stability was not overwhelmingly related to the number and total duration of contact with health and social service providers. Therefore, identifying the specific aspects of professional help that facilitate housing stability would enable practitioners to implement best practices when working with mental health consumers.

This result highlights the need for further research regarding the effects of health and social service provision on housing stability, in order to inform the practice of professionals working with psychiatric consumer/survivors. More specifically, in depth knowledge of the nature of the relationship between the utilization of services and

housing stability would allow social workers employed in shelters and psychiatric hospital settings to more effectively meet the housing needs of their clients.

The quality of the therapeutic alliance and the sense of empowerment instilled in clients by helping professionals, suggested as areas fur future research, would relate directly to the practice of social workers in shelter and hospital settings. Coady (1993) emphasised the importance of the quality of the therapeutic alliance in social work practice. Similarly, empowerment, the belief in basic human potential and the ability to assist clients to assume control of their lives, is a key element of social work practice (Kruger, 2000) and an essential counselling skill (Shebib, 2003). Empowerment is closely related to the strengths-based perspective (Woods & Hollis, 2000), a collaborative approach that assumes and capitalizes on client competencies (Saleeby, 2002), used in social work. Since quality of the therapeutic relationship and empowerment are widely used by social workers, and previous studies suggest that a relationship may be present, further research into the effects of these social work skills on housing stability among psychiatric consumer/survivors is warranted. Thus, the results of the current analysis further highlight the pressing need for greater research in this area in order to improve outcomes of social work practice with psychiatric consumer/survivors.

Housing Stability and Quality of Life

Findings

The results of the current analysis indicate that on average psychiatric consumer/ survivors rated their overall quality of life as neutral. These findings are similar to those of Mares and Rosenheck (2004), which indicated that the average overall quality of life reported by 5325 individuals with severe mental health issues ranged from neutral to

mostly satisfied. In addition, Mares et al. (2002) reported the overall quality of life of 164 veterans with severe mental health issues as mostly satisfied, deviating only slightly from the neutral response found in the current study.

In the current analysis it was hypothesized that housing stability would be directly related to quality of life. The findings supported this hypothesis, indicating that an increase in housing stability was associated with an increase in the quality of life score reported by psychiatric consumer/survivors. Previous research has demonstrated that quality of life increases as the size and restrictiveness of the current type of housing decrease (Lehman, 1991; Mares et al., 2002; Mares & Rosenkeck, 2004). For example, researchers have reported that quality of life is the lowest for homeless individuals, followed by those in hospital and those in group living environments, with those living independently reporting the greatest quality of life. However, previous literature focuses only on current type of housing and fails to address the relationship between quality of life and a continuum of housing stability. Thus, the current analysis enabled a primary look at the relationship between housing stability along a continuum and the quality of life of psychiatric consumer/survivors.

In addition, the relationship observed between housing stability and quality of life was maintained when controlling for age, gender, income, education, marital status, and psychiatric symptomatology. The current findings contradict those of Mares et al. (2002), Stuart and Arboleda-Florez (2000), and Wilton (2004) who found that the variance in quality of life was affected by psychopathology, education and marital status, and income, respectively, and support the validity of the relationship observed between quality of life and housing stability.

Limitations and implications for future research

A limitation of the current analysis may have been the failure to include formal social supports (i.e. total number of contacts and total duration of contact with all health and social service providers during the previous month) as one of the hypothesized intervening variables in the relationship between quality of life and housing stability. However, this additional partial correlation was computed following the completion of all other statistical analyses, revealing no change to the relationship between housing stability and quality of life (see Table 9).

Additional limitations which exceed the realm of the current analysis include the failure to control for informal social supports and for characteristics of formal social supports such as continuity of and satisfaction with professional care. A German study by Rössler et al. (1999), in which the quality of life, mental state, sociodemographic information, social support, and illness concepts of 96 individuals with schizophrenia were collected, indicated that informal social support is a significant predictor of quality of life. Furthermore, Lasalvia et al. (2005) reported that in their sample of 188 Italian psychiatric consumer/survivors, as unmet social needs decreased, overall quality of life increased. Therefore, it is recommended that future research regarding housing stability and quality of life partial out the effects of informal social support, in order to further validate the current findings.

Moreover, the relationship between quality of life and housing stability may have been mediated by the characteristics of the provision of formal social supports. For example, Adair et al. (2005) completed a Canadian study in which they investigated the relationship between continuity of care and quality of life. The authors reported that

continuity of care was significantly related to increased quality of life. In addition, Eklund and Bäckström (2005) investigated the predictors of quality of life experienced by 134 psychiatric consumer/survivors through developing and testing a multifactorial model. The results indicated that satisfaction with care contributed to the variance in general quality of life. Thus, future research might focus on investigating whether or not the relationship between the continuum of housing stability and quality of life is maintained when controlling for informal social support as well as satisfaction with and continuity of formal social support.

In addition, it is important to note that although the use of a continuum of housing stability offered a deeper understanding of the housing situation experienced by consumer/survivors and removed the various categorizations typically used in previous research regarding housing stability, the three measures of housing stability used in the current study were not found to be normally distributed, a further limitation. The raw data and logarithm transformations revealed skewed data, which may have contributed to the weak relationships observed. Also, the skewedness of the data limits the interpretation of the results, and cautions the reader to carefully interpret the relationship found between the continuum of housing stability and quality of life. However, the current study offers hope that housing stability may be related to quality of life for psychiatric consumer/survivors and supports future endeavours to further investigate this relationship.

The study was also limited by its cross-sectional design and correlational statistical strategy. A longitudinal analysis of the relationship between housing stability and quality of life for psychiatric consumer/survivors might provide greater insight into

the current findings. Also, it is important to note that the current analysis investigated correlates of housing stability and did not endeavour to analyse causality between the variables measured.

Conclusion and implications for social work

The current analysis demonstrates a relationship between the continuums of housing stability and quality of life. Although this relationship was found to be weak, it is the first relationship to be observed between a continuum of housing stability and quality of life among psychiatric consumer/survivors. Knowledge of the relationship between quality of life and housing stability is valuable to the social work profession because improving quality of life is consistent with social work values (Felton, 2005) and is a key outcome in assessing effectiveness of social work practice (Berkman & Maramaldi, 2001). Moreover, the relationship between housing stability and quality of life informs the practice of social work in shelters and psychiatric hospitals, where social workers typically facilitate the process of attaining housing and provide follow-up appointments to assure that housing is maintained.

Measures of Housing Stability

Findings

Housing stability was operationally defined in the current study as number of moves, number of undesirable moves, and number of nights homeless over the two-year period prior to interview. These three measures, which provide continuums of housing stability, were chosen because previous research does not specify a common definition of housing stability with regard to number of moves (Goering et al., 1997; Mares & Rosenheck, 2004; Shinn et al. 1998) or the experience of homelessness (Eynan et al.,

2002; Mares & Rosenheck, 2004). It was hypothesized that the three measures of housing stability would represent different aspects of housing stability, and the results of the current study support this hypothesis. Although there was some degree of relationship between these three measures, none of the measures were perfectly correlated to each other and thus do not all reflect the same construct of housing stability.

This is the first study to utilize, analyze, and compare a variety of continuums of housing stability extending over a two-year period. The use of continuums is a strength of the current analysis, as it expands on previous research and deemphasizes the categorization previously employed, allowing for a greater depth of understanding of the housing situation experienced by psychiatric consumer/survivors.

Limitations and implications for housing stability research

Although the use of continuums is a major strength of the current analysis, it also served to limit the interpretation of the findings, as all three measures of housing stability were not found to be normally distributed, resulting in skewed data. Although the skew in the data limits the interpretation of the findings, it does not eliminate the importance of the correlation of these measures; rather it warrants further research to determine if these continuous variables consistently reveal skewed data.

Although the measures of housing stability were not normally distributed, the results of the current analysis have implications for housing stability research. Number of undesirable moves was chosen as one of the three chosen measures of housing stability, as there is a gap in the literature regarding the desirability of moves among psychiatric consumer/survivors. Moreover, the current study revealed that number of undesirable moves represents a different aspect of housing stability, as compared to number of moves

and number of nights homeless. Therefore, the current study revealed an aspect of housing stability that was untapped by previous researchers. Moreover, the results of the current analysis reveal that the relationships between number of undesirable moves and quality of life was slightly stronger than the relationships observed between both the number of moves and of nights homeless and quality of life. Thus, past research that has focused simply of number of moves may have unintentionally minimized the positive impact of desired moves.

For example, based on the utilization of number of moves as an indication of housing stability, an individual reporting having willingly moved from the streets, to shelter, to transitional housing, to group supported living, and finally to independent living would be interpreted as having experienced lesser housing stability as compared to an individual reporting an undesirable move from stable housing to shelter. However, taking into consideration the desirability of the moves would result in the opposite conclusion. Regardless of how researchers and health and social service professionals interpret the meaning of moves for psychiatric consumer / survivors, only the personal perspective of these individuals regarding their moves can provide researchers with accurate insight into the effects of housing stability on various outcome measures.

Thus, the results of the current analysis and the abovementioned example emphasize the important distinction between number of moves and desirability of moves in the interpretation of measures of housing stability, and demonstrate the potential value of focusing future research on further investigating the desirability of moves in the context of housing stability research. In addition, future housing stability research might focus on adding a qualitative component to quantitative assessment of housing stability in

order to gain a greater understanding of the meaning of moves to psychiatric consumer / survivors.

Conclusion and implications for social work

The current analysis complements previous literature on housing stability, operationally defining housing stability along three continuums and highlighting the importance of taking into consideration the desirability of moves in housing stability research. Moreover, the desirability of moves is an important aspect of housing stability that is relevant to helping professionals, especially social workers, as it pertains to psychiatric consumer/survivors' perceived sense of control and empowerment. In addition, the finding of the importance of desirability of moves informs the practice of social workers in psychiatric hospital and shelter settings, as it supports the inclusion of clients in the discharge planning process.

Conclusion

The current study revealed a significant relationship between housing stability and quality of life. In concert with the increase in deinstitutionalization, decrease in affordable housing, increase in shelter use, and physical health risks associated with homelessness, the relationship between housing stability and quality of life in the current analysis emphasizes the need to investigate the factors that might serve to maintain stable housing among psychiatric consumer/survivors. Although a significant relationship between the number and total duration of contacts with helping professionals and housing stability was not observed, additional research regarding which aspects of the helping relationship are associated with housing stability among psychiatric consumer/survivors is warranted. In addition, the three measures of housing stability, representing

continuums rather than groupings, were found to be measuring different aspects of the housing stability construct, highlighting the importance of the desirability of moves and suggesting future directions for housing stability research. In sum, the current study highlights the need for further research regarding the correlates of housing stability, in order to decrease the incidence of homelessness and improve social work practice, with the ultimate goal of adequately meeting housing needs and improving the quality of life of psychiatric consumer/survivors.

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Appendix A

File ___

Demographic Questionnaire

Code: CURA _ _ _ _ _ _ _ _

Date: _____, 20___

Sex: Female (1) ____ Male (2) ____

Age: (years) _____

Marital Status:

Single/Never Married	(1) ____
Separated/Divorced	(2) ____
Widowed	(3) ____
Married/Common Law	(4) ____
Other: _____	(5) ____

Highest Level of Education:

Grade School	(1) ____
High School	(2) ____
Community College/University	(3) ____

Psychiatric Diagnosis: _____

Current Medication:

Name	Dosage, Route, Frequency

Age at first contact with mental health system: ____ Years

Age at first Psychiatric hospitalization: ____ Years

Duration of most recent hospitalization: ____ Weeks

Estimated total number of psychiatric hospitalizations: ____

Appendix B

File ___

Housing History Form

Participant Code: CURA _____ Year: ____ Page # ____

Type of Residence (describe and code using categories on the next page)	Length of Time	Chronology (1 being most recent)	Reason for Move (describe and code using categories on the next page)	Housing Satisfaction Scale (delighted/terrible scale)

Summary:

How many undesirable moves have you had in the last 5 years? _____

Appendix B *(continued)*

Housing History Definitions

Type of Living Situation

1. Group home (permanent) – Level I (24 hour support)
2. Group home (permanent) – Level II (daily support)
3. Group home (permanent) – Level III (weekly support)
4. Group home (permanent) – (less than weekly but more than monthly support)
5. Group home (permanent) – (less than monthly but more than annually)
6. Apartment (permanent) – Level I (24 hour support)
7. Apartment (permanent) – Level II (daily support)
8. Apartment (permanent) – Level III (weekly)
9. Apartment (permanent) – (less than weekly but more than monthly support)
10. Apartment (permanent) – (less than monthly but more than annually)
11. Halfway house (transitional) - Level I (24 hour support)
12. Halfway house (transitional) - Level II (daily support)
13. Halfway house (transitional) - Level III (weekly support)
14. Halfway house (transitional) - (less than weekly but more than monthly support)
15. Halfway house (transitional) – (less than monthly but more than annually)
16. Apartment (transitional) – Level I (24 hour support)
17. Apartment (transitional) – Level II (daily support)
18. Apartment (transitional) – Level III (weekly support)
19. Apartment (transitional) – (less than weekly but more than monthly support)
20. Apartment (transitional) – (less than monthly but more than annually)
21. Private apartment or house
22. Social/Public apartment or house.
23. Unregulated rooming house (no meals provided)
24. Unregulated room-and-board (includes meals, no program or supervision)
25. Unregulated room-and-board (includes meals and supervision)
26. Home for Special Care
27. Parent's home

Appendix B *(continued)*

28. Foster family
29. Hostel – Emergency
30. Hostel – Transitional
31. Hostel – Long term
32. Psychiatric hospital psychiatric unit
33. General hospital psychiatric unit
34. General hospital non-psychiatric unit
35. Jail or prison
36. Nursing home/Long term care home
37. Residential treatment home
38. Group independent living
39. Congregate model (apartment with shared social space and meals provided)
40. Hotel
41. Other (specify_____)

Reasons for move:

1) internally controlled – desired change, perceived as self-motivated

2) externally controlled – not a desired change, perceived as being caused by external forces

Table 1

Description of Variables Included in Correlation Analysis #1

Independent variable	Dependent variable
Utilization of health and social services - Number of contacts with a psychiatrist, social worker, occupational therapist, nurse, psychologist, peer supporter, or family doctor during the previous month. - Total duration of contact with a psychiatrist, social worker, occupational therapist, nurse, psychologist, peer supporter, or family doctor during the previous month.	Housing stability - Number of moves during the previous two-year period. - Number of undesirable moves during the previous two-year period. - Number of nights homeless during the previous two-year period.

Table 2

Description of Variables Included in Correlation Analysis #2

Independent variable	Dependent variable
Housing stability - Number of moves during the previous two year period. - Number of undesirable moves during the previous two-year period. - Number of nights homeless during the previous two-year period.	Quality of life - Overall well being of psychiatric consumer / survivors on a scale from 1 ("terrible") to 7 ("delighted").

Table 3

Descriptive Characteristics of the Sample

Characteristic	*N*	*M*	*SD*	Minimum	Maximum
Age	599	40.23	13.33	15	78
Severity of psych. symptoms	600	4.05	1.22	1	7
Monthly income (CAN$)	601	716.86	414.75	0	4050.00

		Frequency	Percent
Sex	Male	316	52.6
	Female	285	47.4
Marital status	Single / never married	373	62.1
	Separated/divorced	174	29.0
	Widowed	24	4.0
	Married/common law	28	4.7
	Other	2	0.3
Education	Grade school	304	50.6
	High school	206	34.3
	College/university	76	12.6
	Other/missing	15	2.5
Psychiatric diagnosis	Mood disorders	212	35.3
	Anxiety disorders	58	9.7
	Schizophrenia	228	37.9
	Other	39	6.5
	Unknown/missing	64	10.6

Table 4

Housing Stability During the Previous Two Years

Characteristic	*N*	*M*	*SD*	Minimum	Maximum
	Raw data				
Number of moves	601	3.44	8.73	0	152
Number of undesirable moves	601	1.46	2.73	0	31
Number of nights homeless	601	71.01	162.41	0	728
	Outliers removed				
Number of moves	571	2.22	2.24	0	9
Number of undesirable moves	565	0.97	1.25	0	4
Number of nights homeless	135	52.83	31.09	17	126

Table 5

Number and Length of Contacts with Health and Social Service Providers During the Previous Month

Health and social service provider	*N*	*M*	*SD*	Minimum	Maximum
	Number of contacts				
Psychiatrist	601	0.68	1.65	0	30
Social worker	600	1.62	4.10	0	30
Occupational therapist	601	0.14	0.85	0	10
Nurse	601	2.21	7.60	0	90
Psychologist	601	0.10	0.53	0	5
Peer supporter	600	0.28	2.43	0	40
Family doctor	601	0.82	1.17	0	10
	Total duration of contacts (minutes)				
Psychiatrist	600	14.28	26.28	0	240
Social worker	600	17.03	29.79	0	240
Occupational therapist	601	3.66	22.72	0	360
Nurse	601	9.57	46.18	0	720
Psychologist	601	1.99	10.54	0	120
Peer supporter	600	2.84	17.36	0	240
Family doctor	601	13.03	21.64	0	240

Table 6

Correlations Between the Utilization of Health and Social Services and Housing Stability

Health and social service provider	Housing stability (previous two years)		
	Number of moves	Number of undesirable moves	# of nights homeless
	Number of contacts		
Psychiatrist	.00	.03	.01
Social worker	-.01[a]	.02[a]	.00[a]
Occupational therapist	-.01	-.02	-.04
Nurse	.01	.03	.05
Psychologist	-.03	-.05	.05
Peer supporter	-.02[a]	-.03[a]	.00[a]
Family doctor	.01	-.00	-.01
	Total duration of contacts (minutes)		
Psychiatrist	.03[a]	.00[a]	.05[a]
Social worker	.00[a]	.02[a]	-.07[a]*
Occupational therapist	-.01	-.02	-.04
Nurse	.12**	.00	-.04
Psychologist	-.03	-.04	.03
Peer supporter	-.03[a]	-.05[a]	.01[a]
Family doctor	.09*	.08*	.04

[a] $N = 600$. $^{**}p < .01$. $^{*}p < .05$.

Table 7

Correlations Between Housing Stability and Quality of Life

Housing stability (previous two years)	Quality of life					
	Pearson	1	2	3	4	5	6
Number of moves	-.14**	-.14**	-.12*	-.14**	-.13*	-.14**	-.13*
Number of undesirable moves	-.20**	-.20**	-.18**	-.21**	-.18**	-.20**	-.20**
Number of nights homeless	-.15**	-.15**	-.12*	-.14**	-.15**	-.15**	-.14**

Note: 1 = controlling for gender; 2 = controlling for income; 3 = controlling for severity of psychiatric symptomatology; 4 = controlling for age; 5 = controlling for marital status; 6 = controlling for education.

*$p < .01$. **$p < .001$.

Table 8

Intercorrelations Between Three Measures of Housing Stability

Housing stability (previous two years)	1	2	3
	Raw data ($N = 601$)		
1. Number of moves	—	.66*	.19*
2. Number of undesirable moves		—	.25*
3. Number of nights homeless			—
	Outliers and influential variables removed		
1. Number of moves	—	.67*	.47*
		($n = 571$)	($n = 550$)
2. Number of undesirable moves		—	.33*
			($n = 553$)
3. Number of nights homeless			—

*$p < .001$.

Table 9

Relationship Between Quality of Life and Measures of Housing Stability Controlling for Formal Social Supports.

Quality of life	Housing stability (previous two years)		
	Number of moves	Number of undesirable moves	# of nights homeless
Pearson r	-.14*	-.20*	-.15*
Controlling for total number of contacts with health and social service providers	-.14*	-.20*	-.14*
Controlling for total duration of contact with health and social service providers	-.14*	-.20*	-.15*

*p <.001.

Figure Captions

Figure 1a. Inverse relationship between total duration of contact with social workers during the previous month and number of nights homeless during the previous two years using raw data.

Figure 1b. Scatterplot of total duration of contact with social workers during the previous month and number of nights homeless during the previous two years with outliers removed.

Figure 2a. Direct relationship between total duration of contact with nurses during the previous month and number of moves during the previous two years using raw data.

Figure 2b. Inverse relationship between total duration of contact with nurses during the previous month and number of moves during the previous two years with outliers removed.

Figure 3a. Direct relationship between total duration of contact with family doctors during the previous month and number of moves during the previous two years using raw data

Figure 3b. Scatterplot of total duration of contact with family doctors during the previous month and number of moves during the previous two years with outliers and influential observations removed.

Figure 4a. Direct relationship between total duration of contact with family doctors during the previous month and number of undesirable moves during the previous two years using raw data.

Figure 4b. Scatterplot of total duration of contact with family doctors during the previous month and number of undesirable moves during the previous two years with outliers and influential observations removed.

Figure 5a. Histograms of number of moves during the previous two years using raw data.

Figure 5b. Histograms of number of moves during the previous two years using the logarithm transformation.

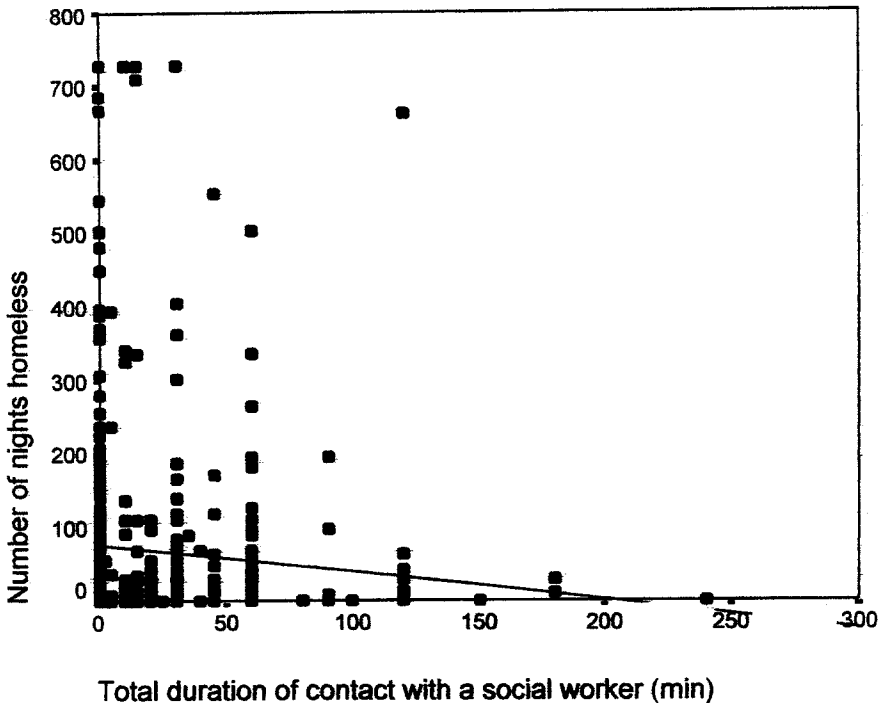
Figure 6a. Histograms of number of undesirable moves during the previous two years using raw data.

Figure 6b. Histograms of number of undesirable moves during the previous two years using the logarithm transformation.

Figure 7a. Histograms of number of nights homeless during the previous two years using raw data.

Figure 7b. Histograms of number of nights homeless during the previous two years using the logarithm transformation.

Figure 1a.



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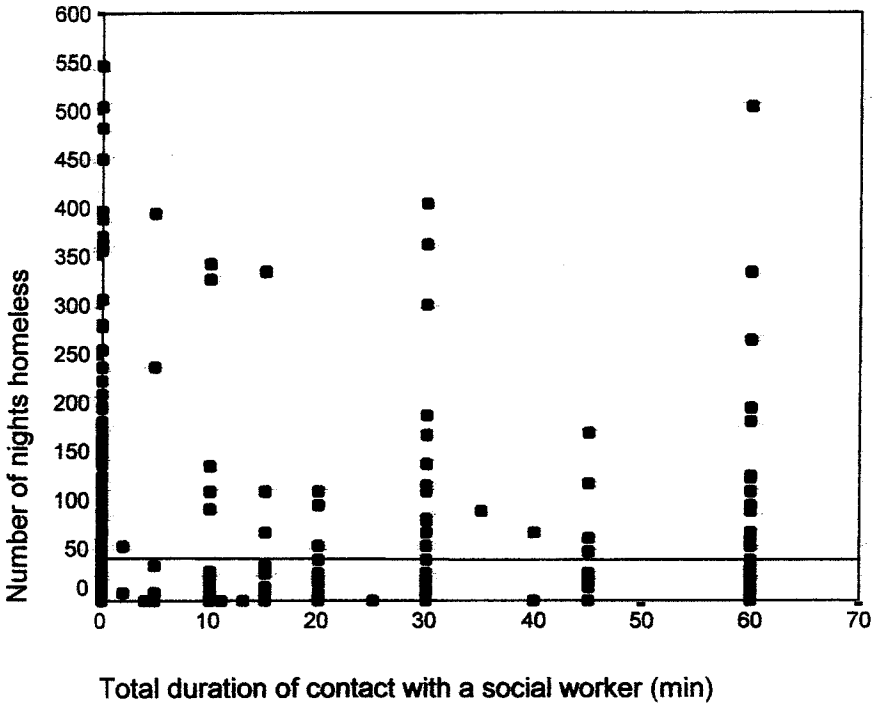

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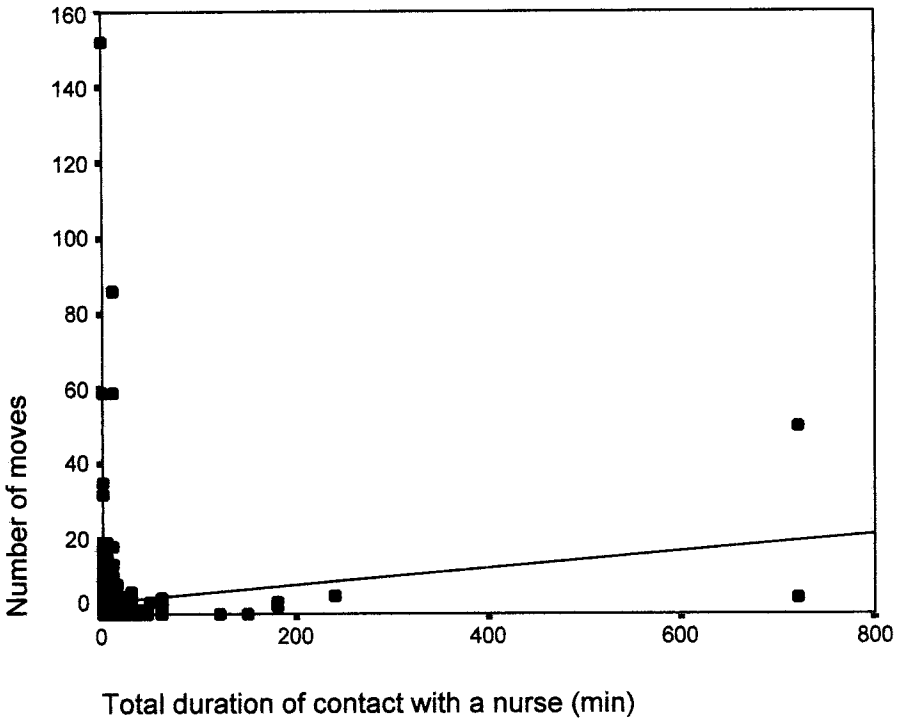

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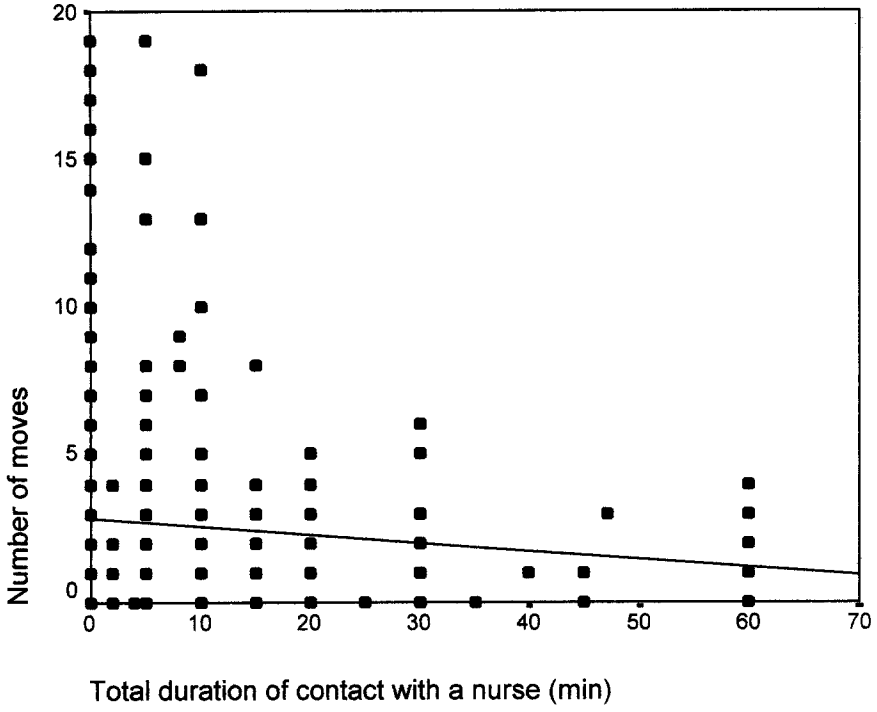

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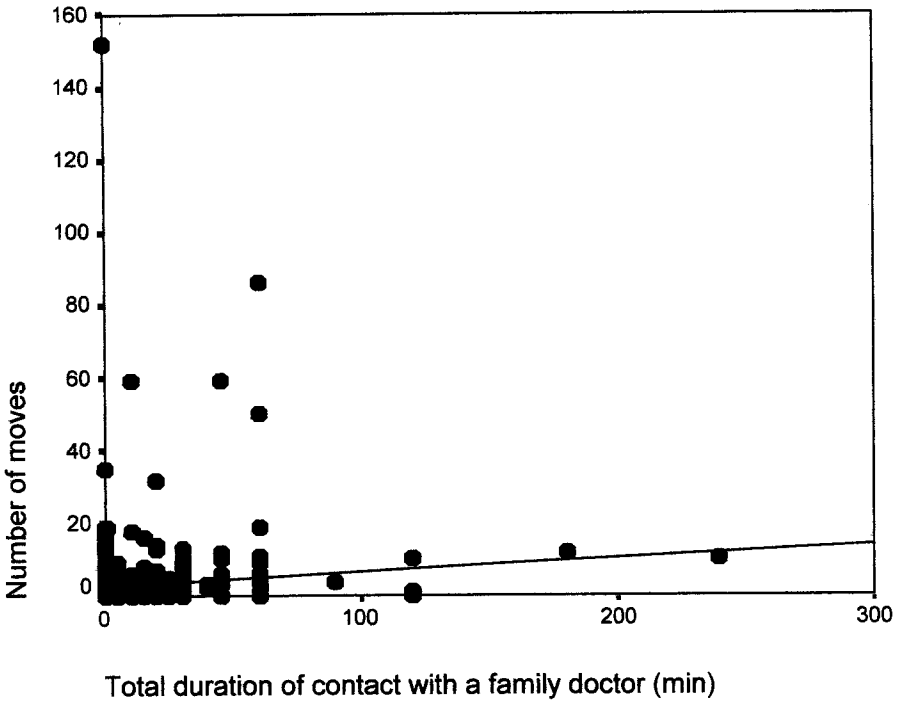

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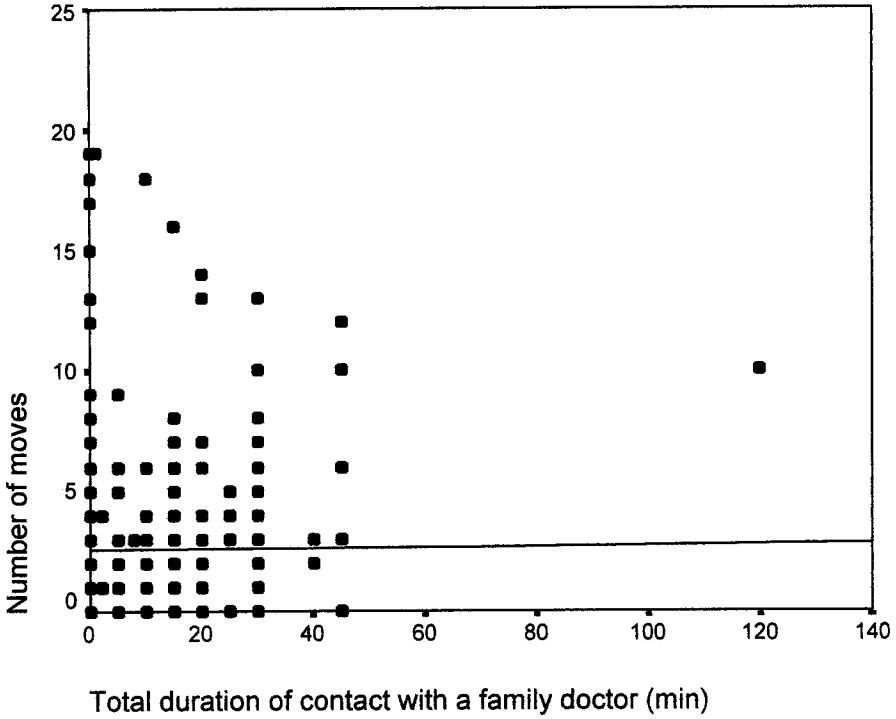

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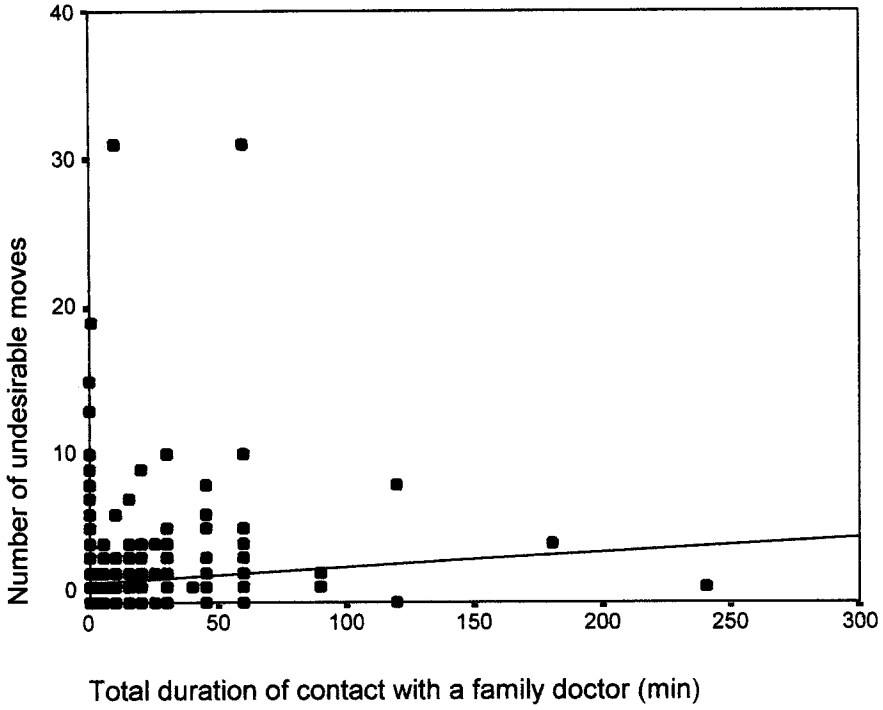

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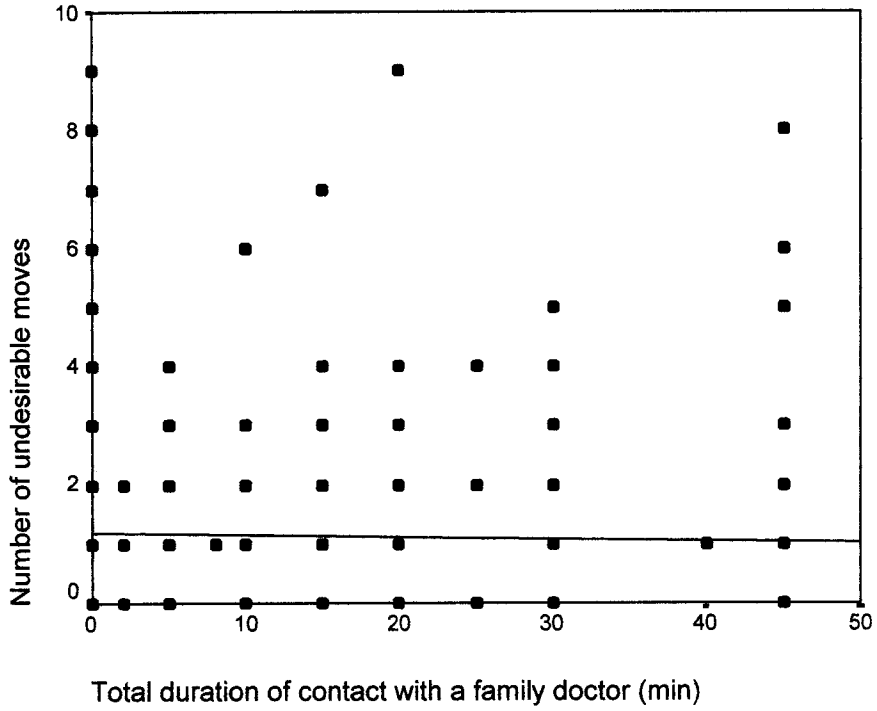

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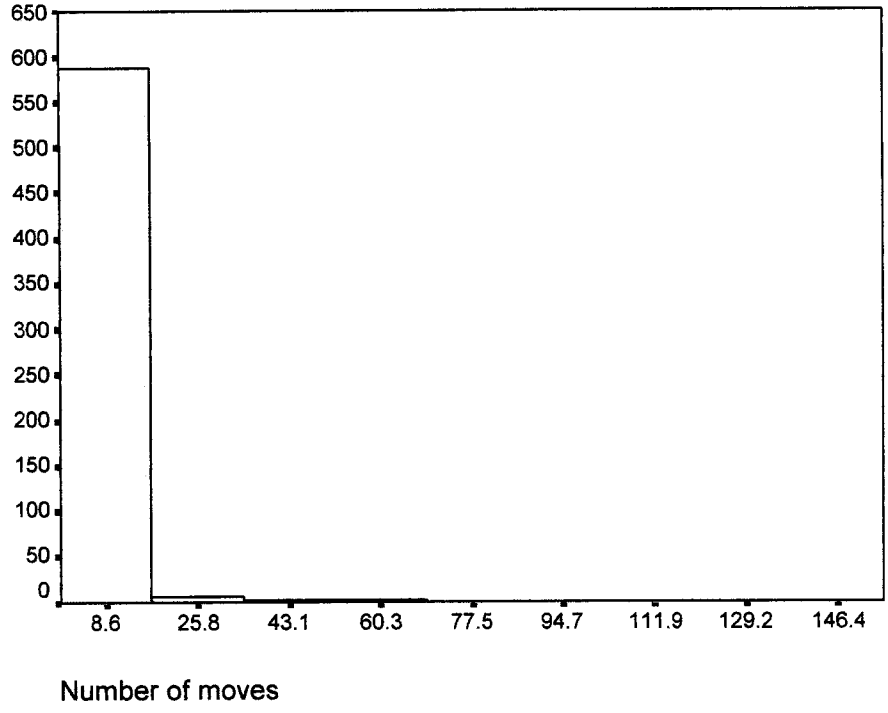

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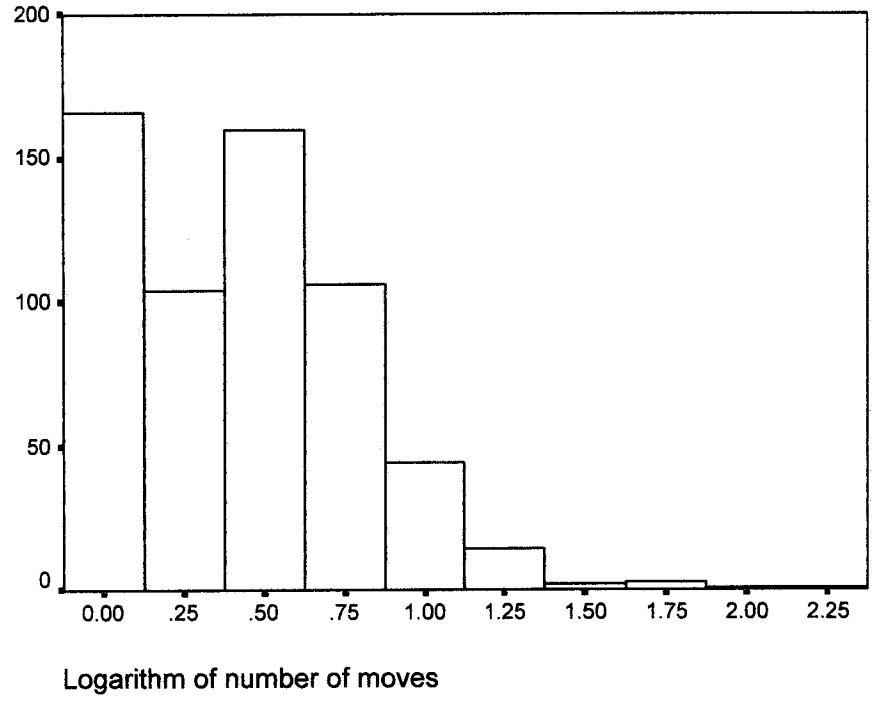
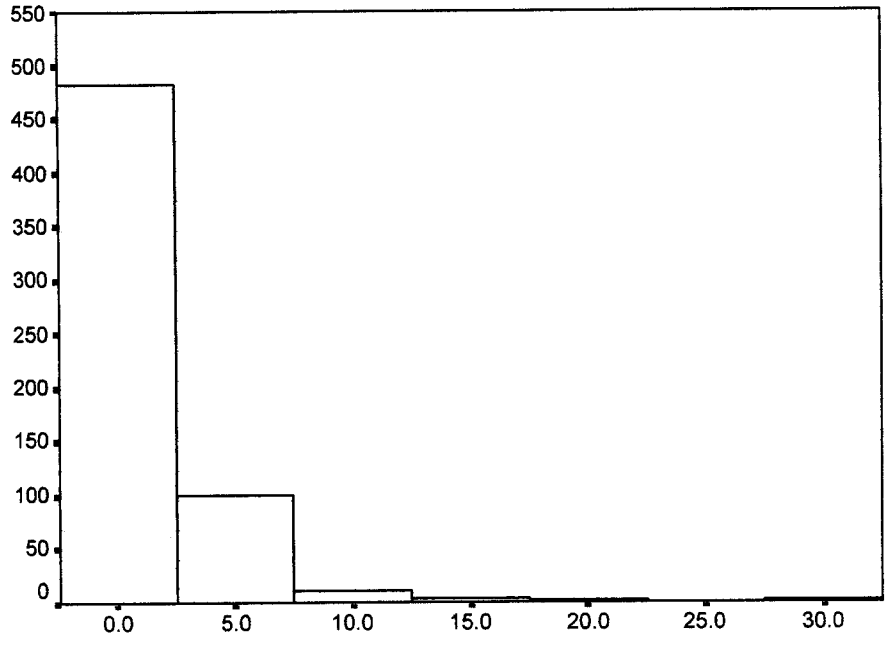


Figure 6a.



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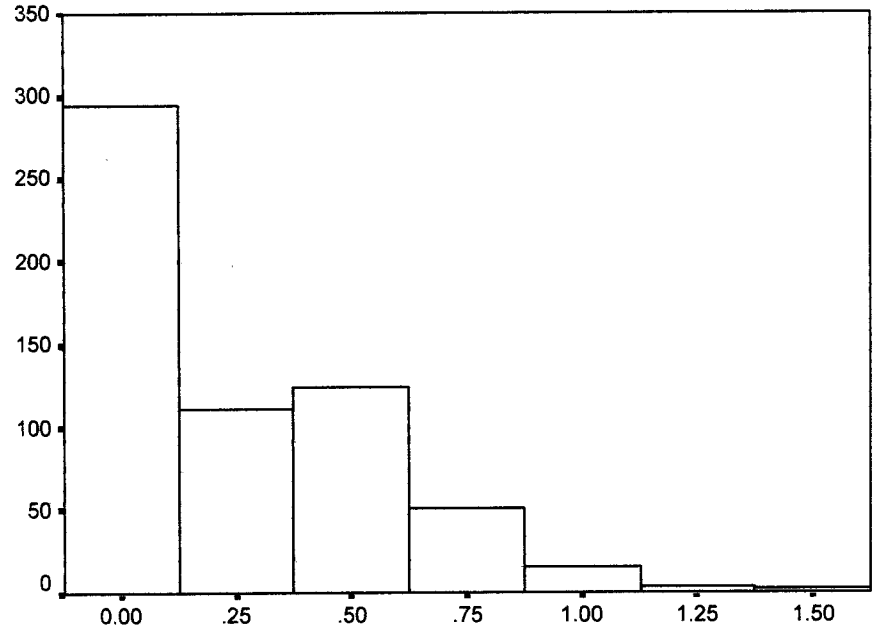

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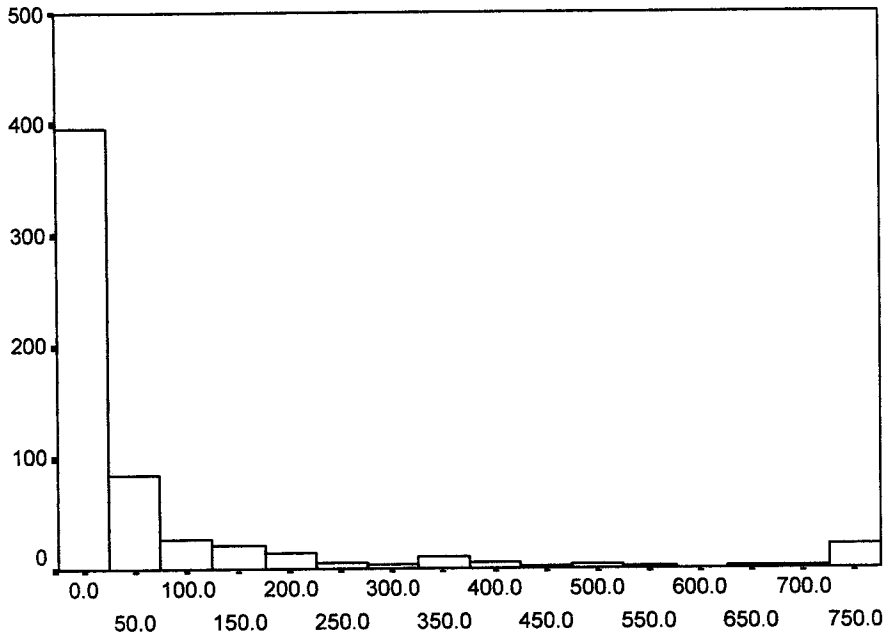
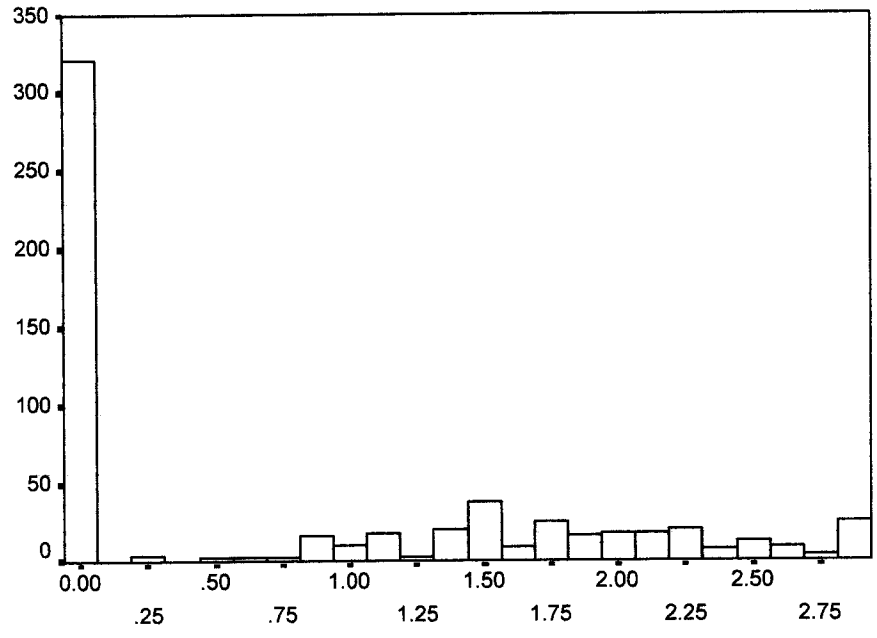
Figure 7b.