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**Exit Strategies: Testing Ecological Prediction Models of Resilient Outcomes in Youth with Histories
of Homelessness**

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Exit Strategies: Testing Ecological Prediction Models of Resilient Outcomes in Youth with
Histories of Homelessness

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Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
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School of Psychology
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Abstract

National incidence and prevalence estimates of homelessness in Canadian youth are unknown. However, a recent annual profile of shelter users in a large urban centre estimated that one in five consumers of emergency shelter services are youth. Adolescence is a period of vulnerability from developmental perspective. In their progression from childhood to adulthood, youth have multiple role transitions such as identity, autonomy, and parental separation to negotiate. Dire circumstances such as homelessness place youth at a disadvantage for attaining mastery of developmental transitions compared to their housed peers.

Resilience has been defined as the maintenance of positive adaptation despite adversity. Developmentally, resilience is understood as age-appropriate functioning concurrent with vulnerability related to the adversity that might otherwise place the young person at risk for less positive adaptation.

Ecological Systems Theory examines not only the most immediate aspects of youths' social context, such as social support, but also broader factors, such as resource-intensity of communities. Ecological Systems Theory considers linkages between the different levels comprising youth's social ecology. This framework is useful for understanding resilient outcomes in homeless youth because their social contexts are less insulated and protected, and are subject to differing influences than housed youth living in a traditional family unit.

The purpose of this dissertation was to develop and test Ecological Resilience Prediction Models of outcomes in N = 157 youth who were homeless in October 2002 to October 2003, and N = 99 youth who were re-interviewed between March 2004 to October 2005. The current study and its participants are part of the larger *Panel Study on Homelessness in Ottawa* (Aubry, Klodawsky, Hay & Birnie 2003). The *Panel Study* was undertaken to understand pathways into

and out of homelessness across purposively sampled subgroups of homeless individuals. The three resilient outcomes predicted by Ecological Resilience Prediction Models within the dissertation were becoming re-housed, returning to school, and joining the work force. Secondary analyses were conducted amongst 17 youth who had become parents between Time 1 and Time 2 interview, whose data were considered separately from the rest of the sample.

Results indicated that the single predictor of becoming re-housed was shorter *lifetime durations* of homelessness. Female sex and re-housing (for 90 days or longer), best predicted return to school. Factors predicting employment were complex, but consistent with working long hours while attending high school in studies conducted on housed youth with respect to cumulative stress. Greater Time 1 substance use and increased size of social networks predicted employment stability at Time 2. Diminished mental health functioning and greater duration of re-housing at Time 2 were additional predictors of employment at Time 2. Although employment was associated with benefits such as re-housing and decreased alcohol use at Time 2, it was associated with reduced mental health at follow-up.

Policy and research recommendations emerged from examining each resilient outcome ecologically. The United States has specific educational legislation for homeless youth (the McKenny-Vento Act), a national data system to track epidemiological statistics on homeless youth (NEO-RHYMIS), and re-housing interventions for homeless adults, the implementation of which is supported in an adolescent population based on results of this dissertation (Housing First). Future research is needed to identify methods of feasibly implementing protective education, supportive employment and immediate housing for homeless youth in Canada.

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This thesis is dedicated to the youth who shared their time and personal history with us through the course of completing the interviews over the two years that they were conducted. Youth's willingness to engage in a discussion of some difficult life events took a great deal of trust, often during circumstances of ongoing hardship. My hope in undertaking this doctoral thesis was to contribute to a body of research that will prevent and ideally end homelessness.

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INTRODUCTION

Structure of Thesis

This thesis is comprised of three articles, each predicting a resilient outcome in youth with histories of homelessness following an introduction that frames each article's contribution to the overall thesis. Hypotheses are formulated through models developed and tested to predict resilient outcomes. Resilience in youth with histories of homelessness is the focus of this dissertation. Research on the course of homelessness among youth in the United States has observed that the majority of homeless youth do not go on to become homeless adults (Burt, 2007). Despite this positive housing outcome, it is unknown to what extent youth who have experienced homelessness are able to achieve normal developmental outcomes in such areas as schooling and workforce entry.

Across the lifespan, youth are the subgroup most vulnerable to homelessness (Robertson & Toro, 1999). Even if most young people who are homeless eventually find their way to stable housing, little is understood about the mechanisms that facilitate their exits from homelessness. The purpose of this dissertation was to systematically test which factors predict homeless youths' resilient outcomes by interviewing them twice over approximately two years. Aspects of individual, social and community functioning were queried to generate an understanding of what facilitates resilient outcomes in youth with histories of homelessness.

Each of the three articles was developed in consultation with a review of the literature based upon the resilient outcome being predicted. From those reviews, Ecological Resilience Prediction Models (ERPMS) were proposed and tested within each article. The first article examined predictors of achieving housing stability. The second article examined predictors of participation in schooling. The third and final article examined predictors of participating in the

workforce. Variable-focused approaches to applying resilience frameworks were used for data measurement and analysis, to maximize longitudinal data, and to determine whether or not youth had met resilient outcomes (Masten et al., 1999). Criteria for resilience in this dissertation were becoming stably housed, returning to school, or becoming stably employed.

Each model tested in each article within this dissertation predicts that resilient outcomes in homeless youth are arrived upon by exposure to greater resources than risks, which in turn produces the resilient outcome being predicted. Being housed, employed, or in school are all markers of normative late-adolescent and early adulthood development in North America. In fact, educational participation, as well as residence in a secure dwelling is considered so fundamental to basic well-being that they are reflected directly in the Canadian Charter of Rights (Constitution Act, 1982).

Predictors of resilience will encompass the most immediate level of Bronfenbrenner's (1989) Ecological Systems Theory (the microsystem), which is the theoretical framework underlying each prediction model developed within this thesis. Individual-level, social-level, and community-level variables are hypothesized to predict the outcomes in each of the three Ecological Resilience Prediction Models (ERPMS). These ranged from individual characteristics such as personal empowerment, to social predictors such as family connectivity, to the community-level predictor of utilizing supportive community resources. The variables encompassed in the each ERPMS exist on a continuum, with high levels of each predictor serving as a protective factor, and low levels of each predictor serving as a risk unless otherwise specified. Dichotomous variables such as engagement within a positive mentoring relationship are similarly predicted to be a resource that facilitated resilience.

CHAPTER 1

Context of Homelessness in the Twenty-First Century

Estimating the Prevalence of Homeless Youth

In their examination of homelessness in Canada, Begin, Casavant, and Chenier (1999) reported that the sociodemographic characteristics of homeless individuals have changed since the 1980's. Specifically, Begin and colleagues noted that prior to 1980, homeless individuals were predominantly single adult males who had been without housing for a significant portion of their life history. After the 1980's however, the characteristics of homeless individuals shifted and increased in number, with homeless families and youth appearing more frequently in situations of homelessness (Begin et al.).

It is commonly agreed that estimating the prevalence of homeless youth is extremely difficult, as reflected by Ringwalt, Greene, Robertson & McPheeters (1998):

Homeless youths are largely a "hidden" population owing to their high residential mobility, diffusion through communities, and movement into and out of domiciles, public institutions, and the streets. Also, many homeless youths avoid contact with shelters, medical services and the police, service providers who might otherwise estimate their numbers...[they] are reluctant to admit to homelessness, and avoid interviewers whom they may mistake for victimizers" (p. 1325).

Other researchers have made similar observations in their studies of homeless youth (Ensign, 1998; Farrell, 2001; Hagan & McCarthy, 1991; Hammer, Finkelhor & Sedlak 2002; Phelan & Link, 1999; Ringwalt et al.; Toro et al., 1999; Votta & Manion 2003) due in part to differing definitions and criteria for determining homeless status.

Defining homelessness in a standardized manner is imperative. Phelan and Link (1999) caution that sampling discrepancies arise from inconsistent operational definitions. Specifically, these authors note that current episode versus lifetime prevalence estimates of homelessness

yield significantly different depictions of the proportion of homeless individuals in any one location at any one time. They state that when persistence is factored into definitions of homelessness (that is, individuals in situations of homelessness for substantial periods of time, moving into and out of residential stability sometimes for decades), the characteristics of homeless individuals differ from shelter users who access emergency housing only once in their lifetimes. The authors conclude that when persistence is factored into definitions of homelessness, the persistently homeless tend to be individuals presenting with other risk factors, such as severe and persistent mental health problems. Notably, the persistently homeless tend not to be youth, but rather single adult men. By contrast, point-prevalence or cross-sectional methodologies include homeless samples comprised of comparatively high-functioning individuals, who experience homelessness as a crisis situation brought on by unforeseen emergencies such as sudden unemployment or eviction (Phelan & Link, 1999).

Operational Definitions of Adolescent Homelessness and Related Measurement Issues

An additional difficulty to researchers focused on estimating the prevalence of homeless individuals arises when special populations are of research interest, as in the case of estimating homeless youth. Age definitions vary considerably. Due to definitional discrepancies, plus the reluctance of many homeless youth to identify themselves to adults, it is difficult to arrive at accurate prevalence estimates of homeless youth.

The United States' National Family and Youth Services Bureau (FYSB) have revised their system of collecting data on runaway and homeless youth utilizing FYSB services. Upgraded in 2004, the National Extranet Optimized Runaway and Homeless Youth Management Information System (NEO-RHYMIS) collects information on youth demographics, the nature of homelessness services used, and status of youth at exit from services (National Clearinghouse on

Families and Youth, 2008). NEO-RHYMIS enables national incidence and prevalence estimates of youth homelessness to be calculated over time. Notably, no similar national data collection system on homeless youth has been developed in Canada (T. Melanson, personal communication, May 20, 2009).

In order to standardize definitions of homelessness such that prevalence estimates can be meaningfully compared across studies, Toro et al. (1999) suggests that definitions of homelessness be streamlined within all investigations of homeless populations, including special subgroups. Specifically, he outlines criteria that are general enough to avoid under-representation, and specific enough to focus within a given sub-group, such as homeless youth. Definitional criteria utilized by Toro et al. are that individuals “were staying or had stayed at least one night in a shelter for homeless people, on the streets or in other unconventional circumstances..., temporarily [for at least 7 days in a row] with friends or family without paying rent and considered themselves homeless” (p. 161). Toro et al.’s definition of homelessness was utilized in the *Panel Study* (Aubry, Klodawsky, Hay & Birnie, 2003).

Antecedents to Homelessness: “Runaways,” “Throwaways,” and “System Youth”

Typologies of homeless youth, based on the antecedents to their current homeless situations have been developed to examine different experiences preceding homelessness in subgroups of youth (Hier, Korboot & Schweitzer, 1990; MacLean, Embry & Cauce, 1999; Slesnick & Meade, 2001).

Within investigations examining typologies, street youth have been divided into one of three categories: “*runaways*”, “*throwaways*”, and “*system youth*” (Hier, et al, 1991.; MacLean et al.,1999; Slesnick & Meade, 2001). Runaways are described as youth who run from home due to family conflict, including maltreatment. Throwaways, are youth asked to leave their parents’

homes due to parental rigidity or intolerance of incongruous lifestyles (i.e. youth experimenting with drug use or family upheaval due to youth's gender or sexual identity). System youth are those removed from their families by social service and child welfare agencies due to threats to well being posed by either the youth or their families.

Homeless adolescents classified as system youth may have life histories involving multiple foster and group home placements during childhood, and then exits from the child welfare system during adolescence. With histories of trauma and involuntary interactions with mental health and social service agencies, many of these youth become homeless as they are without family resources during adolescence when they age out of support provided by the child welfare system (MacLean et al., 1999; National Alliance to End Homelessness, 2007).

In order to develop profiles of adjustment and estimates of re-housing across subgroups of homeless youth classified by the contributors to their homeless status, Maclean et al., (1999) grouped their sample of 356 youth into the runaway, throwaway, and system youth categories described above, and collected data on family separation and current functioning. The authors predicted that system youth would exhibit the least likelihood of all three groups to secure re-housing due to their lack of social support and lack of connectivity with mainstream (non-homeless) society. They further hypothesized that system youth would illustrate the greatest psychological disturbance due to their difficult life histories, while throwaways would also be unlikely to exit homeless situations due to burned bridges with family, and externalizing behaviour. Runaway youth were predicted to have some psychological difficulties arising from a trauma history, but as a group, these youth were believed to have the best prognosis for exits from their homeless situations.

What is remarkable about the results reported by Maclean et al., (1999) is that the authors found no differences among the three groups in terms of psychological functioning which was uniformly poor, level of victimization which was uniformly high, and nature of family functioning which was disconnected, even though some youth had the option to return to a family home. Although the authors utilized measures with excellent psychometric properties, (for example, the Youth Self-Report: Achenbach, 1991), and reported strong statistical power for conducting analyses, no differences in family relationships or mental health functioning emerged across the three subgroups of youth, despite the different contributors to their homeless situation.

Maclean et al.'s (1999) findings suggest that the impact of homelessness is significant, regardless of the particular contributors to their current homeless situations. Thinking beyond youth's current situations of homelessness is important to getting them re-housed. Having a sense of youths' previous living situations are important for planning and prevention, particularly if youth are exiting residential mental health, detention, or child welfare settings, which have been observed to be transitions that are antecedents of homelessness for many youth at risk (Kidd & Davidson, 2006). Understanding what options are available to youth prior to discharge from service settings may ease transitions, and help youth avoid episodes of homelessness.

Youth and Adult Homelessness: Similarities and Differences

In the adult homelessness literature (Grigsby, Baumann, Gregorich & Roberts-Gray, 1990), and the youth homeless literature (Auerswald & Eyre, 2002), theoretical models explain the complex process of how individuals become acculturated to street life over time. Disaffiliation from mainstream society is understood as a function of increased duration of time homeless. The similarity observed across youth and adult homeless populations appears to be affiliation with and attachment to the street culture. Pathways out of homelessness (housing and

employment) become less likely exit points from the street as time and distance from a housed social network increases (Auerswald & Eyre, 2002; Grigsby et al., 1990).

Differences between youth and adult homeless populations are notable in terms of pathways into homelessness (Aubry, Klodawsky, Hay & Birnie, 2003), experiences of homelessness (Kidd & Davidson, 2007), vulnerability to victimization (Gaetz, 2004), and exits from homelessness (Burt, 2007).

Whereas homeless adults are more likely to cite economic hardship, physical health problems (including long-term disabilities), domestic abuse, and vulnerabilities to addiction as reasons for their current episode of homelessness, youth were more likely to attribute their homelessness to childhood stressors, family difficulties, and mental health problems (Aubry et al., 2003). Childhood stressors were experiences of maltreatment, often at the hands of their parents and/or caregivers, making vulnerability to addictions and mental health problems understandable with respect to traumatic sequelae. Male youth were also more likely than female youth to describe problematic drinking as a reason for current homelessness (Aubry et al.). Many homeless adults experienced these childhood stressors as well, but they did not attribute their current homeless situations to these as frequently as youth (Aubry et al.). For youth, reluctance to re-join mainstream society and all that it represents is "...potentially more difficult than going to the streets, because it is adjusting to and accepting a set of values/schemas that, in many instances, had profoundly failed them in the past." (Kidd & Davidson, 2007, p. 236).

Once on the street, youth are uniquely susceptible to victimization, due to the vulnerability of their age, as the criminal networks that exploit newly homeless youth are well aware that they are often unable to protect themselves (Gaetz, 2004).

Finally, a report tracking the number and trajectories of homeless youth in the United States indicates that the significant majority of runaway youth using State homelessness network services become re-housed (Burt, 2007). This is a notable difference from the episodic and chronic homelessness over a long period of time that is noted in the adult homelessness literature (Grigsby et al., 1990). The exception noted amongst youth were those involved in child welfare, as they have no home to return to, and “multi-problem youth” exiting correctional and mental health systems, who were also noted to be at increased risk of chronic homelessness (Burt, 2007).

CHAPTER 2

Guiding Theoretical Frameworks

Toro, Dworsky, and Fowler (2007) suggest avoiding a focus on the individual problems of young people in relation to their homeless circumstances. Rather, research on homeless youth should be viewed as “a social phenomenon involving transactions between individuals and their environments” (p. 6-1). A framework that examines youth’s functioning in relation to their social and community context is a perspective that is ideally captured by Ecological Systems Theory (Bronfenbrenner, 1989). As such, it is the theoretical framework underlying each resilience model developed in this dissertation. Resilience theory will be reviewed at length before discussing how Ecological Systems Theory informs the development of each Ecological Resilience Prediction Model in each article in the dissertation.

Resilience Theory

Historic Framework for Emergence of the Resilience Construct

As observed in Olsson et al.’s (2003) concept analysis of resilience, the study of adaptation to circumstances of adversity and change was originally conducted by Charles Darwin in 1898. Following this, Hand (2003) and Al-Naser (2000) concur that the next series of scientific investigations into the characteristics of individuals contributing to adaptation to stressors was Selye’s (1955) neurobiological work, in which he proposed a biologically-based model of adaptation to physiological stressors. Following from Selye, stress resistance moved into the realm of psychological study. This literature focused primarily on how the quality of psychological adaptation to stressors (termed “stress resistance” or “hardiness”) was linked to positive health outcomes, or the avoidance of physical illness (Orr & Dana, 1982). Within these

studies, hardiness and/or stress resistance were proposed as internal resources within certain individuals (Kobasa & Puccetti, 1983).

Theoretical advancements in the conceptualization of resilience continued to evolve. Beginning in 1980, Block developed the Ego Resilience Scale to the Minnesota Multiphasic Personality Inventory (MMPI: Block, 1980), and a small group of investigations emerged that utilized this measure to assess ego resiliency within cognitive and interpersonal contexts (Block, & Kremen, 1996).

Childhood Invulnerability Research

Studies of child invulnerability developed, which extended the scope of hardiness from the individual to the family and the community. Invulnerable children were hypothesized to be capable of demonstrating excellence, even in situations of significant disadvantage (Robinson & Fields, 1983). James Anthony (1974) contributed significantly to invulnerability research.

However, in his later work, he cautioned against defining invulnerability too literally:

...there appears to be a pervasive myth that “superkids” or children labelled as “invulnerable” excel in all areas: socially, cognitively, emotionally, and so on. As is the case with most myths, this one may be based more on wish than substance. (Anthony & Cohler, 1987, p. 223)

Masten (2001; 2000) attributes the uptake of research interest in resilience in developmental contexts to the work of Garmezy (1974) and Rutter (1987; 1985; 1979), whose investigations of risk factors for child psychopathology such as poverty, genetic predisposition to specific mental illnesses, neglectful, impoverished or abusive child rearing (etc.) revealed that there were children who encountered all of these adverse events and conditions, who did not go on to demonstrate psychopathology as was predicted. These at-risk children sparked a voluminous body of research that focused on resilient outcomes (Bell, 2001; Cicchetti, 2003; Cicchetti, Rappaport, Sandler, & Weissberg, 2000; Forman, & Kalafat, 1998; Garmezy, 1991;

Hetherington, & Blechman, 1996; Jew, Green & Kroger, 1999; Luthar, 2003; Masten, 1999; 1994; Masten, & Coatsworth, 1998).

Resiliency as a Trait

A persistent critic of resilience research conducted on children and youth at risk was Block (1980; 1996). Block and colleagues most recently summarized their concern regarding outcome-based definitions of resilience as too global, and too readily applied to any degree of positive adaptation: “The term *resilience*, as now used so broadly by so many, is often nothing more than contemporary jargon for what an earlier generation of psychologists labelled *ego strength*” (1996, p. 351). Born of his previous work developing an ego-resilience measure for the MMPI as introduced earlier, Block proposed a trait-oriented conceptualization that he describes as “ego resiliency,” (measured by the Ego Resilience Scale 89: ER89; Block, 1980) that assesses the degree to which an individual is able to demonstrate competence that is consistent with internal resources, abilities, and the demands of social and vocational contexts (Block & Kremen, 1996). Proponents of a trait-based measure of resiliency generally refer to Blocks conceptual model (see for example Al-Naser & Sandman, 2000).

Limitations of Trait-Based Conceptualizations

Shortcomings of examining resiliency as a personality factor are described by Masten, (1999) who observe that not only does such a definition limit the scope of the phenomenon to an idiographic approach, but also that the factor structure and operationalization of resiliency remain somewhat unclear in the *Ego Resiliency* measure (Block, 1980). The paucity of studies using the personality trait of ego resiliency compared with the breadth of research adopting resilience frameworks based on positive adaptation despite exposure to adversity speaks most strongly to the comparative strengths and weaknesses of each approach. In other words, there

appear to be comparatively few researchers who have taken up the study of Block's (1980) Ego Resiliency measure within in the context of adult personality assessment. On the other hand, the study of resilience in the field of developmental psychopathology is substantial, rigorous, and acknowledged in both clinical and research settings. Resilience conceptualizations from Masten et al. and Luthar (2003) are adhered to in the current dissertation.

Recent Elaborations: Outcome and Process-Based Resilience Models

Process-based conceptualizations of resilience consider the interface of risk and protective factors leading to adaptation despite adversity. An example of a process-based conceptualization of resilience is examining longitudinal psychological and family functioning of an individual from adolescence to adulthood who has no mental illness them self, but whose parent has schizophrenia. Outcome-based conceptualizations of resilience examine isolated risks or resources in association with specific resilient outcomes. An example of an outcome-based conceptualization would be the case of an adolescent with a learning disability showing average grades at the end of a school year.

In their concept analysis of resilience in adolescents, Olsson et al., (2003) divide their substantial literature review into investigations utilizing resilience defined as an outcome versus resilience defined as a process. In their discussion of the varying methods of operationalizing resilience in youth, the authors conclude that "any theoretical account of resilience that does not discriminate between process and outcome may be prone to needless complexity" (p.2). Direct benefits of a process definition of resilience outlined in Luthar (2003) and echoed in Olsson et al. assisted to inform the current dissertation in terms of which approach to follow. Specifically, Olsson et al. state that process models of resilience take into consideration the interface of individual, social, and environmental risks and resources, which lend themselves directly to two

of Bronfenbrenners' (1989) levels of analysis (although Olsson et al. did not make specific reference to an Ecological perspective). Benefits of a process-defined model of resilience have the additional advantage of examining how linkages between risk and protective factors interact, which follows Luthar's guidelines for future research in developmental prediction models.

Recent quantitative and qualitative studies suggest that resilience models may be process oriented (examining both risks and resources within an individuals' context), and contain outcome measures of resilience (specific resilient outcomes). This proposition arises from findings described by Holdaday and McPhearson (1997), who made unique contributions relevant to the current dissertation, and is therefore included here despite the fact that their participants were severe burn victims rather than homeless youth.

In their phenomenological study of resilience, Holdaday and McPhearson (1997) asked their participants whether they considered themselves resilient, and if yes, how they understood their arrival at good psychosocial adaptation following recovery. Burn survivors described their experience of resilience as a daily and continuous trajectory that involved mobilizing their inner resources until over time, they reached self-acceptance with their physically altered self as a result of significant scar tissue. Within this context, resilience is both a process (a continuous pursuit, facilitated by an accepting community and empathy towards others), and an outcome (positive psychosocial adaptation following treatment for acute stages of burns). These findings were preliminary, as they lacked the standardization that would enable replication. However, they provided a conceptualization of resilience that was fluid, embedded in an ecological process, and measured in part by positive adaptation despite adversity, which is consistent with Luthar's (2003) conceptualization of resilience.

Tiêt and Huizinga (2002) provide empirical validation for a multidimensional model of resilience, which captures the fluidity described by Holaday and McPhearson (1997). Tiêt and Huizinga (2002) empirically tested the multidimensional structure of resilience in their sample of high-risk inner-city youth. They conceptualized a classification system based on outcome and risk status as presented in Figure 1.

Figure 1. Tiêt and Huizinga's classification system of risk and resilient outcomes

Outcome		
Unfavourable	Group 1 Low risk /Unfavourable outcome	Group 2 High risk /Unfavourable outcome
Favourable	Group 3 Low risk /Favourable outcome	Group 4 Resilience High risk/Favourable outcome
Risk	Low	High

Note: Adapted from Tiêt and Huizinga, 2002, p. 261

Based on their classification, resilience would be present in youth whose adaptive functioning placed them in the fourth group depicted in Figure 1, characterized by “High risk / Favourable outcome” (Tiêt & Huizinga, 2002). Classifying resilience dimensionally as a favourable outcome despite high-risk conditions follows contemporary resilience definitions.

Tiêt and Huizinga (2002) used structural equation modelling with six indicators to arrive at an empirically-based conceptualization of resilience in their adolescent sample of youth from high-risk neighbourhoods in Denver, Colorado. Indicators were drawn from the researchers’ review of the literature, including both internal and external measures of resilience (for example, self-reported academic achievement and gang involvement), as well as indicators of less favourable outcomes, that were nonetheless characteristic of functioning in some youth (such as delinquency and poor mental health). Their results suggested that two constructs were present, one relating to adjustment, and the other to antisocial behaviour. The authors noted that self-esteem is a contentious issue, and commented that although counterintuitive, their anti-social youth reported the highest self-esteem. Tiêt and Huizinga’s recommendations were that studies of resilience include measures of both internal (psychological) and external (social / environmental) functioning.

Masten et al., (1999) recently summarized resilience research and measurement perspectives. They contrast uni-dimensional resilience outcomes (variable-focused) versus multi-dimensional resilience outcomes (person-focused), both of which were described as complementary (p. 144). Variable-focused approaches are understood as those that examine resilience as arising from outcomes in a specific area of functioning (e.g., academic, social, work). In contrast, person-focused approaches are based upon “determining” resilience based on achievements in several areas of functioning considered simultaneously (Masten et al.). In the

current thesis, examined outcome variables were always single rather than holistic measures of resilience at follow-up (i.e. housed/not housed; participating in school/not participating in school, participating in the work force/not participating in the work force within each of the three manuscripts). Therefore the resilience measurement approach taken within the dissertation is best understood as variable-focused (Masten & Reed, 2002).

Ecological Systems Theory

Glantz and Johnson (1999) state that measuring resilience in youth who have experienced serious threats to their mental health and well-being is best captured by following a dynamic and multi-systemic approach. For this purpose, an Ecological Systems model of adolescent development will be proposed, which predicts resilient outcomes across interdependent dimensions of homeless youth's social contexts.

Bronfenbrenner's (1989) theory of Social Ecology posits that the roles and relationships that have the most immediate impact on individuals make up their unique microsystems. Individual microsystems are typically comprised of (for example) family in one microsystem, school in another, and peers in a third. Each microsystem is said to interact with the others to form a complex network that Bronfenbrenner refers to as the mesosystem. The mesosystem serves as the backdrop upon which the microsystems are staged (1989). Bronfenbrenner's Ecological Systems Theory also includes an exosystem, which takes socio-cultural factors into consideration, but global levels of analysis are beyond the scope of the current thesis, which was limited to exploration of the microsystem. However, social policy was considered to be a powerful influence within Barber's (2006) study of resilience within an Ecological environment. Although social policy could not be systematically examined as a predictor of resilient outcomes in this dissertation for measurement purposes, policy implications are considered within the

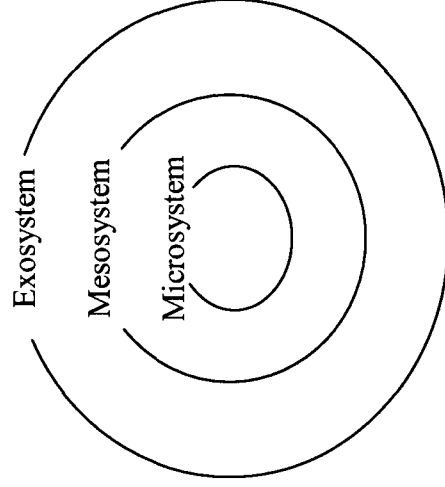
discussion section. A limitation of Ecological Systems Theory is that the levels of the system beyond the microsystem are difficult to operationalize, which makes standardized measurement challenging.

As with Flynn et al., (2006) in this dissertation, the addition of examining individual-level characteristics of youth will be added to Bronfenbrenner's (1989) 'microsystems' level of analysis in order to identify and test predictors of resilient outcomes in homeless youth.

Bronfenbrenner's Ecological environment is depicted in Figure 2, adapted from Flynn et al. (p. 420). Predictor variables encompassing homeless youths' intrapersonal, social, and community-levels of Ecological interaction are depicted within each Ecological Resilience Prediction Model (ERPM) examined in each article within this dissertation.

This thesis is comprised of three articles, each of which focuses on a different resilient outcome in youth with histories of homelessness. Each article develops and tests an ERPM based on the resilience and youth homelessness literature. The purpose of the first article is identify predictors of re-housing. The purpose of the second article is to identify predictors of participation in school, and the purpose of the third article is to identify predictors of participating in the work force. A general methods section for research is presented next. The methods that are specific to each paper are more briefly presented within each paper including the measures used for each articles' particular analyses.

Figure 2. The Ecological environment



Note: Adapted from Barber, (2006), p. 420.

CHAPTER 3

Method

Participants

Youth participants in this dissertation were recruited as part of the sample of *the Panel Study on Homelessness in Ottawa* (Aubry et al., 2003). The objective of the *Panel Study* was to examine the pathways into and out of homelessness by following subgroups of people who were initially homeless over time. The *Panel Study* defined homelessness based on Toro et al.'s (1999) criteria, such that at the time of first interview youth did not have their own apartment or room, and were either living in emergency shelters, on the streets, or staying temporarily (for at least one week) with friends to whom they did not pay rent.

Sampling in the *Panel Study* involved recruiting different subgroups of homeless participants, namely single male adults, single female adults, adults with children, and male and female youth (Aubry et al., 2003). Data from the male and female youth subgroups comprise the participants in the current study.

For the male youth, population sampling (i.e., all youth in recruitment locations were invited to participate) in an emergency shelter serving youth between 16 and 19 years of age, and at a youth drop-in centre was used. The reason for using a population sampling strategy was the expectation that the full sampling period of four months would be required to develop the sample for this subgroup. Forty participants were to be selected from each location until as near the targeted number of 80 participants could be reached.

In spite of daily calls to monitor male youth entering the shelter and at least three times weekly (sometimes daily) visits to the drop-in centre, there were insufficient numbers of male youth available to participate in the study. Therefore, in order to recruit more male youth,

research staff also recruited participants who were not from Ottawa through an agency that assists youth to return home and re-unite with their families. A small number of male youth (i.e., 19 years of age or younger) (n=4) were also recruited from two single men's shelters. The final sample for male youth was made up of 79 participants, of which 26 originated from the male youth shelter, 40 from the drop-in centre, 4 from single male adult shelters, and 9 from the social service agency assisting youth to re-unite with their families in another city. Although it was not feasible to record refusals because of the large number of different staff involved in recruitment, agency personnel who recruited participants reported that of those approached for participation in the *Panel Study*, very few refused.

Population sampling in an emergency shelter and a youth drop-in centre was also used to select the female youth participants. As with the male youth participants, the reason for using a population sampling strategy was the expectation that the full sampling period of four months would be required to develop the sample for this subgroup. Forty participants were to be selected from each location until as near the targeted number of 80 participants could be reached. As well, a small number of female youth (4) were recruited for the study at two single women's shelter.

Problems similar to the male youth sample were encountered when trying to recruit female youth, and recruitment of participants was also extended to the social service agency assisting youth to return to their families in another city. Interviewers recruited as many female youth as were available and willing to participate over the data collection period. The final sample of female youth totaled 78 participants and consisted of 35 youth recruited at the female youth emergency shelter, 36 youth located at the drop-in centre, 3 recruited through the social service agency assisting youth from out of town to return home, and 4 youth from the single female adult shelters.

Tracking procedures, described in a later section, were based on methodologies that proved to be successful in locating homeless participants in American longitudinal studies (Toro et al., 1999). Data were collected on N=157 youth in the first wave of interviews (Time 1, with 79 male youth and 78 female youth) from October 2002 to October 2003, and on N= 99 youth in the second wave of interviews (Time 2, with n=49 male youth and n=50 female youth) from March 2004 to October, 2005. The total number of Time 2 interviews of youth represented 63% of the originally interviewed sample in Time 1.

Roy et al.'s (2003) cohort study had a 5-year timeframe, and reported a participation rate of 89% in at least one follow-up interview. Slesnick, Ju Kang, Bonomi, and Prestopnik (2008) reported a participation rate of 76% at 12 month follow-up, and Craig and Hodson (2000) reported a 67% participation rate, also using a 1 year follow-up period.

Description of the Final Sample: Respondents versus Non-Respondents.

The final sample of N=82 youth participating in the follow-up interviews (i.e., respondents) who were not parents with young children living with them was compared to the youth who did not complete a follow-up interview (i.e., non-respondents). Overall, there were more male (n=45, 54.9%) than female respondents (n=37, 45.1%) although sex differences measured by respondent status were non-significant. Respondents' age at the initial interview were younger than non-respondents (respondents: $M = 17.33$, SD), which was a significant difference ($t(156) = 16.32$, $p. <.001$).

Differences in educational status (in school/not in school) at Time 1 by respondent/non-respondent comparisons were non-significant. Of the respondents, 19 (23.2%) were in school at Time 1 compared to 10 non-respondents (17.9%). Respondents' perceptions of their mental health functioning or degree of empowerment did not vary from non-respondents; mean differences between groups were non-significant. Given that respondents and non-respondents

were similar on the socio-demographic characteristics of sex and educational status and self-report measures such as mental health functioning and empowerment, attrition does not appear to be related to individual characteristics or outcomes.

A total of 17 youth (4 males and 13 females) had children between the ages of less than one year to four years old living with them at Time 2 interview. Becoming a parent is associated with a new identity, which may not include the same priority on educational engagement or workforce participation as non-parent respondents. Although teenage parents with young children may enroll in part-time education programs (and demonstrate educational resilience), we expect that their developmental trajectories will be modified by early parenting. Therefore, the data for new parents of children living with them were not included in the final sample. As such we were not concerned about a gender confound, despite the fact that most new parents were mothers, as their data were not included in the final sample, but were considered separately in secondary analyses (see Appendix A). A total of 6 youth (4 males and 2 females) were parents of children who did not live with them at Time 2. Their data were retained in the final sample.

At Time 2, 98.8% of the final sample of youth ranged in age between 18 to 22 years old. One youth (1.2%) was 17 years old at Time 2, suggesting that this participant had misrepresented their age at Time 1 to be eligible for shelter services and inclusion in this study by extension. Given that this respondent participated fully in both phases of data collection, their data was retained in the final sample. The mean age of the final sample was 19.84 years old.

The final sample used for data analyses was N=82 (i.e., n=45 male youth; n=37 female youth). The majority of youth (66.3%) described using both shelter and drop-in services over the two-year period that the *Panel Study* was conducted (see Social Service Utilization, Section F, Appendix C). A small portion of youth indicated that they would access shelters but not drop-ins

(7.5%), while the reverse was true for slightly more youth, who would reported that they accessed drop-in services, but not shelters (16.3%).

Measures

Demographic variables. Data on age and sex were collected as part of the *Panel Study's* interview protocol at Time 1 interviews (Section K Phase 1 protocol Appendix B, Section I Phase 2 protocol Appendix C). Marital status and whether or not participants had children were queried at both Time 1 and Time 2, which allowed us to determine whether or not youth had become parents between Time 1 and Time 2 interviews. The interview protocol also asked whether one's children were currently living with participants.

Social support. The Social Support Questionnaire (SSQ: Sarason, Levine, Basham & Sarason, 1983) is a 27-item measure that asks participants to list the individuals who provide them with different aspects of support as well as their satisfaction with this support. The measure is made up of two scales: (1) number of people in a person's social network (N), and (2) satisfaction with the provision of support provided by these people (S). In the current study, a shortened 5-item version of the measure was used.

N was measured by summing the number of different individuals listed by participants *on the five items*, and computing an average by dividing *the total by five* (Sarason et al., 1983). S was measured by asking participants "how satisfied are you with this level of support?" with six response options that ranged from "very dissatisfied" (1) to "very satisfied" (6). Total scores for S were calculated by summing across the six items and dividing by five.

The 27-item SSQ has been shown to have excellent internal consistency ($\alpha = 0.97$ for N, $\alpha = 0.94$ for S), and strong test-retest reliability over a period of one month ($r = 0.90$ for N, and $r = .83$) for S (Sarason et al., 1983). Cronbach's alpha computed for the 5-item SSQ in the current study was .80 for N and .81 for S at Time 1, and .88 for N, and .91 for S at Time 2.

Coping. Carver's two-item Brief-COPE measure (Carver, 1997) was used to measure

problem-focused / approach coping or “active” coping construct. On the measure respondents were asked about the extent they agreed or disagreed with different items measuring active coping such as “*I’ve been concentrating my efforts on doing something about the situation I’m in*” (Carver, 1997). In assessing their level of agreement or disagreement, respondents used a four-point Likert-type scale ranging from “*I haven’t been doing this at all*” (1) to “*I’ve been doing this a lot*” (4). Total scores on the scale can range from 1 to 8.

The Active Coping scale on the Brief-Cope has been shown to have good internal consistency ($\alpha = 0.68$), and adequate test-retest reliability ($r = 0.60$) (Carver, 1997). On our sample, Cronbach’s alpha for the full Brief-COPE was strong (.79).

Empowerment. The 15-item version of the measure of empowerment created by Rogers et al., (1997) was used in the current study to assess the degree respondents felt in control of their life situation. Examples of items on the scale are “*I generally accomplish what I set out to do*”, and “*People are limited only by what they think possible*”. Response alternatives ranged from 1 – 4 (“*Strongly Disagree*” to “*Strongly Agree*”). Total scores on the 15-item version can range from 15 to 60. The measure has been shown to have strong overall internal consistency (Cronbach’s $\alpha = .86$). Empowerment was measured at both Time 1 and Time 2 in the current investigation. Cronbach’s alpha at Time 1 was acceptable (.66), although stronger at Time 1 (.71).

Prosocial tendencies. Carlo and Randall’s (2002) 23-item *Prosocial Tendencies Measure* (PTM) was created to assess “behaviours that benefit society” (p. 31) amongst adolescents globally, and within six specific domains. The six facets of prosocial behaviours measured by this instrument are; altruism, compliant, public, emotional, anonymous, and dire (Carlo & Randall, 2002). Over a two-week period, test-retest reliability ranged from 0.60 for altruism and

0.80 for emotional facets of the scale, with moderate internal consistency (Cronbach's $\alpha = 0.73$) reported for a PTM aggregate score (Carlo & Randall, 2002).

A sample item from the PTM is "*when people ask me to help them I don't hesitate*" (p. 42, Carlo & Randall, 2002), with five response options ranging from 1-5: "*does not describe me at all*" (1) to "*describes me greatly*" (5). Because the PTM's Altruism facet had the weakest test-retest reliability, ($\alpha = 0.01$, Carlo & Randall, 2002) the items measuring altruism were dropped in the current investigation. An aggregate score based on shortened 11-item version of the scale was used in this study, comprised of two items each from compliant, emotional, anonymous, and dire facets, and three from the public facet of the PTM . Total scores ranged from 11 to 55 with higher scores representing a higher level of prosocial tendencies.

Mentor Relationship. Klaw, Rhodes, and Fitzgerald's (2003) five-item Mentor Relationship Scale (MRS) was used to assess if youth had a positive mentor relationship. A positive mentor in the scale is defined as "an adult who is older than you, who has had more experience than you, and who has taken a special interest in you" (Klaw et al., p. 226).

Youth were initially asked if they had a mentor. If a youth responded 'no,' they were scored as not having a positive mentor. If a youth responded 'yes,' they were asked to rate the mentor on items such as "*He or she believes in and cares deeply about you*" with responses on a Likert-type scale ranging from 0 (*Not at All*) to 4 (*A Huge Amount*). Possible aggregate scores can range from 0-20. Given the importance of each of the items to the overall mentor construct, failure of a prospective mentor to be rated positively on any item (i.e., "*Not at all*" = 0) resulted the youth being rated as not having a positive mentor. As well, only mentors with an endorsement rate of 80 % or more (total scores higher than 16) were counted as positive mentors. For the current study, using these criteria, a dichotomous measure was created that assessed

whether or not a youth had a positive mentor (0 = no, 1 = yes). Cronbach's alpha for the MRS computed on our sample was strong (.86).

Family connectivity. The shortened, 5-item version of Sarason, Levine, Basham and Sarason's *Social Support Questionnaire* (SSQ; 1983) used in the current study asked participants not only to list the initials of the individuals in participants' social networks, but also the nature of their relationship to the social contacts they listed. Therefore, it was possible to compare the members of youth's social networks across baseline and follow-up interviews to determine whether youth maintained connectivity with their families if the same initials and relationships were present (i.e. grandmother, X.X at Time 1 and Time 2 interview). Youth who described having at least one relationship with the same parent, sibling, grand-parent, uncle, aunt, cousin, niece, nephew, extended family member, member of step-family or foster family at follow-up as at the initial interview received scores of 1. Youth who did not describe maintaining any family relationships across interviews received scores of 0 on this measure.

Service Utilization Measure. In order to measure the utilization of social services, participants were presented a list of 12 different types of social services and asked about their frequency of use for each one of them over the past two years (Section F, Time 2 interview protocol; Aubry, Klodawsky, Nemiroff, & Bonetta, 2007). In particular, respondents were asked "*Since we last interviewed you...did you get help from any of the following social or community services?*" Types of services that were presented on the list were homeless shelters, community resource and health centres, addictions programs, crisis counselling, religious organizations, housing services, drop-ins, First Nations/Inuit/Métis organizations, supportive housing services, legal services, disability organizations, and food banks. A total (aggregate) score was created that summed the frequency of each participants' self-described use of the 12 types of social services

that they used between the first and second interviews. Cronbach's alpha was not calculated because the aggregate measure was not a scaled score.

Total months homeless prior to study: The Housing Income and Services Timeline (HIST: Toro et al., 1999), was included in the *Panel Study* interview schedule at Time 1 and Time 2 (Aubry et al., 2003). At Time 1, the version of the HIST used in the study asked participants to list each housing site at which they had lived in the three years prior to the beginning of the study, whether they considered themselves homeless at that address, the type of housing it was, and the dates when they began and ended living there (Toro et al.). As well, participants were also asked whether there was ever another period of time, even for one night, that they had no housing. Summing the number of days homeless across sites before Time 1 interview allowed calculation of the total months an individual had been homeless during their lifetime prior to the study.

Alcohol use. The 4-item *CAGE Questionnaire* (Ewing, 1984) was used in the study to assess for the presence of problematic alcohol use. Items ask about different issues related to drinking that would be indicative of alcohol use problems. Response alternatives are "yes" (1) or "no" (0). For example, an item from the CAGE asks: "*Have you ever felt you should cut down on your drinking?*" (Ewing, 1984). Possible total scores on the measure can range from 0 – 4. The CAGE is a well-validated measure that has been shown to have strong sensitivity and specificity to DSM-III-R criteria of alcohol use problems in the general population and for general outpatient samples (Chan, Pristach & Welte, (1994). Internal consistency for the CAGE in our sample was adequate, yielding a Cronbach's $\alpha = .64$ at Time 1, and Cronbach's $\alpha = .80$ at Time 2.

Drug use. The 10-item Drug Abuse Screening Test (DAST-10; Skinner, 1982) was used to measure for the presence of problematic drug use in the study. The DAST-10 has very strong internal consistency (Cronbach's $\alpha = .86$) (Cocco & Carey, 1998). Items on the DAST ask respondents about the presence of issues that reflect problematic drug use. For example, an item from the DAST asks: "Do you ever feel bad or guilty about your drug use?" Response alternatives to these items are either "yes" (1) or "no" (0). Total scores on the DAST-10 can range from 0 – 10. Internal consistency was found to be adequate for the DAST-10 in the current study at both Time 1 (Cronbach's $\alpha = .78$) and at Time 2 (Cronbach's $\alpha = .67$).

Mental health functioning. The presence of symptoms of mental illness was measured using the *SF-36 Health Survey* (SF-36: Ware, Kosinski, & Gandek, 1995). This screening tool is comprised of eight scales that produce composite scores for mental health functioning and physical health functioning. The Mental Health Component (MCS) score, used in this study, was derived from scoring items that load onto the General Health, Vitality, Social Functioning, Role-Emotional, and Mental Health scales (Ware Kosinski, & Gandek, 2002). These items assess for the presence of mental health problems and the extent that these problems limit daily activities. The total raw MCS score is transformed to a normative *t*-score based on the distribution of scores on MCS subscales, normed within the 1998 U.S. general population. The total transformed MCS score has a mean of 50 and the standard deviation at 10 (Ware et al.).

A sample item on the Mental Health scale of the SF-36 is: *During the past week, have you had to cut down the amount of time you spent on work or regular daily activities as a result of any emotional problems, such as feeling depressed or anxious?"* (yes/no) (Ware et al. p. C:14). Ware reports reliability coefficients in the range of .80 based on numerous studies using the SF-36 (Ware et al., 2002, p.7:4). Both the internal consistency and the test-retest reliability of

the MCS have been shown to be good to excellent in studies of populations in 10 countries including the U.S. and U.K. (Ware et al.). The MCS has also been found to discriminate between groups known to differ in psychiatric conditions (Ware et al.). For our sample, Cronbach's Alpha was .88 at Time 1 and .80 for Time 2.

Duration of re-housing. In the third paper focused on predicting employment in youth with histories of homelessness, duration of re-housing was an individual-level predictor of vocational integration. Because duration of re-housing is examined in depth as an outcome in the first article on re-housing, it is described and defined as such extensively as follows.

Outcomes

Duration of re-housing. A variation of the Housing Income and Services Timeline (HIST) (Toro et al., 1999) was used to query the housing history of participants between interviews, including their housing status at the point of the follow-up (Section A Time 2 interview protocol in Appendix C). Previous research has shown the HIST to have good test-retest reliability (Toro et al., 1997). In addition to location, respondents were asked who they were living with, what type of housing it was, and whether or not they considered themselves homeless at that address. Respondents were also asked for the dates they left each address, the reasons why they left, and the factors that might have been helpful to keep them housed. Housing duration was coded by dates, which enabled computation of a "days" variable¹. Total days per site were summed into an aggregate score measuring total number of days re-housed at Time 2.

Housing stability. The *Panel Study* conceptualizes housing stability as secured housing at follow up in the same site for which one pays all or a portion of rent for durations of 90 days or longer (Aubry et al., 2003). This amount of time housed was chosen as it would require individuals to have paid the rent for three months as well as adapt to the new living situation. In

¹ Through the "DATEDIFF" compute function in Statistical Package for the Social Sciences (SPSS, 10.0)

the study, a dichotomous measure of “housing stability” was created with participants being either “unstably housed” (0) (i.e., homeless or housed less than 90 days) or “stably housed” (1) (i.e., housed 90 days or longer).

Employment status. The HIST (Toro et al. 1999) was also used to determine employment history of participants between the initial and follow-up interviews. In particular, the HIST asked participants to list the types, sources, dates, and amounts of money they received in the form of income, employment and “other” sources. The nature of employment, assistance, and other income was coded by type of employment described by youth at each work site. Assistance in the form of government, social, health, and family support were not counted as employment, nor was “other” income, which tended to be generated from unconventional sources (i.e. the sex or drug trades). Employment lasting 90 days or longer at the same job at follow-up (Time 2) was the cut-off selected to signify that a participant was considered stably employed (i.e., coded as “1”). Youth who had been at a job for less than 90 days at follow-up were not considered stably employed (i.e., coded as “0”).

Proportion of time working. The date fields identified for each job in the HIST (Toro et al., 1999) were used to compute total number of days employed. These were then summed across jobs to determine a total length of time employed since Time 1 interview (days). Because the length of time between interviews varied somewhat for each respondent approximating two years, a proportional employment variable was calculated representing amount of time employed between interviews divided by amount of time between interviews. Seven youth were found to have been working more days than had elapsed between interviews, which signified that they had started working in a job prior to their first interview in the study, while still homeless. Therefore, the proportion of time worked / time between interviews exceeded 1.0 for these seven

cases. The proportion was adjusted to equal 1.0, reflecting that they had worked a total number of days between interviews equivalent to the time between interviews.

Return to school. In the Demographic Information portions (Section K of the Time 1 interview protocol and Section I of the Time 2 Interview protocol), *the Panel Study* queries participants: *Are you still in school?* Response options for this question are Yes or No.

Procedures

Time 1 interview. Youth were between the ages of 16 to 19 years old at Time 1 in order to be eligible for services at the shelters, drop-in centre, and social service agency from which participants were recruited. Shelter staff familiar with the *Panel Study* and with their youth clientele invited potential youth participants to meet with a member of the research team if they were interested in participating in the study. Subsequent to providing informed consent, participants were interviewed individually.

Interviews were conducted in a private area in emergency shelters or drop-in centres. Interviewers were trained graduate students or by individuals who had extensive interviewing experience or experience working with homeless youth. Interviewers used response cards to assist respondents with structured questions (with a set of response alternatives). The duration of initial interviews ranged from 30 to 180 minutes with a mean of 81 minutes. Follow-up interviews ranged from between 35 and 165 minutes with an mean duration of 91 minutes. The majority of Time 1 interviews were completed in English 152 (96.8%), with 5 (3.2%) completed in French. One Arabic interpreter was used for facilitation with the English language. Similarly, most 97 (97.98%) Time 2 interviews were completed in English, with 2 interviews completed in French. No interpreters were used at Time 2.

Youth were paid \$20 for their participation at Time 1 interview, and \$30 for their participation at Time 2. Research methods implemented in the study were approved by University Research Ethics Board at the University of Ottawa.

Tracking participants. Approximately one year after the initial interview, tracking procedures were undertaken to follow up with *Panel Study* participants, in order to: (1) ensure that contact information was still valid, (2) to remind participants of the study and our ongoing wish to interview them a second time, (3) to provide a sense of connectivity to participants, so that the follow-up contact for the second interview would be anticipated (Aubry, Klodawsky, Hay, Nemiroff & Hyman, 2004).

Youth were invited for follow-up interviews approximately two years after the first interview. To facilitate follow-up and Time 2 interview, youth were asked at Time 1 interview to provide contact information on as many individuals in their social and care-providing networks as possible. E-mail addresses were useful in tracking youth over time, as many of them had free on-line accounts they checked regularly. Youth were contacted by e-mail and telephone approximately one year following the Time 1 interview (Aubry et al., 2003).

Time 2 interviews. Time 2 interviews were conducted at a secure and private location near participants' residences. Interviewers used response cards to assist respondents with structured questions (i.e., questions with a set of response alternatives). Participants were paid \$30 for Time 2 interviews.

Data cleaning and preparation: For each of the three papers, range checks were conducted and data were separately screened for univariate and multivariate outliers. There were no univariate outliers. During this process for the paper on re-housing, one multivariate outlier was found and removed. Mahalanobis distance testing was repeated, and no multivariate outliers

remained (Tabachnick & Fidell, 2001). No other univariate or multivariate outliers were present in that paper or any of the other papers.

An examination of frequency distributions of study variables revealed the presence of missing data. To maximize the existing data, SPSS 15's Missing Values Analysis was used within the Regression module to estimate missing values using Estimation Maximization. In this iterative procedure, values for missing data are generated based on similar items to which the participant has responded. To maximize sensitivity and minimize the amount of data that was estimated, item-level missing data were estimated, rather than aggregate-level data.

Prior to conducting major analyses, the assumptions of normality, linearity, and homoscedasticity were verified. Time 1 alcohol use, proportion of time employed, and Time 1 social support (S) had moderate positive skewness, and so were square root transformed (Tabachnick & Fidell, 2001). Time 1 social support (N), and residualized Time 2 social support (S) had moderate negative skewness and so underwent reflected square root transformations. Finally, the aggregate variable for social service use, and residualized Time 2 social support (N) had substantial positive skewness and were therefore log transformed (Tabachnick & Fidell, 2001). Multiple regressions were calculated with and without the transformed variables, which did not affect results. Therefore the original variables were retained for ease in interpretation of results.

Residualized change data. To examine Time 2 scores as predictors while adjusting for assumed differences at Time 1 interview, residualized change scores were calculated in SPSS 15 using the linear regression module. Residualized change scores were generated whenever possible, on continuous variables that had both Time 1 and Time 2 data, which were being tested in Ecological Resilience Prediction Models (ERPMS) in this dissertation. Specifically,

residualized change scores were calculated for social support N, social support S, and empowerment. Additionally, raw (non-residualized) change scores on these variables were correlated with predicted variables to assist with interpretation in cases where residualized change scores were significant predictors.

For each of these variables, the Time 2 measure was entered as a dependent variable and the Time 1 measure as the predictor in an initial analysis to calculate the residualized change scores. Through requesting unstandardized residuals within the SPSS Regression module, error/residualized scores are generated which serve as an index of change, after controlling for variance at Time 1 (Zumbo, 1999). The residualized change scores are advantageous because they take into account participants' scores at Time 2 in order to understand change after controlling for Time 1 scores; in other words, it is a predicted difference that is not affected by error variance at Time 1, as would be the case using raw change scores (D. Shindler, November 7, 2007).

Using an index of change (in this case residualized change scores) that is not affected by Time 1 variance has been encouraged by researchers using longitudinal data, such as Curran and Muthén (1999). These authors observe that raw change scores can be misleading “when the behaviour of interest is developing systematically over time”, due to variance that may be unrelated to capturing developmental trajectories (1999, p. 577).

Williams and Zimmerman's (1983)² decision rules were applied to determine whether residualized change scores would illustrate greater reliability than raw change scores. Levene's test for homogeneity of variances was computed, and found to be non-significant³, meeting Williams and Zimmerman's criteria to adopt the residualized approach to capturing change.

² In consultation with Zumbo's (1992).

³ *Levene Statistic* for Empowerment at Time 1=.014 (1), *p.* = .905

Empowerment at Time 2=2.157 (1), *p.* = .146
Social Support N at Time 1 = .513 (1), *p.* = .476
Social Support N at Time 2 = .404 (1), *p.* = .527

CHAPTER 4.

Re-Housing

Contributions

Dr. Tim Aubry and Dr. Fran Klodawsky along with a team of researchers from University of Ottawa, Carleton University, and St.-Paul University developed and conducted the research for the *Panel Study on Homelessness in Ottawa*. The youth participants for the study presented in the manuscript were directly recruited from the *Panel Study*. Ms. Sophie Hyman developed the project and analysed the data for the research on the youth participants presented in the manuscript. Ms. Hyman also conducted the interviews to a large number of the youth that participated in the study. Dr. Aubry supervised the doctoral thesis research presented in this manual.

Acknowledgements

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Re-housing: Resilient Outcomes in Youth with Histories of
Homelessness

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Abstract

Resilience is defined as the maintenance of positive adaptation despite experiences of adversity (Masten, 2001). In a sample of youth with histories of homelessness, becoming re-housed is considered a resilient outcome. The purpose of this longitudinal study was to predict what factors enabled youth with histories of homelessness to become re-housed. Based on the developmental psychopathology, general mental health, and youth homelessness literatures, we proposed and tested a model to predict re-housing, the resilient outcome of interest in our sample of youth with histories of homelessness. Variables in the model hypothesized to be related to re-housing were at the individual-level (i.e., empowerment, pro-social tendencies, active coping), social-level (i.e., having a positive mentor, family connectivity, perceived social support), and community-level (i.e., level of utilization of supportive community resources) of functioning. Both dichotomous (i.e., being housed for 90 days or more) and continuous (i.e., number of days housed) measures of re-housing were used as indicators of resilient outcomes reported by youth at a two-year follow-up. Fewer months homelessness prior to the study alone predicted both measures of re-housing. Our results are unexpected with reference to the resilience and developmental psychopathology literature, but are consistent with previous youth homelessness research (Auerswald & Eyre, 2002; Burt, 2007). Implications of findings for program and policy development are discussed.

Re-housing: Resilient Outcomes in Youth with Histories of Homelessness

Annual incidence estimates of homelessness amongst youth between 12-17 years of age in the United States range from 1.6 to 1.7 million (Burt, 2007). These data are based youth recipients of homelessness services, and do not include estimates of the homeless youth population who refuse to access social and community services (Burt, 2007).

National incidence and prevalence rates of homelessness in Canada are as yet unknown (T. Melanson, personal communication, May 20, 2009), although an annual profile of shelter users in a large urban city estimated that 22% of its users were youth (City of Toronto, 2003). Toro, Dworsky and Fowler (2007) have stated that across lifespan, youth may be the subgroup with the greatest vulnerability to becoming homeless. Despite this, they noted that the majority of research efforts over the past 20 have been focused on homeless adults.

Risks Associated with Youth Homelessness

Exceptionally high mortality rates and death due to suicide (Roy et al., 2004), as well as thwarted personal development due to school drop out and alienation from society are the most readily apparent losses associated with homelessness in youth (Williams, Lindsey, Kurtz & Jarvis, 2001). There also exist risk factors contributing to, and consequences associated with homelessness that are less visible. These include experiences of victimization. Trauma has been reported to lead some youth to running away if they are maltreated in their family homes (Bao, Whitbeck & Hoyt, 2000), while other youth describe traumatic experiences arising as a result of the vulnerability inherent in their homeless situations (Bailey, Camlin & Ennett, 1998). Clearly there is urgency in protecting youth from maltreatment, and preventing young people from becoming homeless, as their age makes them vulnerable to street-level criminal networks (Gaetz, 2004).

Entering and Exiting Homelessness: An Adolescent Perspective

When avoiding homelessness is not possible, returning youth to safe and stable housing as soon as possible would protect them from exposure to trauma associated with the vulnerability of homelessness. This premise not only makes sense, but is supported by research conducted in the adult homelessness literature, which has documented how increased durations of homelessness leads to disaffiliation from mainstream society, making returns to stable housing less likely (Grigsby, Baumann, Gregorich & Roberts-Gray, 1990).

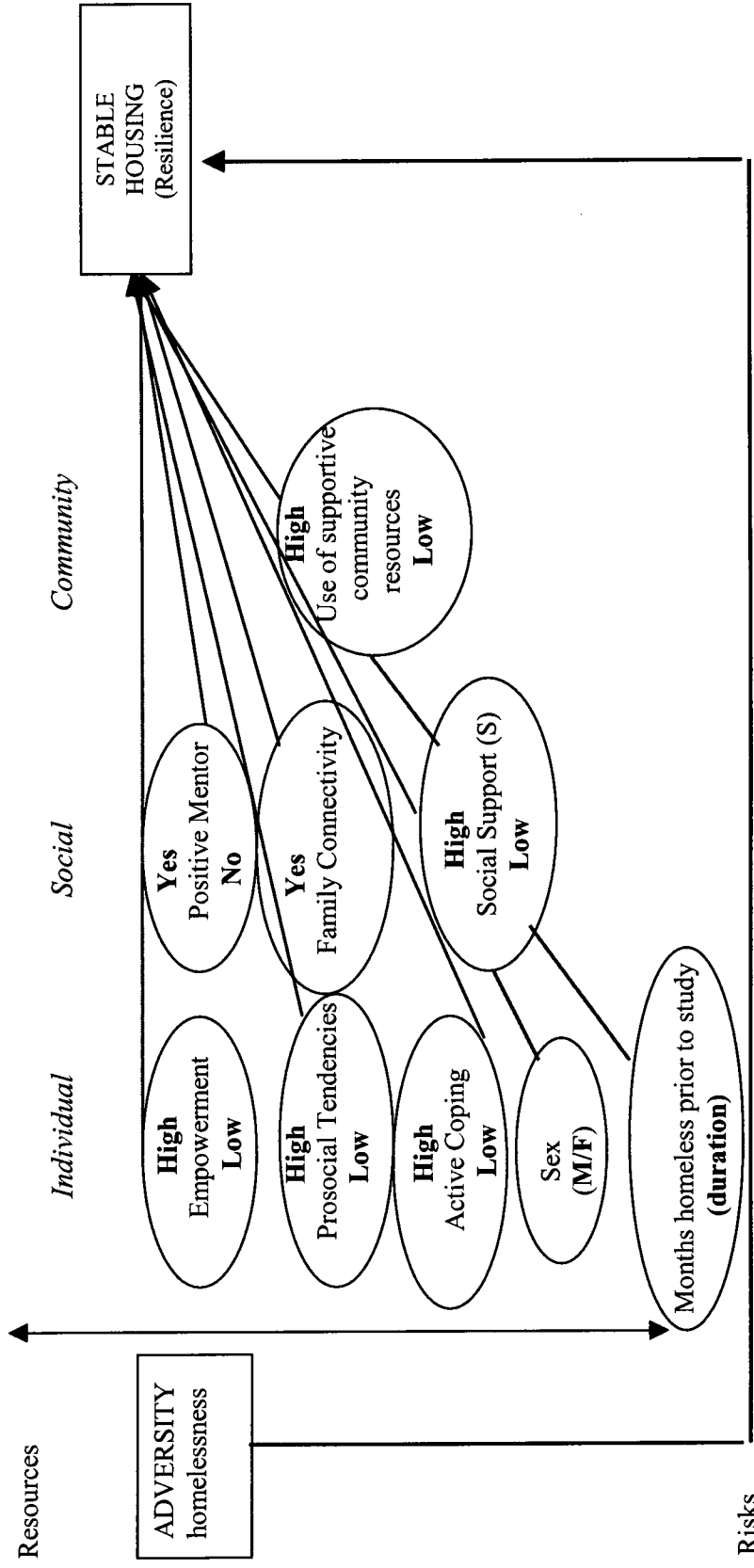
Similar to Grigsby et al.'s (1990) work with adults, Auerswald and Eyre (2002) conducted an ethnographic study of 20 homeless youth in San Francisco. The purpose of their study was to understand the social context of street life for homeless youth in their sample, and to inform intervention programs (Auerswald & Eyre, 2002). Participants were interviewed about their experiences entering and exiting homelessness, and a Life Cycle Model of Youth Homelessness was developed to explain likely entry and exit points, based on in-depth transcriptions and field-notes (Auerswald & Eyre, 2002). These authors concluded that early stages of homelessness were the times youth felt the most profound sense of "outsiderness," making them the most likely to return to housing. Other points of "extrication" were identified as periods of "disequilibrium" that were created through crises, such as being assaulted or robbed, jailed, or institutionalized, which were identified as events that had the potential to bring youth back into contact with mainstream society, and weaken ties to the street (Auerswald & Eyre, 2002). An early return to a safe and stable housing situation would be both ideal and preventive based on this research.

Ecological Resilience Prediction Model of Resilience (ERPM)

The purpose of the current study is to examine how well predictors of positive adaptation from the developmental psychopathology, general mental health, and youth homelessness literatures predict re-housing in a sample of youth with histories of homelessness. The model proposed and tested in the study is based upon an ecological perspective (Bronfenbrenner, 1989). Bronfenbrenner's theory of social ecology (1989) conceptualized human development as a dynamic process that occurs across individual-level, social-level, and broader socio-political-level spheres of daily life. Glantz and Johnson's (1999) work on resilience also suggested following multi-systemic approach to understanding outcomes in studies of youth at-risk. Therefore an ecological framework for the current study was chosen.

The Ecological Resilience Prediction Model (ERPM) is depicted in Figure 3. An ecological understanding of resilience suggested that a combination of *individual-*, *social-*, and *community-*level factors would predict the resilient outcome of becoming stably re-housed after a period of homelessness. *Individual-level* predictors were sex, empowerment, prosocial tendencies, active coping, and total (lifetime) months homeless. *Social-level* predictors were having a positive mentor, family connectivity, and size of social networks. The *community-level* predictor was level of use of supportive social/community resources.

Figure 3. Resilience model predicting re-housing



Note: Stable housing measured in the following three ways, based on variable versus person-based resilience measurement:

1. Housing in same site at follow-up for 90 days or longer in person-based resilience analysis (yes/no)
2. Number of days continuously housed at follow-up

Individual-Level Predictors

Empowerment, prosocial tendencies, active coping, sex, total months homeless prior to the study were hypothesized as individual-level predictors of becoming re-housed in the model.

Rappaport defined empowerment as “individual determination over one’s own life and democratic participation in the life of one’s community” (1987, p. 121). We felt that examining empowerment in the context of resilience and youth homelessness was important as its opposite, social exclusion, has been reported in studies of homeless adults who have been homeless for prolonged durations of time due to their longstanding marginalization (Grigsby et al., 1990).

Characteristics of resilient youth with histories of homelessness in Williams et al.’s (2003) multiple case study investigation were related to (amongst other things), compassion, helping those in need, and making a social contribution. These prosocial values were reflected in accounts of resilient youths’ everyday interactions (Williams et al., 2003). Carlo and Randall (2002) related prosocial behaviour in part to the internalization of social norms. In a sample of homeless youth, internalized mainstream values may facilitate detaching from street life, which is characterised by its own sub-culture that is not supportive of exits from homelessness (Auerswald & Eyre, 2002). Therefore we hypothesized that prosocial tendencies would predict re-housing.

Votta and Manion (2003; 2004) and Votta and Farrell (2009) have clarified relationships between mental health functioning and coping style in homeless youth. In their first study the authors examined how coping style (engagement vs. disengagement), stressful life events, social support, and self-esteem relate to psychological adjustment in a sample of 100 homeless male youth with two matched comparison groups who were not homeless. Results illustrated that amongst the three groups of youth, homeless males endorsed the greatest use of disengagement

coping, which was associated with greater stress, less social support, and greater rates of depression than comparison groups (Votta & Manion, 2003). In their second study (2004) these authors examined the relationships between coping style, risk-taking, adjustment and suicide. Results again indicated that disengagement coping, when coupled with other risk factors such as depression, predicted suicidal preoccupation and greater likelihood of previous suicide attempts (Votta & Manion, 2004).

Most recently, Votta and Farrell (2009) have examined coping and mental health in samples of homeless and housed young women. Results of their study indicated no difference in engagement versus disengagement coping based on housing status reported by female youth. However, disengagement coping and self-worth predicted symptoms of depression in both samples of young women.

Informed by this research, the current study hypothesized that active coping would predict re-housing, as a disengaged, avoidance-based coping style was linked to negative psychosocial outcomes for both homeless male and female youth (Votta & Manion 2003; 2004, Votta & Farrell, 2009). Active coping is conceptually similar to engagement coping, as it is based upon problem-solving and movement towards (rather than away from) stressors (Carver, 1997).

Auerswald and Eyre's (2002) formulation of youth homelessness suggested that the shorter the duration youth are homeless, the less likely they are to feel disconnected from mainstream society, which increases the likelihood of early return to re-housing. Based on this model, the longer youth are homeless, the more difficult it is for them to encounter exit points from the street. Accordingly, we hypothesized that shorter durations of homelessness prior to the study would be predictive of re-housing. Shorter durations of homelessness were calculated to

capture total amount of time homeless across episodes of homelessness youth had encountered prior to the study, even if for only one night, and were therefore not influenced at all by the current episodes of homelessness over the course of participating in the study.

It was also hypothesized that female youth would return to stable housing earlier and more frequently than male youth, as this finding has been observed elsewhere (Thompson, Pollio & Bitner, 2000).

Social-Level Predictors

Perceived social support, family connectivity, and having a positive mentor were hypothesized to predict becoming re-housed. Both helpful and problematic outcomes have been reported in relation to forming friendships and romantic attachments amongst street youth. Bao, Whitbeck and Hoyt (2000) examined the association between social support and depression within their sample of 602 homeless youth, and found mixed results in relation to the helpfulness versus harmfulness of attachments to other street youth. Supportive friendships were associated with lower rates of depression, but attachment amongst youth involved in “deviant” activities was associated with increased depression as well (Bao et al., 2000).

Similarly, Rice, Milburn, Rotheram-Borus, Mallett and Rosenthal (2005) reported both risks and resources arising from joining peer networks of homeless youth. Specifically, drug use was observed to initially increase if newly homeless youth joined social networks dense with drug using peers. However, these observations attenuated over time, and benefits such as access to resources gained through connectivity with the network of homeless peers were also reported (Rice et al., 2005). We hypothesized that support experienced as helpful would be associated with re-housing in the current investigation. For that reason we asked youth about their perceived satisfaction with social support, which we expected would predict re-housing.

Milburn et al. (2005) followed two large samples of homeless youth between 12 and 20 years-old in both the United States and Australia. Data were collected at 3, 6, and 12 months after first contact and variable rates of perceived family bonds were apparent among participants (Milburn et al.). The authors noted that “some young people reported high rates of feeling loved, cared for, satisfied and important to their families; others reported the opposite pattern” (p. 272).

Thompson, Pollio and Bitner (2000) examined outcomes of 70 youth 3 months after discharge from homeless youth services in St. Louis, Missouri. In addition to demographics, data tracked over time were those mandated by the Runaway Homeless Youth Management Information System (RHYMIS), a federally-based system that measures homeless youth’s intake and follow-up information where possible, such as housing status and location, school and employment status, life satisfaction, and so on (Thompson et al., 2000).

The authors reported that at 3-month follow-up, youth who had returned to their parental homes were more likely than those who did not to report positive outcomes, such as return to school, fewer legal problems, and fewer homeless episodes post-discharge (Thompson et al., 2000). They also noted, however, that theirs was a relatively homogeneous sample of young adolescents (mean age 14.8 years old at admission), 72% of whom were primarily living at home with their parents prior to what appeared to be a discrete episode of homelessness. Further, these youth had a home to go back to that was accepting of their return. It was unclear whether returning home was responsible for positive outcomes observed in this sample of youth post-discharge, or whether having a home to return to improved outcomes for youth receiving homelessness services (Thompson et al.).

As older adolescents are moving towards developmental tasks of individuation and autonomy, in the current study stable housing in the context of a history of homelessness is

understood as a resilient outcome, rather than necessarily moving back into the parental home. Nevertheless, family relationships and attachments are understood to be protective factors that may help to offset risks to mental health and psychosocial development (Masten, 2001). For that reason we examined the maintenance of relationships with family members over the course of 2-year follow-up to see whether it would predict re-housing at follow-up.

Werner and Smith (2001) note a correlation between resilience and access to a positive mentor. In their work, youth at high risk for developing psychopathology due to extreme childhood adversity had encountered mental health difficulties they later overcame. In reflecting on their resilience, they rated the supportive adult mentors in their environment as more helpful to them in the acute stages of distress they experienced (Werner & Smith, 2001). The role of positive mentors providing support for youth whose parents are unavailable is believed to be particularly relevant, as homeless youth are often in conflict with their families. Having a positive mentor is believed to be predictive of resilience (Klaw, Rhodes & Fitzgerald, 2003). Therefore, we hypothesized that having a positive mentor would be related to becoming re-housed.

Community-Level Predictor

We examined use of supportive community resources as the community-level predictor in the current investigation. The community-level predictor measures youth's use services in the current study. Thompson et al., (2006) found that collaborative and respectful service provision was associated with exiting the streets in an in-depth qualitative study of 60 homeless youth. We hypothesized that greater use of community resources by youth would be related to higher likelihood of being re-housed.

Method

Participants

Data for this research were collected as part of *the Panel Study on Homelessness in Ottawa*, a longitudinal study focusing on identifying predictors facilitating or impeding exits from homelessness (Aubry, Klodawsky & Hay, 2003). For the present study, data collected from participants in the male and female youth subgroups were used (N=157 at Time 1; n=79 males, n=78 females; N=99 at Time 2; n=45 males, n=37 females). In line with the definition of the population served in emergency shelters for youth in Ottawa, “youth” were represented in the study by young people between 16 and 19 years-old at the time of the first interview. Data from youth who had dependent children between the ages of 0 – 4 years old living with them “most of time” were removed, as examining the pathway out of homelessness for families was beyond the scope of the current study. This resulted in the removal of 17 cases. Therefore, the sample for study was N= 82 participants who participated in both the first and follow-up interviews.

Measures

Predictors

Empowerment. The 15-item version of the measure of empowerment created by Rogers, Chamberlin, Langer, Ellison and Crean (1997) was used in the current study to assess the degree respondents felt in control of their life and circumstances.

Prosocial tendencies. Carlo and Randall's (2002) 23-item *Prosocial Tendencies Measure* (PTM) was created to assess "behaviours that benefit society" (p. 31) amongst adolescents globally, and within six specific domains.

Active coping. Carver's two-item Brief-COPE measure (Carver, 1997) was used to measure problem-focused / approach coping or "active" coping construct.

Total months homeless prior to the study. The Housing Income and Services Timeline (HIST: Toro et al., 1999), was included in the *Panel Study* interview schedule at Time 1 for three years prior to the study (Aubry et al., 2003). Summing the number of days homeless across sites prior to Time 1 interview allowed calculation of the total months an individual had been homeless prior to participating in the study.

Sex. Demographic information (section K Time 1 interview protocol, Section I Time 2 interview protocol) queried the sex of study participants.

Positive mentor. Klaw, Rhodes, and Fitzgerald's (2003) five-item Mentor Relationship Scale (MRS) was used to assess if youth had a positive mentor relationship.

Satisfaction with social support. A shortened, 5-item version of Sarason, Levine, Basham and Sarason's *Social Support Questionnaire* (SSQ; 1983) was used to measure satisfaction with the quality of an individual's social network.

Family connectivity. The shortened, 5-item version of Sarason et al.'s 1983 *Social Support Questionnaire* (SSQ) used in the current study asked participants not only to list the

initials of the individuals in participants' social networks, but also the nature of their relationship their social contacts. Therefore, it was possible to compare the members of youth's social networks across baseline and follow-up interviews to determine whether youth maintained connectivity with their families if the same initials and relationships were present

Service Utilization Measure (SUM). A measure of the utilization of social and community services created for the study was used to measure the extent of social service utilization at Time 2 (Section F, Time 2 interview protocol; Aubry et al., 2007).

Housing Outcomes

Housing stability. The *Panel Study* conceptualizes housing stability as secured housing at follow up in the same site for which one pays all or a portion of rent for durations of 90 days or longer (Aubry et al., 2007).

Length of time housed at follow-up. Length of time housed at follow-up was measured through the use of the Housing Income and Services Timeline (HIST: Toro et al., 1999).

Data Analyses

Youths' self-perceived empowerment, and the satisfaction with their social networks between Time 1 and Time 2 was measured using residualized change scores, to examine changes at Time 2 while adjusting for differences at Time 1. Residualized change scores were calculated in SPSS 15.0 using the linear regression module.

Data were screened for univariate and multivariate outliers. During this process, one multivariate outlier was found and removed, resulting in a sample of N=81. Mahalanobis distance testing was repeated, and no multivariate outliers remained (Tabachnick & Fidell, 2001).

Results

Characteristics of Housing at Follow-up for the Overall Sample

Over three-quarters of the youth ($n=64$, 79.0%) were stably housed at follow-up, whereas $n=17$ (21%) were not. Stable housing was defined as having one's own housing or sharing accommodations for 90 days or longer at follow-up for which youth pay rent. The average length of time re-housed at follow-up for the overall sample was 378.39 days ($SD = 258.93$ days). The range was 0 days re-housed (still homeless) to 825 days re-housed.

Characteristics of Housing at Follow-up by Sex

There were 44 male and 37 female youth at Time 2. Of these, 31 (70.5%) male youth and 33 (89.2%) female youth were re-housed for 90 days or longer at Time 2 interview. Differences between male and female youth on proportion re-housed was significant ($\chi^2 (1) = 4.25$, $p. < .05$). With respect to duration of re-housing at follow-up, males were re-housed on average for 334.41 days ($SD 274.61$) with a range of 0 – 802 days. The average duration of re-housing for female youth was 430.70 days ($SD 231.80$) with a range of 0-825 days. Female youth were re-housed for significantly longer durations than male youth at follow-up $t (80) = -13.10$, $p. < .001$.

Correlational Analyses

Results of Pearson's bivariate correlations between Time 1 and Time 2 predictors and housing outcome variables are presented in Table 1. Correlation coefficients ranged from .00 to .61, indicating that multicollinearity was not an issue of concern.

Table 1.

Correlation Between Time 1 Predictors and Resilience Housing Variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Pro-social tendencies ^a	..	-.14	-.20	.11	.21	.20	.11	.10	.05	.06	-.06
2. Empowerment	..	.11	.54**	-.05	-.06	-.23*	.24*	-.13	-.13	.02	.12
3. Months homeless prior to study ^a03	-.20	-.13	-.17	-.12	.31**	-.40**	-.32**	
4. Active coping ^a11	.03	-.15	.06	-.18	-.04	.13	
5. Sex ^d23*	.20	.05	-.07	.19	.23*	
6. Positive mentor ^a17	.14	-.04	.24*	.15	
7. Longitudinal family relationships ^a08	.00	.10	.08	
8. Social support S	-.20	.13	.28*	
9. Social service use ^b	-.31**	-.20	
10. Days re-housed61**	
11. Housing status ^c	

* $p < .05$; ** $p < .01$.

^aMeasured at follow-up only ^bSocial service use between first and second interview. ^cConsidered stably housed (yes/no) if housed 90 days and longer at Time 2.

^d1 = female sex, 0 = male sex

Total months youth were homeless prior to the study had a significant negative association with both the duration of time youth were housed at follow up ($r = -.40, p < .001$), and youth's housing status ($r = -.32, p < .01$). These relationships indicate that the longer youth were homeless, the less likely they were to be stably housed at time 2 and the less time they were re-housed at Time 2.

Drop-in and shelter services were frequently used by many youth respondents, with 82.5% of youth reporting frequent use of drop-in services, and 73.75% of youth reporting frequent use of shelter services at Time 2. Both male and female youth experienced multiple episodes of homelessness, with 33% of male youth and 32% of female youth reporting 5 or more separate times in their lives when they were without housing (Aubry, Klodawsky, Hay & Birnie, 2003).

Results in Table 1 also indicate that sex was correlated with having a mentor ($r = .23, p < .05$), and with having attained housing stability at Time 2 ($r = -.23, p < .05$) such that female youth were more likely to have a mentor and have attained housing stability than male youth. As well, having a positive mentor was associated with a greater number of days re-housed at follow-up ($r = .24, p < .05$). Satisfaction with social support was significantly correlated with housing stability such that a higher level of satisfaction with social support was related to a higher likelihood of having attained housing stability at follow-up ($r = .28, p = .01$).

Results between Time 2 residualized change scores on level of perceived empowerment and level of satisfaction with social support and the housing outcome variables are presented in Table 2. Residualized change scores levels of perceived empowerment and satisfaction with social support at Time 2 were not significantly correlated with either housing stability or length of time housed at follow-up.

Table 2.

Correlation Between Time 2 Residualized Change Scores and Resilience Housing Variables

Variable	1	2	3	4
1. Empowerment ^a	..	.25*	.07	-.03
2. Social Support S ^a		..	-.10	-.05
3. Days re-housed			..	.61**
4. Housing status ^b				..

* $p < .05$; ** $p < .01$.

^a Residualized change scores. ^b Considered stably housed (yes/no) if housed 90 days and longer at Time 2.

Model Testing

The prediction model (see Figure 3) was tested using Time 1 and residualized change scores calculated on data from Time 2. Regression analyses were performed to predict resilient housing outcomes based on dichotomous (i.e., attainment of housing stability) and continuous (i.e. length of time housed at follow-up) measurement approaches (Masten et al., 1999).

Predictor variables were entered into the regression equation in a hierarchical manner. In particular, individual-level variables were entered in the first step (i.e., level of empowerment, level of pro-social tendencies, extent of engaging in active coping, months homeless prior to study, sex) followed by social-level variables in the second step (i.e., having a positive mentor or not, level of satisfaction with social support, having family connectivity or not). Finally, the community-level variable (i.e., level of social service use) was entered in a third step. Variable entry followed these steps for all of the multiple regressions that were conducted.

Predictors of Attainment of Housing Stability

Table 3 presents the final step of results from a sequential logistic regression analysis with Time 1 data predicting the attainment of housing stability.

Table 3.

Results of Hierarchical Logistic Regression Using Time 1 and Time 2 Variables to Predict Housing Stability

Variable	β	Wald	α	Odds Ratio	95% Confidence Interval
		Criterion			Lower Upper
Pro-social tendencies	-.08	2.40	.13	.93	.84 1.02
Empowerment T1	.05	.26	.61	1.05	.88 1.25
Months homeless prior to study	-.08	5.68	.02*	.93	.87 .99
Active coping	.16	.16	.20	1.78	.74 1.88
Sex	.94	1.61	.20	2.53	.60 10.79
Positive mentor	.95	.89	.35	2.58	.36 18.36
Family continuity	-.09	.01	.92	.91	.14 5.93
Social support (S) T1	.49	2.27	.13	1.63	.86 3.08
Social service use	.00	.14	.71	1.00	1.00 1.00

* $p < .05$; ** $p < .01$.

Only months homeless prior to the study emerged as a significant predictor of housing stability ($\beta = -.08$ $p < .05$). Specifically, a greater number of months homeless prior to the study was related to a lower likelihood of having attained housing stability at follow-up. None of the other individual-level, social-level, or community-level variables emerged as significant predictors of housing stability. Results of the ERPM presented in Table 3 correctly classified 85% of respondents (housed 90+ days yes/no) for the third and final block of variable entry.

To determine how changes over time influenced housing stability, the sequential regression analysis was repeated, using residualized change scores for variables measuring empowerment and satisfaction with social support. Results are presented in Table 4.

Table 4.
Results of Hierarchical Logistic Regression Using Residualized Change Scores to Predict Housing Stability

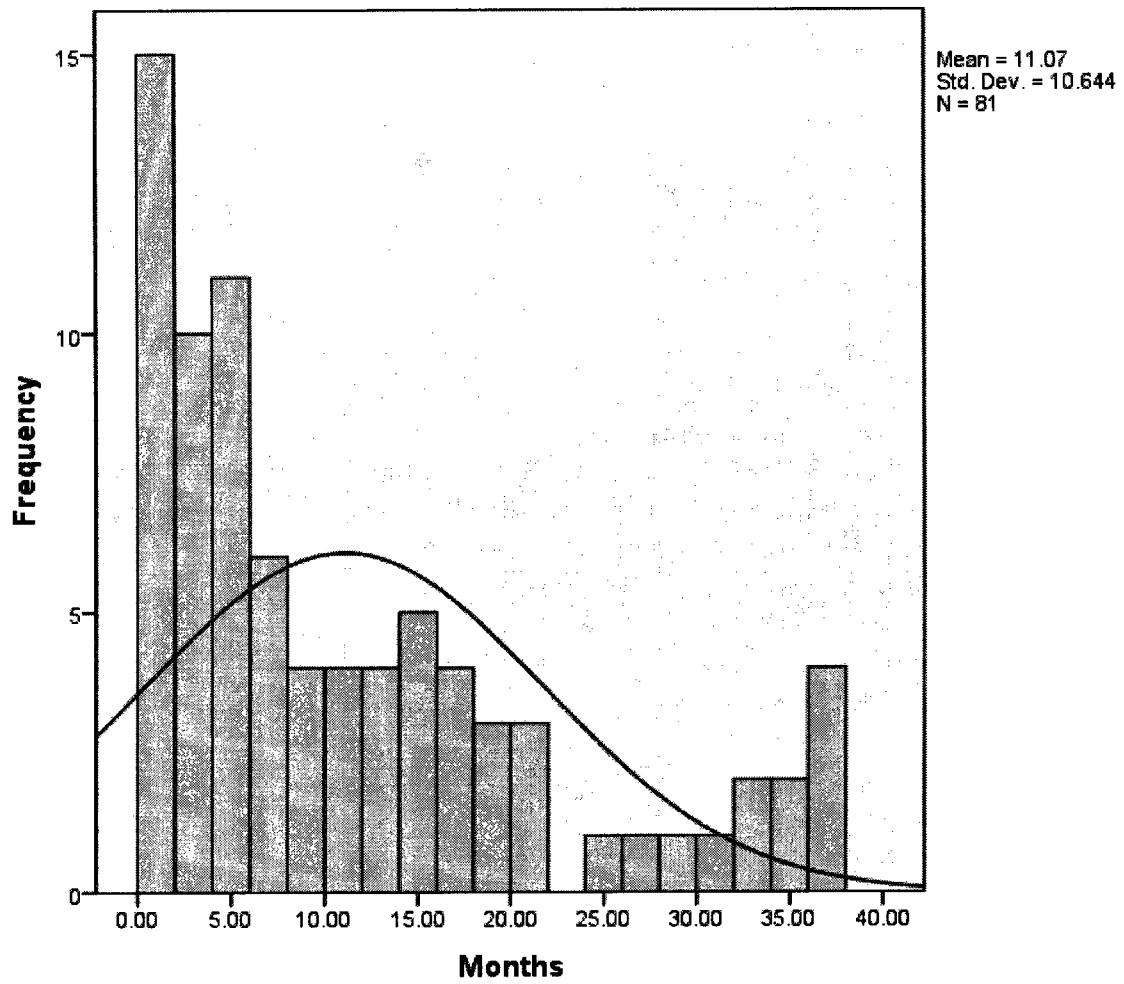
Variable	β	Wald Criterion	α	Odds Ratio	95% Confidence Interval Lower	Upper
Pro-social tendencies	-.06	1.65	.20	.94	.86	1.03
Empowerment ^a	-.05	.45	.50	.95	.81	1.11
Months homeless prior to study	-.08	6.24	.01*	.93	.88	.98
Active coping	.33	2.49	.12	1.38	.92	2.08
Sex	.81	1.30	.25	2.25	.56	9.12
Positive mentor	.88	.89	.35	2.41	.39	14.90
Family continuity	.22	.05	.82	1.24	.20	7.89
Social support (S) ^a	-.17	.16	.69	.84	.36	1.99
Social service use	.00	.00	.96	1.00	1.00	1.00

* $p < .05$; ** $p < .001$.
^a Residualized change scores

As in the previous analysis testing the ERPM, only months homeless prior to the study emerged as a significant predictor of housing stability ($\beta = -.08$ $p < .05$). Again, a greater number of months homeless prior to the study was related to a lower likelihood of having attained housing stability at follow-up. None of the other individual-level, social-level, or community-level variables emerged as significant predictors of housing stability. The hierarchical logistic regression analysis using residualized change data correctly classified 81.3% of respondents (housed 90+ days yes/no) for the third and final block of variable entry.

Figure 4 shows a histogram of the duration of time homeless (months) prior to Time 1 interview. Youth were homeless for an average of 11.07 months (SD 10.64), although the modal time homeless was 1 month. The range of months homeless was 35 months.

Figure 4. Histogram Depicting Duration of Time Homeless Prior to Time 1 Interview



Predictors of Total Days Housed at Follow-up

Two multiple regressions were calculated in order to test how well the ERPM predicted the second outcome variable, which was total number of days youth were housed at Time 2.

Variable entry followed the same hierarchical order of individual-level, social-level, community-level variables described above. Results of the multiple regression entering Time 1 and Time 2 predictors are presented in Table 5.

Table 5

Results of Hierarchical Multiple Regression Using Time 1 and Time 2 Variables to Predict Number of Days Housed at Follow-Up

Variable	Block	β	R^2 change	R^2
Pro-social tendencies	1	-.02	.18	.18
Empowerment		.12		
Months homeless prior to study		-.39*		
Active coping		-.10		
Sex		.12		
Pro-social tendencies	2	-.05	.03	.21
Empowerment		.11		
Months homeless prior to study		-.38**		
Active coping		-.10		
Sex		.09		
Positive mentor		.18		
Family continuity		.01		
Social support (S)		.03		
Pro-social tendencies	3	-.02	.03	.24
Empowerment		.11		
Months homeless prior to study		-.31*		
Active coping		-.13		
Sex		.09		

Table 5 (continued)

Positive mentor	.18
Family continuity	.01
Social support (S)	.00
Social service utilization	-.19

* $p \leq .05$; ** $p \leq .01$.

The individual-level variables entered into the first block of the multiple regression equation were significant ($F(5, 74) = 3.29, p < .01$), accounting for 18% of the variance. Months homeless prior to the study was the single significant predictor of the number of days housed at Time 2 ($\beta = -.31, p < .01$). Greater number of months homeless prior to the study predicted a lower likelihood of having increased days re-housed at follow-up.

Social-level variables were entered in a second block and accounted for an additional 3% of variance explained. The change in R^2 was not significant. The community-level variable was entered into the third and final block of the hierarchical multiple regression analysis, and accounted for an additional 3% of variance explained. The change in R^2 was not significant. With all variables in the third and final step of the regression equation, 24% of variance was accounted for in relation to predicting total days housed at follow-up, although throughout the analysis the only significant predictor was shorter duration homeless prior to the study, which was entered in the first (individual-level) block of predictors.

As in all previous analyses, changes at Time 2 were examined through re-testing the ERPM with residualized change variables for empowerment and satisfaction with social support. Results of multiple regression predicting total days housed at Time 2 are presented in Table 6.

Table 6.

Results of Hierarchical Multiple Regression Using Residualized Change Data to Predict Total Number of Days Stably Re-Housed at Follow-up

Variable	Block	β	R^2 change	R^2
Pro-social tendencies	1	-.05	.18	.18
Empowerment (T1)		.05		
Months homeless prior to study		-.38**		
Active coping		-.04		
Sex		.11		
Pro-social tendencies	2	-.03	.05	.23
Empowerment (T1)		.08		
Months homeless prior to study		-.37**		
Active coping		-.01		
Sex		.06		
Positive mentor		.18		
Family continuity		.01		
Social support (S) (T1)		.16		
Pro-social tendencies	3	-.01	.02	.25
Empowerment (T1)		.05		
Months homeless prior to study		-.32*		
Active coping		-.05		
Sex		.07		
Positive mentor		.18		

Table 6 (continued)

Family continuity	.01
Social support (S)	.12
Social service utilization	-.16

* $p \leq .05$; ** $p \leq .01$.

^a Residualized change scores

With residualized change data for variables measuring empowerment and satisfaction with social support at Time 2, the individual-level variables entered into the first block of the multiple regression equation were significant ($F(5, 74) = 3.14, p < .05$). Cumulatively, the first block of variables accounted for 18% of the variance explained in the regression equation, in relation to total days housed at Time 2 using residualized change data for the two aforementioned variables. Months homeless prior to the study was the only significant predictor of the number of days housed at Time 2, $\beta = -.32, p < .01$. A greater number of months homeless prior to the study predicted a lower likelihood of having increased days re-housed at follow-up based on residualized Time 2 data.

Social-level variables were entered in the second block and accounted for an additional 5% of variance explained. The change in R^2 was not significant. The community-level variable was entered into the third and final block of the hierarchical logistic regression analysis, and accounted for an additional 2% of variance explained. As with the previous step, the change in R^2 was not significant. With all variables in the third and final step of the regression equation, 25% of variance was accounted for in relation to predicting total days re-housed at follow-up based on residualized Time 2 data. Like the hierarchical logistic regression analysis using Time 1 data for the same outcome, the only significant predictor was shorter duration homeless prior to the study, which was entered in the first (individual-level) block of predictors.

Discussion

It has been observed that the majority of homeless youth do not go on to become homeless adults (Burt, 2007). Less is known about the mechanisms that promote re-housing in youth with histories of homelessness, or what interventions are most effective, although it

appears that intervening when youth are in states of transition or when they are newly homeless (Burt, 2007; Milburn et al., 2005) are the most effective (Auerswald & Eyre 2002).

Results from the current investigation are consistent with previous recent research on re-housing among youth with histories of homelessness conducted in the United States. Similar to Burt (2007), as well as Thompson et al. (2000) the majority of youth in the current study were housed at follow-up. In contrast with Burt's (2007) and Thompson et al.'s studies, youth in our sample were older, more likely to have experienced multiple episodes of homelessness prior to becoming stably housed, and became re-housed independently rather than returning to their family's homes.

The current study proposed and tested an Ecological Resilience Prediction Model (ERPM) which predicted re-housing using dichotomous (i.e., stably housed or not stably housed) and continuous (i.e., length of time housed) measures at follow-up. Youth were re-interviewed (Time 2) two years after baseline (Time 1), at which time they were still homeless.

Individual-Level Findings

To the best of our knowledge at the time of writing this paper, empowerment, prosocial tendencies, and having a positive mentor had not been directly investigated in studies of homeless youth. It was surprising that active coping did not predict re-housing, given findings of negative mental health outcomes in relation to a disengagement style of coping among homeless youth (Votta & Farrell, 2009; Votta & Manion, 2003; 2004). As coping measures were only administered at Time 2, we were not able to examine change over time in the current study. Quite possibly youth are able to become re-housed despite still coping in ways that are more typical of the disengaged style documented in previous studies.

Although both male and female youth were re-housed at high rates at Time 2, female youth in our study were more likely than male youth to be stably housed, and for longer durations at follow-up, which is a finding that is consistent with previous research (Thompson et al., 2000). Unlike the youth in Thompson et al.'s study, however, youth in our sample were older. They were also less likely to have returned to their parents' homes. It may be that female youth were less likely to have spent time in jail than male youth, some of whom commented on having been detained by the youth criminal justice system for offences they had committed while homeless, such as robberies and trespassing between Time 1 and Time 2 interview (i.e. "squatting" on public or private property).

A smaller number of months homeless prior to the study was the sole significant predictor of re-housing within the ERPM. At the level of individual-level functioning, however, Kidd's (2007) cross sectional study of 208 homeless youth found that participants who had been homeless for longer durations experienced greater perceived social stigma due to their homeless status. Perceived stigma was significantly related to "low self-esteem, suicidal ideation, loneliness and feeling trapped" (p.296). Given this population's high rate of completing suicide (Roy et al., 2004), the association between stigma and increased duration of time homeless is noteworthy. It also makes sense that a shorter duration of time homeless prior to the study is linked to achieving housing stability, which was the key finding in the current study. None of the other individual-level, predictors in the current study emerged as significant.

Social-Level Findings

Milburn et al.'s (2005) work anticipated the absence of a relationship between family connectivity between Time 1 and Time 2 interview and re-housing in the current study. With the exception of younger adolescents in their sample who returned to their parents' home, these

authors found that family bonds were related to social and behavioural factors rather than demographic characteristics (such as re-housing) at follow-up 12 months after baseline in their study. Youth-perceived emotional and financial supports at baseline were the best predictors of family connectivity one year after becoming homeless. These findings speak to relational and systemic family outcomes which are important, but do not address the resilient outcome of becoming independently re-housed which was the focus of the current study. Family connectivity did not predict re-housing in our study.

Despite the mixed findings regarding social support in the homelessness literature (Bao, Whitbeck & Hoyt, 2000), we expected that high satisfaction with social support would predict re-housing. The fact that it did not is consistent with other research that has spoken to the complexity of roles, functions, and outcomes associated with peer social networks amongst homeless youth (Ennett, Bailey & Federman, 1999; Rice et al., 2005).

Ennet et al.'s (1999) cross-sectional study of 327 homeless youth found that social networks of homeless youth had both risk-enhancing and risk-decreasing dimensions. Network characteristics determined the relative risk to its members, with the presence of drug and alcohol users in a social network increasing the likelihood of substance abuse (drug and alcohol use) outcomes in addition to pressure to engage in prostitution.

However, there were positive dimensions of social networks. Those whose networks possessed a friend or family member were less likely to engage in survival sex. Network cohesiveness was negatively associated with multiple sex partners. Perhaps most revealingly, isolated homeless youth (i.e., those who reported having no social networks) were significantly more likely to engage in all risky behaviors tested by the authors, which included current

marijuana use, current heavy alcohol use, current illicit drug use, lifetime multiple sex partners, lifetime survival sex and recent unprotected sex.

Finally, Rice et al. (2005) examined how drug use is initiated and changes within peer networks of homeless youth. Important findings in their study were that concentrations of drug using peers shifted based on changes in peer networks over time. Further, peer networks of homeless youth were understood as having members who were “extremely resilient.” The authors acknowledged that beyond drug use, there were interpersonal exchanges such as mutual support and information exchange that were understood as crucial to survival while homeless.

For these reasons it is understood that youth may be both satisfied and dissatisfied with elements of their social support. In turn, because of their attachment to their peer networks where the traditional family unit may have failed them, peer social networks may both help and hinder exits from homelessness. A measure of social support specifically designed for street youth would be a significant contribution to the youth homelessness literature. Such a measure would ideally define youths’ satisfaction with each element of the peer network separately to understand how various domains are cognitively and affectively represented for homeless youth. Results could inform community-based programs for homeless youth at the level of group intervention.

Community-Level Findings

At the univariate level, there was a significant negative association between use of supportive community resources and number of days re-housed, suggesting that services which are wide-ranging play some role in helping youth re-establish stable housing. This relationship makes sense since it is likely that social service providers when working with homeless youth give priority to assisting them to become housed again. This also is consistent with previous

research documenting associations between exiting homelessness in youth who connected well with collaborative and compassionate service providers (Thompson et al., 2006).

Theoretical Models of Youth Homelessness Revisited

Although the ERPM proposed in the current investigation was not supported, we believe it is important for future researchers to continue to examine youth homelessness ecologically, whenever possible. Toro et al., (2007) also encouraged examining the “transactions between individuals and their environments,” and cautioned against focusing on problematic individual factors contributing to or sustaining youth’s homeless circumstances in isolation. To do so is to risk stigmatizing homeless youth by holding them accountable for childhoods and family histories that they have not chosen.

The finding that the most robust predictor of stable housing two years after an episode of homelessness is a shorter duration of time on the street directly supports Auerswald and Eyre’s (2002) Life Cycle Approach of Youth Homelessness. Auerswald and Eyre’s model posited that early exits from street life were the most protective against becoming entrenched within its subculture. Our findings empirically support that model, whereas other variables originating from the developmental psychopathology and resilience literatures examined in our study appear to have less impact on predicting re-housing, at least in the current study.

Limitations

The finding of shorter duration of homelessness prior to the study was the sole significant predictor of re-housing in the current study is a noteworthy contribution to the youth homelessness literature, as it provides an empirically validated standpoint to argue for timely interventions for youth in situations of homelessness. However, there were also limitations associated with the current study. Although our follow-up period of 2 years is longer than other

recent longitudinal studies of homeless youth (Pollio et al., 2006 and Slesnick et al., 2007, both had 1 year follow-up time-frames), we believe that two years may be too short a duration to capture significant developmental shifts, such as changes in coping and sense of empowerment. A study time-frame of five years would more optimally capture shifts in identity and functioning that likely manifest over time. A larger sample size (i.e., $N = 500$) would also strengthen the longitudinal analysis of homeless youth. A limitation of the current study was modest statistical power for hypothesis testing given the ratio of predictors to participants (i.e., 1:9). Finally, it may also be possible that becoming re-housed is a natural phenomenon that occurred as a “regression artefact” (i.e. regression to the mean), wherein a large proportion of youth would become re-housed regardless of the predictors selected in the regression equation.

Adding a qualitative section to the interview protocol querying youth’s experience of their positive mentors may assist in understanding how mentors assist youth. In the current study the role of positive mentors is not significantly associated with becoming re-housed, despite the fact some youth reported having positive mentors.

Policy Recommendations

The United States’ national Family and Youth Services Bureau (FYSB) has revised their system of collecting data on runaway and homeless youth utilizing their services. Upgraded in 2004, the National Extranet Optimized Runaway and Homeless Youth Management Information System (NEO-RHYMIS) collects information on youth demographics, the nature of homelessness services used, and status of youth at exit from services (National Clearinghouse on Families and Youth, 2008). NEO-RHYMIS enables national incidence and prevalence estimates of youth homelessness to be calculated over time. It also facilitates estimating what services may be tied to a better status at exit, such as becoming re-housed and returning to work or school. In

order to develop a better sense of the scope of the problem of youth homelessness in Canada, as well as a sense of what services are effective in relation to status at discharge, a national data collection system similar to NEO-RHYMIS should be developed.

Results from the current study also support implementation of a “Housing First” approach to re-housing older youth with histories of homelessness. Housing First programming originated in New York as an alternative to moving mentally ill homeless adults across incrementally increasing stages of independent living based on adherence to treatment protocols (Tsemberis, Gulcur & Nakae, 2004). In addition to becoming housed earlier, individuals in Housing First programming reported feeling a greater sense of choice over their circumstances, and they were able to maintain their independent housing over time (Tsemberis et al., 2004).

Housing First for older youth such as those in our sample would move homeless youth away from transitional housing and into autonomous stable housing on their own and as quickly as possible. It would provide a safe and accessible alternative for youth who do not have a familial home to return to. Given that longer durations of homelessness are associated with affiliation within the street youth subculture (Auerswald & Eyre, 2002; Burt, 2007), and that waiting lists for subsidized housing are 6 months to 2 years long in many Canadian cities (Watson, 2008), Housing First for older homeless youth is a timely, evidence-based, and effective intervention for this vulnerable population.

For youth entrenched in the street culture, Kidd and Davidson (2006) communicated a recent call for partnerships between research and policy. Rather than focusing on single definitions of positive outcomes amongst homeless youth, such as re-housing and reintegration into mainstream society, these authors suggested adopting methods of defining positive adaptation in the context of youth homelessness. Homeless youth-specific outcomes may be

related to harm reduction strategies for youth with addictions, or moving to sleeping indoors throughout winters if youth were typically sleeping on the street (Kidd & Davidson, 2006).

Kidd and Davidson (2006) also outlined areas of policy and legislation that are problematic for youth in situations of homelessness, which included lack of sufficient discharge planning for youth exiting child welfare, mental health, and detention settings. What is hopeful about these points of intervention from Auerswald and Eyre's (2002) Life Cycle Approach of Youth Homelessness is that they represent points of "disequilibrium" which were proposed by the authors to be prime exits from the street. If adequately funded, sustainable housing could be mapped on to discharge planning, previously homeless youth entering the above-mentioned facilities and systems could be discharged into stabilized housing. In this way homelessness could be prevented among the subgroup of youth that has been historically the most difficult to effectively serve.

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CHAPTER 5.

Participation in School

Contributions

Dr. Tim Aubry and Dr. Fran Klodawsky along with a team of researchers from University of Ottawa, Carleton University, and St.-Paul University developed and conducted the research for the *Panel Study on Homelessness in Ottawa*. The youth participants for the study presented in the manuscript were directly recruited from the *Panel Study*. Ms. Sophie Hyman developed the project and analysed the data for the research on the youth participants presented in the manuscript. Ms. Hyman also conducted the interviews to a large number of the youth that participated in the study. Dr. Aubry supervised the doctoral thesis research presented in this manual. Dr. Klodawsky provided critical feedback on this manuscript prior to its submission to a peer reviewed journal.

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Running head: YOUTH HOMELESSNESS AND PARTICIPATION IN SCHOOL

Resilient Educational Outcomes: Participation in School by Youth with Histories of
Homelessness

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Abstract

Disrupted high school experiences, including drop-out, are educational consequences for many youth with histories of homelessness (Rafferty, Shinn & Weitzman, 2004). Using an Ecological Resilience Prediction Model (ERPM) based upon the literature on resilience in at-risk youth (Bronfenbrenner & Ceci, 1994; Masten, 2000; Reed-Victor & Stronge, 2002), the study followed 82 youth who were initially homeless for a two-year period, in order to identify predictors of participating in school. Female sex and increased duration of re-housing at Time 2 significantly predicted being in school at follow-up. Youth who were not in school reported a greater increase in satisfaction with social support compared to youth who were participating in school at follow-up. The study adds to what is understood regarding the longitudinal consequences of housing instability and discontinuity in school participation in youth by examining ecological predictors of resilience. Implications of findings for policy and program development targeting education and housing for youth are discussed.

Keywords: youth; homelessness; education

Resilient Educational Outcomes: Participation in School by Youth with Histories of Homelessness

Lack of high school education is a key social factor that sustains the disengagement of homeless youth from mainstream society (Commander, Davis, McCabe, & Stanyer, 2002; Grigsby, Baumann, Gregorich, Roberts-Grey, 1990; Wurzbacher, Evans, & Moore, 1991; Zlotnick, Robertson & Lahiff, 1999). Those lacking a high school diploma are at risk of economic disadvantage for the duration of their working years. A consistent finding of the Labour Force Survey conducted in Canada is that quality of life improves in relation to increased education (Statistics Canada, 2007). A high school diploma substantially enhances access to continuing education opportunities through college or university, attendance of which is associated with greater employment (Bowlby, 2005).

Homelessness is at the severe end of a continuum of economic hardship and social exclusion. Accordingly, the United States has created legislation and programming as a national response (National Coalition for the Homeless: NCH, 2006). The Stewart B McKinney Homeless Assistance Act, (renamed the McKinney-Vento Act in 2000) remains the only federally mandated initiative that authorizes and funds specific programs for the education of homeless children and youth (NCH, 2006). Mainstreaming homeless children and youth is an operational goal from which McKinney-Vento educational programs are administered (Hernandez Josefowicz-Simbeni & Isreal, 2006). That is, identifying and tracking homeless young people in school, and extending efforts to decrease barriers in access and academic integration while removing segregation are the values sustaining McKinney-Vento schooling initiatives. As yet there are no nationally unified set of educational programs for homeless youth in Canada akin to those supported through the McKinney-Vento Act in the United States.

High school attendance is a normative task of adolescence in North America.

Expectations that youth attend school are reflected in legislation such that Canada requires high school enrolment until the age of 16 in all provinces except New Brunswick and Ontario, which mandates high school enrolment until the age of 18 (New Brunswick Department of Education Services, 1998; Ontario Teacher's Federation, 2006).

Franklin and Streeter (1995) derived their definition of having a "high school drop out status" from the United States General Accounting Office as "a person neither enrolled in school nor a high school graduate" (p. 435). In terms of prevalence, Dryfoos (1997) states that one of three youth in early to middle adolescence are at high risk of drop out. Youth in difficult circumstances, such as inner city youth, are understood to be at greater risk still (Dryfoos, 1997). A far-reaching consequence of homelessness during adolescence is increased risk of high school drop out.

Youth Homelessness

Annual estimates of the incidence of homelessness in adolescents in the United States have been recently summarized from a variety of sources, such as national databases, and shelter service provider's estimates (Burt, 2007). Yearly estimates of homelessness among youth from 12 to 17 years-old are 1.6 to 1.7 million per year (Burt, 2007). For older youth between the ages of 18 to 19, annual homelessness estimates are from 80,000 to 170,000. No national incidence or prevalence data on homeless youth have been compiled in Canada (Statistics Canada, 2002).

There are numerous barriers to continuous educational participation for homeless youth, and specific barriers to academic participation. These are lack of access to previous school reports, transcripts, and records such as immunization dates. There may be issues of custody in cases of family separation and involvement of child protection agencies, as well as increased

likelihood of psychological and behavioural difficulties arising from multiple concurrent stressful life events associated with multiple moves and housing instability (Hernandez Josefowicz-Simbeni & Isreal, 2006; Masten, Miliotis, Graham-Bermann, Ramirez & Neeman, 1993).

Educational Resilience Among Youth Who Are Homeless

In their provision of a critical evaluation of the construct of resilience, Luthar, Cicchetti and Becker (2000) state that resilience is “a dynamic process encompassing positive adaptation within the context of significant adversity” (p. 543). This conceptualization of resilience is described as being comprised of two essential components: risk or threat, and positive developmental outcomes (Luthar, et al.). Importantly, resilience is dissimilar from invulnerability or stress-resistance, which are constructs that lack longitudinal empirical validity (Masten, 2001).

Hines, Wyatt and Merdinger (2005) examined educational achievement (attending post-secondary school) as a marker of resilience in a sample of former foster youth. Qualitative methods were used to examine a multivariate resilience model amongst 14 participants. Hines et al. (2005) included individual, family, and community levels of variables in their resilience model. Results indicated that variables at each level of the process model were important in arriving at resilient outcomes for participants. At the individual level, having internal locus of control was associated with resilient outcomes, whereas relationships with parental proxies were important at the family level (only a small proportion of participants maintained contact with biological family). Finally, immersion in supportive systems (educational and foster care, respectively) served as important avenues for participants to establish relationships with supportive adults, as well as to serve as “safe havens” for youth (Hines, et al.).

Despite the promise of predictive models to explain resilient processes and outcomes in homeless youth, other research indicates that housing instability and extreme poverty predict poor academic achievement and drop out when comparing groups of economically disadvantaged (but stably housed) and homeless youth (Rafferty, Shinn & Weitzman, 2004). These authors observed that grade retention, under-achievement, and dropout were all more frequent within housed and homeless youth who were significantly more economically disadvantaged than the national average. Their investigation was ecological, with the understanding that academic achievement develops through linkages between the young person's educational experiences and their housing circumstances.

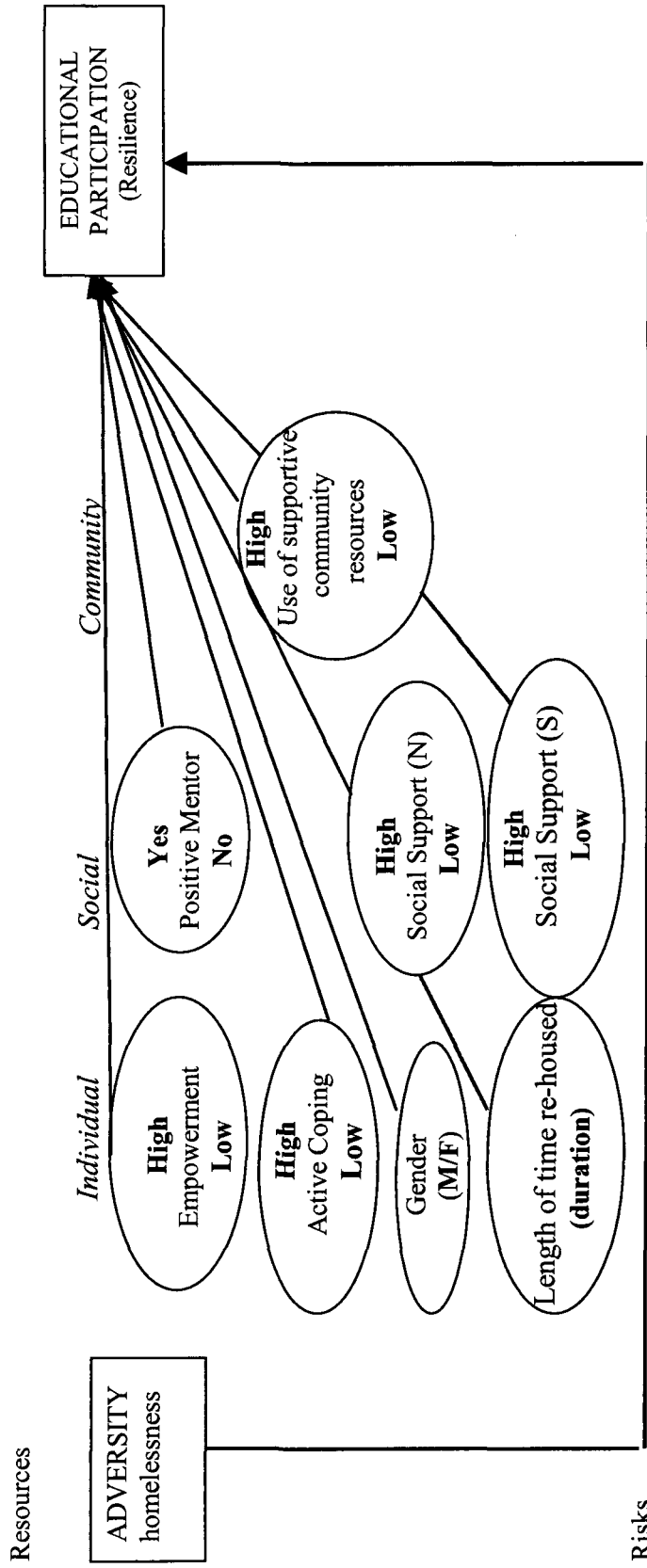
Similar to Hines et al.'s (2005) investigation, educational re-engagement defines the resilient outcome in the current study of at-risk youth. Our Ecological Resilience Prediction Model (ERPM) follows the conceptualization proposed by Luthar, Cicchetti and Becker (2000), and Masten (2001), in that it comprehensively examines variables at the individual-, social-, and community -level.

While examining resilient outcomes regarding education, it is desirable to determine which factors predict educational re-engagement. Importantly for youth with histories of homelessness, assistance in the form of mentorship relationships, as well as connectivity to supportive organizations have been identified as key factors in helping youth exit the streets (Raleigh-Duroff, 2004). However, there has yet to be an investigation that tracks the relative importance of housing status at follow-up, gender, social support and satisfaction with relationships over time, compared with more immediate risks or resources, such as coping style and gender in relation to resilient outcomes (educational re-engagement) in formerly homeless youth.

The purpose of the present study is to test an ERPM created from the resilience, high school drop out, and youth homelessness literatures. More specifically, the research is intended to explain how some adolescents with histories of homelessness are able to participate in school (illustrating educational resilience), despite their adverse circumstances. All youth at baseline were homeless, which is the “adverse” dimension of resilience (Masten, 2001). The resilient educational outcome of interest to this study is “participation in school”, which is determined at follow-up. “Participation in school” reflects the positive adaptation dimension of resilience (Masten, 2001).

The ERPM, created for the study, proposes a set of individual, social, and community predictors of educational resilience among youth who are homeless. In particular, *individual* predictors of educational resilience were longer durations of re-housing, higher levels of empowerment, and higher levels of active coping. Sex was included as an individual variable, to investigate whether homeless male youth, like other vulnerable subgroups of housed male youth (Greene & Winters, 2006) are at greater risk of high school non-completion than female youth. *Social* predictors within the ERPM were having a positive mentor, having larger social networks, and reporting higher levels of satisfaction with social support. The *community* predictor in the ERPM was greater use of supportive community services. The educational ERPM is depicted in Figure 5.

Figure 5. Ecological resilience prediction model of youth homelessness in relation to educational participation



Note: Return to school measured by respondents' yes/no response at Time 2 to the question: *Are you currently in school?*

Method

Participants

The current investigation is part of *the Panel Study on Homelessness in Ottawa* (Aubry, Klodawsky, Hay & 2003). The objective of the *Panel Study* was to examine the pathways into and out of homelessness by following groups of people who were initially homeless over time. Data from the youth participants made up the sample for the current study.

In order to be eligible for the study, youth were absolutely homeless (i.e., did not have their own place in which to live) and were between the ages of 16 – 19 years old at Time 1. Data were collected on 157 youth in the first wave of interviews (Time 1, with 79 male youth and 78 female youth) from October 2002 to October 2003, and on 99 youth in the second wave of interviews (Time 2, with 49 male youth and 50 female youth) from March 2004 to October, 2005. The total number of Time 2 interviews of youth represented 63% of the originally interviewed sample in Time 1.

A total of 17 youth had children less than four years old at the Time 2 interview. Becoming a parent is associated with a new identity, which may not include the same priority on education as non-parent respondents. Although teenage parents with young children may enroll in part-time education programs (and illustrate educational resilience), we expect that their developmental trajectories will be modified by early parenting. Therefore, the data for new parents were not included in the current study. The final sample for the study was made up of 82 youth (i.e., 45 male youth; 37 female youth).

Measures

Duration of re-housing. A variation of the Housing Income and Services Timeline (HIST) (Toro et al., 1999) was used to query the housing history of participants between

interviews, including their housing status at Time 2. Previous research has shown the HIST to have good test-retest reliability (Toro et al., 1997). In addition to location, respondents were asked with whom they were living, what type of housing it was, and whether or not they considered themselves homeless at that address. Respondents were also asked for the dates they left each address, the reasons why they left, and the factors that might have been helpful to keep them housed. Housing duration was coded by dates, which enabled computation of a “days” variable. Total days per site were summed into an aggregate score measuring total number of consecutive days re-housed at Time 2.

Coping. Carver’s two-item Brief-COPE measure (Carver, 1997) was used to measure the level of “active” coping in which participants engaged. Respondents were asked about the extent they agreed or disagreed with different items measuring active coping such as *“I’ve been concentrating my efforts on doing something about the situation I’m in”* (Carver, 1997). In assessing their level of agreement or disagreement, respondents used a four-point Likert-type scale ranging from *“I haven’t been doing this at all”* (1) to *“I’ve been doing this a lot”* (4). Total scores on the two-item scale can range from 1 to 8. Cronbach’s alpha for the Brief-COPE in our study was strong (.79).

Empowerment. The 15-item version of the measure of empowerment created by Rogers, Chamberlin, Langer, Ellison and Crean, (1997) was used in the current study to assess the degree respondents felt in control of their life situation. Examples of items on the scale are *“I generally accomplish what I set out to do”*, and *“People are limited only by what they think possible.”* Response alternatives ranged from *“Strongly Disagree”* (1) to *“Strongly Agree”* (4). Total scores on the 15-item version can range from 15 to 60. Empowerment was measured at both

Time 1 and Time 2 in the current investigation. Cronbach's alpha at Time 1 was acceptable (.66), although stronger at Time 2 (.71).

Presence of a Positive Mentor Relationship. Klaw, Rhodes, and Fitzgerald's (2003) five-item Mentor Relationship Scale (MRS) was used to assess if youth had a positive mentor relationship. A positive mentor is defined as "an adult who is older than you, who has had more experience than you, and who has taken a special interest in you" (Klaw, Rhodes & Fitzgerald, 2003, p. 226).

Youth were initially asked if they had a mentor. If a youth responded 'no', they were scored as not having a positive mentor. If a youth responded 'yes', they were asked to rate the mentor on items such as "*He or she believes in and cares deeply about you*" with responses on a Likert-type scale ranging from 0 (*Not at All*) to 4 (*A Huge Amount*). Possible aggregate scores can range from 0-20. Given the importance of each of the items to the overall mentor construct, failure of a prospective mentor to be rated positively on any item (a "*Not at all*" = 0 appraisal) resulted the youth being rated as not having a positive mentor. Only mentors with an endorsement rate of 80 % or more (total scores higher than 16) were counted as positive mentors. For the current study, using these criteria, a dichotomous measure was created that assessed whether or not a youth had a positive mentor (0 = no, 1 = yes).

Social Support. The 5-item Social Support Questionnaire (SSQ: Sarason, Levine, Basham & Sarason, 1983) was used to determine the size of participating youths' social networks (N) as well as their satisfaction with the support they receive from the people in the network (S). N was measured by summing the number of different individuals listed by participants on the five items which asked participants to list who provided different types of support, and computing an average by dividing the total by five (Sarason, Levine, Basham &

Sarason, 1983). S was measured by asking participants “how satisfied are you with this level of support?” with six response options that ranged from “very dissatisfied” (1) to “very satisfied” (6). A mean score for S were calculated by summing across the five items and dividing by five. Cronbach’s alpha computed for the 5-item SSQ in the current study was .80 for N and .81 for S at Time 1 and .88 for N, and .91 for S at Time 2.

Social Service Utilization. In order to measure the level of social service use, participants were presented a list of 12 different types of social services and asked about their frequency of use for each one of them over the past two years (Aubry, Klodawsky, Nemiroff, & Bonetta, 2007). Respondents were asked “*Since we last interviewed you...did you get help from any of the following social or community services?*” Types of services that were presented on the list were comprised of homeless shelters, community resource and health centres, addictions programs, crisis counselling, religious organizations, housing services, drop-ins, First Nations/Inuit/Métis organizations, supportive housing services, legal services, disability organizations, and food banks. In the case of services which were identified as being used, participants were asked “how many different times did you use these services in the past 2 years?” A total (aggregate) score was created that summed the frequency of each participants’ self-described use of the 12 types of social services that they used between the first and second interviews.

Participation in school. At both Time 1 and Time 2, the Panel Study queried participants: *Are you still in school?* Response options for this question are Yes or No. Non-active involvement in school (such as enrolment without attending) did not qualify as participation. Rather, youth had to be attending classes in order to be considered as participating in school.

Procedures

Research methods implemented in the study were approved by University Research Ethics Board at the University of Ottawa. Participants for the study were recruited from two emergency shelters serving male and female youth, a single men's shelter, a drop-in centre for youth, and a social service agency assisting homeless youth to return to their families located in another city. Staff at these agencies who were familiar with the *Panel Study* and with their youth clientele invited potential participants meeting the eligibility criteria of age (i.e., 16-19 years old) and housing status (i.e., absolutely homeless) to meet with a member of the research team if they were interested in participating in the study. Subsequent to providing informed consent, participants were interviewed in a private area in emergency shelters or drop-in centres. Youth were paid \$20 for their participation at Time 1 interview. The duration of initial interviews ranged from 30 to 180 minutes with a mean of 81 minutes. The majority of Time 1 interviews were completed in English 152 (96.8%), with 5 (3.2%) completed in French. One Arabic interpreter was used for facilitation with the English language.

To facilitate follow-up and Time 2 interview, youth were asked at Time 1 interview to provide contact information on as many individuals in their social and care-providing networks as possible. E-mail addresses were useful in tracking youth over time, as many of them had free on-line accounts that they checked regularly. Approximately one year after the initial interview, tracking procedures were undertaken to follow up with Panel Study participants, in order to: (1) ensure that contact information was still valid, (2) to remind participants of the study and our ongoing wish to interview them a second time, (3) to provide a sense of connectivity to participants, so that the follow-up contact for the second interview would be anticipated (Aubry, Klodawsky, Hay, Nemiroff & Hyman, 2004).

Youth were invited for follow-up interviews approximately two years after the first interview. Time 2 interviews were conducted at a secure and private location in a community agency near participants' residences. Follow-up interviews ranged from between 35 and 165 minutes with an average of 91 minutes. Participants were paid \$30 for Time 2 interviews.

Results

Housing and Educational Status at Time 2

Of the 82 youth participating in the follow-up interview, 65 (79.3%) reported living in stable housing, measured by having a residence one paid rent for or owned and lived in for a duration of 90 days or longer. Significantly fewer male (71.1%) than female (89.2%) respondents reported living in stable housing $\chi^2 (1) = 4.04, p. < .05$. In terms of duration, male respondents had been re-housed on average for fewer days ($M = 348.58$ days, $SD = 287.64$) than female respondents ($M = 430.70$, $SD = 231.80$) at Time 2, $t (80) = -13.10, p. < .001$.

A minority of participants (28%) reported participating in school at Time 2. Of those who were in school, more than twice the number of female youth (43.2%) compared to male youth (15.6%) were current students $\chi^2 (1) = 7.71, p. = .01$.

Table 7

Descriptive Statistics of Predictors of Return to School

Variable	N	M or %	SD
<i>Individual-level</i>			
Duration of re-housing (days) (T2)	82	378.48	257.33
Active Coping (T2)	82	5.63	1.71
Empowerment (T1)	82	41.99	5.39
Empowerment (T2)	82	41.86	5.53
Positive mentor (T2)	82	24.4%	--
<i>Social-level</i>			
Social support (N) (T1)	82	2.02	6.18
Social support (N) (T2)	82	2.28	6.37
Social support (S) (T1)	82	4.83	1.02
Social support (S) (T2)	82	5.28	0.95
<i>Community-level</i>			
Social service use (contacts) (T2)	82	756.15	376.16
<i>Educational Status</i>			
Participation in school (T2)	82	28.0 %	--

* $p \leq .05$; ** $p < .01$

Model Testing

The ERPM was tested through two sequential logistic regressions predicting participating in school at Time 2. Table 7 presents the mean and standard deviation for the predictor variables measured in the study. Variables were entered into the regression equation in blocks, with the first block comprised of individual-level variables (i.e., sex, active coping, empowerment, duration of housing), the second block social-level variables (i.e., size of social network (N) and satisfaction with social support (S)) and the third block, the community variable (i.e., level of utilization of social services). In the first regression, Time 1 measures of empowerment and social support (N and S) are entered as predictors. In the second regression, residualized change scores for these measures are entered as predictors.

Table 8 presents the results of the sequential logistic regression equation with Time 1 measures entered as predictors.

Table 8

Results of Sequential Logistic Regression Using Time1 Predictors of Empowerment and Social Support (N and S)

Variable	Block	β	Wald	α	Odds Ratio	95% Confidence Interval	Lower	Upper
			Criterion					
Sex	1	1.41*	6.37	.01	4.09	1.40	1.40	12.21
Active coping		-.00	.00	.99	1.00	.70	.70	1.50
Duration of re-housing (Time 2)		.00*	4.37	.04	1.00	1.00	1.00	1.00
Empowerment		.05	.54	.46	1.50	.92	.92	1.19
Sex	2	1.37*	5.68	.02	3.94	1.28	1.28	12.15
Active coping		-.03	.03	.87	.97	.65	.65	1.43
Duration of re-housing (Time 2)		.00*	3.82	.05	1.00	1.00	1.00	1.00
Empowerment		.06	.81	.37	1.07	.93	.93	1.22
Social support (N)		-.19	.44	.51	2.09	.48	.48	1.44
Social support (S)		.05	.21	.89	1.05	.52	.52	2.14
Positive mentor		.74	1.43	.23	2.09	.63	.63	6.99

Table 8 continued

Sex	3	1.46*	5.97
Active coping		-.02	.01
Duration of re-housing (Time 2)		.00	2.57
Empowerment		.05	.46
Social support (N)		-.15	.29
Social support (S)		-.02	.00
Positive mentor		.85	1.76
Social service utilization		-.00	3.40

* $p \leq .05$; ** $p \leq .001$.

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.02	4.32	1.34	13.98
.93	.98	.66	1.47
.11	1.00	1.00	1.00
.50	1.05	.92	1.20
.59	.86	.50	1.49
.96	.98	.47	2.04
.18	2.33	.67	8.16
.07	1.00	1.00	1.00

Among individual-level variables, sex and duration of re-housing emerged as significant predictors of educational resilience using Time 1 predictors. Sex was a significant predictor ($\beta = 1.41, p. <.01$) in the direction of female youth being more likely to be in school at follow-up than male youth. The odds ratio for sex in the full model (4.32) indicates that female youth are four times more likely to be participating in school at follow up compared to male youth. Duration of re-housing was also a significant predictor of being in school ($\beta = .00, p. < 0.04$). A longer duration of re-housing predicted a greater likelihood of participating in school at follow-up. Active coping and empowerment were not predictive of participation in school at follow-up.

None of the social predictors (i.e., size of social network, satisfaction with social support, presence of a positive mentor) emerged as being significantly associated with participation in school at follow-up.

Level of social service utilization was entered in the third and final block of the ERPM. It approached significance ($\beta = .05, p. =.07$) in the direction of lower levels of social service utilization predicting being in school at Time 2.

The results of the ERPM presented in Table 2 correctly classified 74.4% of respondents (still in school yes/no) for the first block of variable entry, 72.0% for the second (social) block, and 73.2% for the third (community) block.

Table 9 presents results of sequential logistic regression testing the ERPM model using residualized change scores on measures of empowerment entered in the first block of predictors and social support (N and S) entered in the second block.

Table 9

Results of Sequential Logistic Regression Testing Residualized Change Variables Across Time 1 and Time 2 Data

Variable	Block	β	Wald	α	Odds Ratio	95% Confidence Interval	Lower	Upper
			Criterion					
Sex	1	1.41*	6.37	.01	4.09	1.40	1.40	12.21
Active coping		-.00	.00	.99	1.00	.70	.70	1.50
Duration of re-housing (Time 2)		.00*	4.37	.04	1.00	1.00	1.00	1.00
Empowerment		.05	.54	.46	1.50	.92	.92	1.19
Sex	2	1.37*	5.68	.02	3.94	1.28	1.28	12.15
Active coping		-.03	.03	.87	.97	.65	.65	1.43
Duration of re-housing (Time 2)		.00*	3.82	.05	1.00	1.00	1.00	1.00
Empowerment		.06	.81	.37	1.07	.93	.93	1.22
Social support (N)		-.19	.44	.51	2.09	.48	.48	1.44
Social support (S)		.05	.21	.89	1.05	.52	.52	2.14
Positive mentor		.74	1.43	.23	2.09	.63	.63	6.99

Table 9 continued

Sex	3	1.46*	5.97
Active coping		-.02	.01
Duration of re-housing (Time 2)		.00	2.57
Empowerment		.05	.46
Social support (N)		-.15	.29
Social support (S)		-.02	.00
Positive mentor		.85	1.76
Social service utilization		-.00	3.40

* $p \leq .05$; ** $p \leq .001$

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.02	4.32	1.34	13.98
.93	.98	.66	1.47
.11	1.00	1.00	1.00
.50	1.05	.92	1.20
.59	.86	.50	1.49
.96	.98	.47	2.04
.18	2.33	.67	8.16
.07	1.00	1.00	1.00

Among individual predictors, sex was again a significant predictor in the residualized approach to model testing ($\beta = 1.37, p. < .05$). According to the Wald criterion for the full ERPM, female sex reliably predicts being in school, $z = 5.47 p. < 0.01$. The odds ratio for sex in the full model using Time 2 residualized change scores (4.47) indicates that female youth are more than four times more likely to be educationally re-engaged at follow up compared to male youth. Duration of re-housing was also significant in the first step of variable entry ($\beta = .00, p. < .01$) in the direction of a longer duration of re-housing being associated with being in school at follow-up.

Among social predictors, changes in satisfaction with social support (social support S) as measured by residualized change scores significantly predicted being in school ($\beta = -.81, p. = .05$). To determine the nature of the relationship between changes in social support (S) and schooling status at follow-up, changes in raw scores measures on satisfaction with social support (S) were compared between youth who were in school at follow-up and youth who were not in school at follow-up.

Figure 6 presents a graph of changes in satisfaction with social support (S) for the two groups. As shown in Figure 6, youth who were in school at follow-up showed no change in satisfaction with social support over the course of the study. In contrast, youth who were not in school, reported an increase in satisfaction with social support over the course of the study ($t(80) = -3.97, p. < .01$). Moreover, youth who were out-of-school reported greater satisfaction with social support at Time 2 than those in school ($t(80) = 1.28, p. < .05$).

Figure 6. Time 1 and Time 2 social support (S) by school status

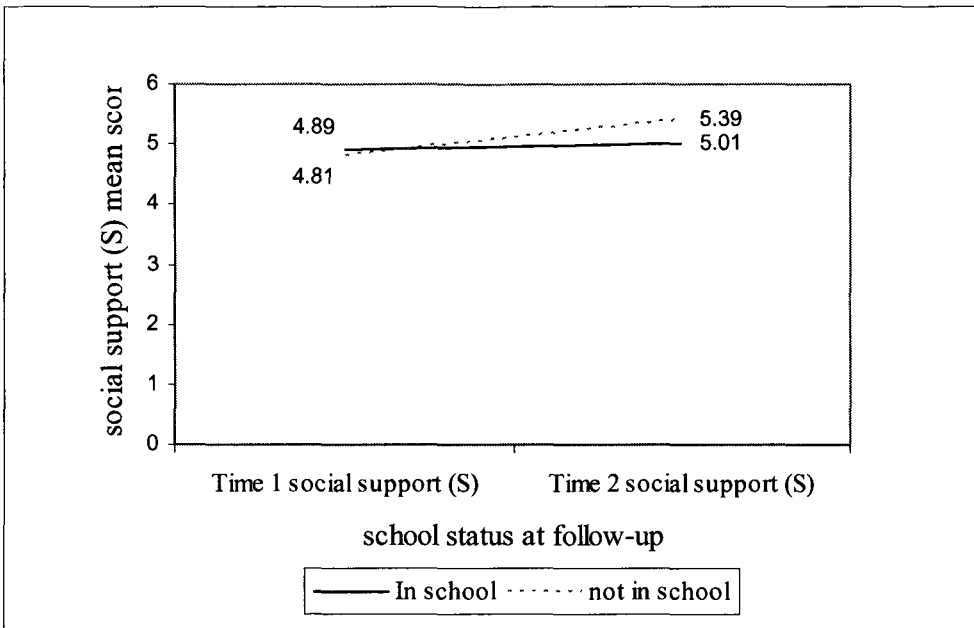


Figure 6 presents a graph of changes in satisfaction with social support (S) for the two groups. As shown in Figure 6, youth who were in school at follow-up showed no change in satisfaction with social support over the course of the study. In contrast, youth who were not in school reported an increase in satisfaction with social support over the course of the study ($t(80) = -3.97, p < .01$).

Social service utilization was entered in the third and final block as a community-level predictor in the ERPM, and was not significant as a predictor of being in school at follow-up.

The ability of the model (using Time 2 residualized change scores on measures of empowerment and social support N and S) to correctly classify respondents improved at each step of variable entry; 69.5 % at Block 1, 75.6% at Block 2, and 76.8% at Block 3.

Empowerment, active coping, and having a mentor did not emerge as significant predictors of the resilient outcome (participation in school) in either version of the model testing.

Discussion

The current investigation utilized longitudinal data on variables identified in resilience research to predict positive educational outcomes in youth at-risk. To capture both baseline measures within our sample, as well as longitudinal estimates of change, the Ecological Resilience Prediction Model (ERPM) was tested using two approaches; (1) both raw score Time 1 data and (2) residualized change score values on variables that had longitudinal data (empowerment; social support N and S at Time 2).

Despite the theoretical promise of Ecological Systems Theory (Bronfenbrenner, & Ceci, 1994) in comprehensively examining youth's social context, only some of the variables in the ERPM were supported as predictors of educational participation at follow-up. However, we believe it is important for future research to continue to examine youth homelessness

ecologically, whenever possible. Toro, Dworsky and Fowler (2007) encouraged examining the “transactions between individuals and their environments,” and cautioned against focusing on problematic individual factors contributing to or sustaining youth’s homelessness. To do so is to risk stigmatizing homeless youth by holding them accountable for childhoods and difficult family histories that they have not chosen.

Individual Predictors of Being in School

Building from the finding that some subgroups of male youth are at a higher risk of high school dropout than female youth among housed adolescents (Greene & Winters, 2006), an important contribution of the current investigation is the role of sex in educational engagement within our sample of youth with histories of homelessness. Greene and Winters (2006) examined high school completion by sex and race, and found that certain subgroups of both male and female youth were at risk of drop-out. The authors also noted a substantial “gender gap in graduation rates,” (p.1) such that female youth were more likely to graduate than male youth. Similarly, our results found that female sex was a significant predictor of educational participation at follow-up. When followed longitudinally, female youth with histories of homelessness were more likely to participate in educational programs than male youth.

We do not debate that both female and male youth who are homeless are vulnerable to high school dropout and social exclusion, and that special efforts are required to engage youth with histories of homelessness in continuing their education, particularly once their housing situation becomes stabilized. However, other research indicates that male youth have less positive school experiences, are more likely to be disciplined, and are more frequently held back a grade or more in school (Stearns & Glennie, 2006). As well, other research indicates that certain subgroups of male youth drop out with greater frequency than female youth (Greene &

Winters, 2006). Our research on homeless youth supports and extends these previous findings, suggesting that male youth with histories of homelessness require additional efforts to be educationally engaged.

In addition to the factors reported by educational research amongst housed male youth that support our findings, it is also possible that male youth in our sample were educationally disengaged at follow-up because they were working. Future longitudinal studies of resilient outcomes in youth with histories of homelessness might usefully examine the role of entrance into the workforce as a positive outcome, indicating alternative normative role transition into early adulthood.

Longer durations of re-housing predicted being in school at follow-up. This finding makes sense, given that the security afforded by stable housing would liberate youth to focus their energy and resources on stabilizing other areas of their life, such as education. That being in school is predicted by stable housing is a noteworthy outcome with important policy implications. Based on our findings, youth with histories of homelessness who have attained stable housing appear to be utilizing resources and opportunities as stepping-stones to secure a more positive future. Assisting youth who are experiencing homelessness to become stably housed needs to be part of any program intended to facilitate the re-engagement of youth into educational activities.

These results are consistent with research on disengagement and social exclusion arising from prolonged homelessness (Grigsby, Baumann, Gregorich & Roberts-Gray, 1990). It makes sense that experiencing housing stability can serve as an important precursor for youth to be in school. The uncertainty and lack of security and structure associated with being homeless makes it very difficult to participate in schooling on a regular basis.

Isolation in Grigsby et al.'s (1990) research was related to outcomes of increased vulnerability and distress, which increased in magnitude with duration of homelessness. Votta and Manion (2004) also found disengagement coping, poor mental health, and suicidality to be prominent risk factors in homeless youth. Findings from these studies provide both a social and psychological context to our results, which confirm that homeless youth are socially excluded from mainstream educational participation.

Despite the findings in the resilience literature that active coping and empowerment were protective internal resources for homeless and at-risk youth, they were not significant predictors of educational resilience in our study. It is uncontested that these factors are assets, enhancing positive adaptation in vulnerable young people. However they may predict other developmentally normative tasks such as regaining stable housing, entering the workforce, or overcoming challenges with mental health functioning, which were not predicted outcomes in the current study.

Social Predictors of Being in School

Youth who were in school at follow-up reported no change in their levels of satisfaction with social support, while those not in school experienced increases in their levels of satisfaction. This is a surprising finding that runs counter to what was expected. It is possible that youth who are not in school have more time to invest in their social relationships particularly if it is with other youth who are not in school and may also be homeless. It is important to note that the mean for both groups, those in school and not in school, is relatively high, suggesting that youth in the study regardless of their educational status are satisfied with the social support they are receiving from people involved in their lives.

The lack of a relationship between having a positive mentor and being in school at follow-up is also surprising. We suspect mentorship was a non-significant predictor of educational participation at follow-up because youth were still engaged with the same social networks formed when they were homeless. It is possible that the amount of time of the study is insufficient for mentors to influence youth to participate in schooling. It is also possible as suggested above as an explanation for the lack of relationship between empowerment and active coping, that having a positive mentor contributes to resilience in areas of a youth's life other than schooling (e.g., housing, relationships, work).

Community Predictor of Being in School

The inability of social service utilization to predict being in school may be the result of insufficient statistical power. Strength for this conclusion exists by considering that social service utilization approached significance in the ERPM. The relationship suggested that greater use of social services was associated with not being in school. A plausible interpretation of this relationship is that youth who are in school are experiencing greater stability that necessitates them to access less services. As well, a lot of their needs are also likely to be met by services and supports available through the schools that they attend.

Implications for Program and Policy Development

Education. We believe that the importance of educational needs of homeless youth must be acknowledged through national policy and educational programming similar to the McKenny-Vento Act in the United States. Federal initiatives such as the McKenny-Vento Act provide organization and infrastructure to programming efforts, which we believe are key to implementing, evaluating, and improving educational programming.

We also feel it is important to involve youth in program conceptualization, development, and delivery. Provincial initiatives (Children's Mental Health of Ontario, 2007) such as the New Mentality, a Youth Engagement Project, exist specifically for the purpose of meaningfully recruiting the expertise of young people to advocate for their needs within mental health, child welfare, and other systemic services.

If mentorship programs were initiated as part of support for youth with histories of homelessness to re-engage in school, perhaps advertised through drop-in services frequented by homeless youth, then the protective mechanism of having a mentor in relation to educational resilience may be observed (Klaw, Rhodes, & Fitzgerald, 2003). The salutary effect of mentorship through educational transitions would likely be protective for both male and female youth.

We feel strongly that youth-friendly adaptable educational programs made visible, available, and non-threatening to homeless youth are essential. These programs must be able to work with anticipated gaps in knowledge and learning that are likely in a population whose schooling experiences have been disrupted by homelessness.

Housing. Results from the current study also support implementation of a "Housing First" approach to re-housing youth with histories of homelessness. Housing First programming originated in New York as an alternative to moving mentally ill homeless adults across incrementally increasing stages of independent living based on adherence to treatment protocols (Tsemberis, Gulcur & Nakae, 2004). In addition to becoming housed earlier, individuals in Housing First programming reported feeling a greater sense of choice over their circumstances, and they were able to maintain their independent housing over time (Tsemberis, et al., 2004). Results from this study demonstrated that once youth stabilized their housing they were more

likely to participate in school. Housing First for homeless youth would move them away from transitional housing and into autonomous stable housing on their own, as quickly as possible. It would provide a safe and accessible alternative for youth who do not have a familial home to return to.

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CHAPTER 6.

Employment

Contributions

Dr. Tim Aubry and Dr. Fran Klodawsky along with a team of researchers from University of Ottawa, Carleton University, and St.-Paul University developed and conducted the research for the *Panel Study on Homelessness in Ottawa*. The youth participants for the study presented in the manuscript were directly recruited from the *Panel Study*. Ms. Sophie Hyman developed the project and analysed the data for the research on the youth participants presented in the manuscript. Ms. Hyman also conducted the interviews to a large number of the youth that participated in the study. Dr. Aubry supervised the doctoral thesis research presented in this manual.

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Resilient Outcomes in Youth with Histories of Homelessness: Participating in the Work Force

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Abstract

Resilience is understood as positive adaptation in the context of adverse circumstances (Luthar, Cicchetti, & Becker, 2000). Homelessness during adolescence poses a serious threat to the ability to engage in developmentally normative tasks such as emerging employment experience (Kipke & Unger, 1997). Participation in the work force can be considered a resilient outcome for youth with histories of homelessness. Little is known about stable employment in youth with histories of homelessness, in part due to the significant difficulties in tracking them over time (Burt, 2007). We interviewed 82 youth who were initially homeless twice over a two-year period. An ecological model predicting employment at follow-up was developed, based on a review of the resilience and youth homelessness literature. The model was tested using both continuous and dichotomous resilience measurement approaches, as recommended by Masten et al., (1999). Analyses using Time 1 data revealed significant relationships between size of social network, drug use, and employment, although these relationships were no longer present at follow-up when the majority of the sample (79.3%) were re-housed. Predictors of employment using Time 2 residualized change data were increased social networks, decreases in alcohol use, and decreases in mental health functioning. Although improved mental health was reported by the overall sample at Time 2, youth who were employed showed relative decreases in their mental health functioning compared to youth who were not employed. Results call into question whether employment is an ideal indicator of resilience in this population. To the best of our knowledge, this is the first study to systematically address how employment interacts with positive developmental adaptation in a sample of youth with histories of homelessness.

Resilient Trajectories in Youth with Histories of Homelessness: Participation in the Work Force

Resilience is generally understood as positive adaptation in the context of adversity (Masten, 2000). Enrollment in and attendance of high school is considered a normative task of adolescence in North America. In Canada, provincial legislation mandates educational participation of young people up to the age of majority. Therefore, educational participation amongst youth whose education was disrupted by homelessness is understood as a resilient outcome.

Early work experience is also considered a normative developmental task, although its priority is secondary to educational participation in youth. Experiences of homelessness often disrupt educational continuity, increasing the risk of high school dropout (Hyman, Aubry & Klodawsky, 2009).

The purpose of the current study is to identify the factors that are associated with employment in youth with histories of homelessness. Specifically, employment is a resilient outcome being predicted by factors elaborated upon in an ecological model based on the literature on adolescent homelessness. Addressing quality of employment was beyond the scope of the current study.

Stressors and Support Associated with Youth Homelessness

The stressors encountered by homeless youth are significant. Many homeless youth describe unstable family environments characterized by maltreatment, which has led them to early departure from the family home (Ginzler, Bryan, Cochran, Domenech-Rodriguez, Cauce & Whitbeck, 2003; Gary, Moorhead & Warren, 1996). Homeless youth report greater rates of maltreatment, sometimes resulting in removal from home by child protection or running from homes in which they report feeling unsafe (MacLean, Embry & Cauce, 1999). The well-

documented consequence of adverse home environments and youth's entry into homelessness is reflected in the elevated reports of distress, mental illness, and self-endangering behaviour in this population (Smart & Adlaf, 1991; Whitbeck, Hoyt & Bao, 2000; Roy et al., 2004; Votta & Manion, 2004).

The subculture surrounding homeless youth has been shown to possess both supportive and destructive elements (Ennett, Baily, Federman, 1999). Social support provided by peers in similar (homeless) circumstances may foster strong attachments that buffer the social exclusion inherent in homelessness. However attachment to other homeless youth may also facilitate substance use and exposure to criminal networks through the sex and drug trades.

Recent findings on the manner that many youth navigate the risks associated with homelessness are compelling. Rice et al., (2005) examined the influence of peer networks on drug use among homeless youth. Their results indicated that although youth without histories of drug use may initially use drugs when entering a social network of other homeless youth who are drug users, their drug use drops off once they have "prove[en] they are 'down' "(p.1118, 2005). In other words, using drugs initially when joining a pre-existing social network of drug-using homeless youth may prove that newcomers are accepting of the groups' norms. Once accepted to the group, youth new to the social network benefit from access to resources and information, which may facilitate exiting homelessness and re-integration to mainstream society. Importantly, drug use was shown not to persist for many youth after initially using when joining the pre-existing social network of other homeless youth (Rice et al., 2005).

This research suggests that many homeless young people are able to negotiate costs and benefits of risk-taking behaviour (in this case drug use) without necessarily progressing towards longstanding problematic patterns of substance use over time. Gains in social capital, even in

unconventional (drug using) social networks appears to be at least one factor that facilitates the exit from homelessness for the proportion of youth who do not continue to be homeless, or develop serious substance abuse problems in their emerging adult years.

Employment During Adolescence

Elements of the research focused upon employment during the high school years do not apply to youth who are homeless, such as employment's domestic impact (participation in chores, hours spent watching television, and so on). However, the longstanding debate of whether youth employment complements or eclipses educational participation and achievement (Kusum, 1998, Oettinger, 1999, Schoenhals, Tienda & Schneider, 1998) is applicable to a homeless youth population, particularly in relation to understanding resilient outcomes.

Because of their circumstances, homeless youth may be more likely than housed youth to accept and work for longer hours at jobs they do not enjoy, with school becoming a secondary consideration until re-housing is stabilized. In the current investigation, becoming re-housed through employment is considered to be indicative of a positive developmental trajectory, and employment itself is considered a resilient outcome. However if employment is characterized by work-related stress and job dissatisfaction, and if working excludes educational participation, there are understood to be costs to youth who work.

Mortimer, Finch, Shanahan and Ryu (1992) controlled for socio-economic and demographic characteristics in relation to behavioural and mental health outcomes in their study of 1001 employed ninth graders. Survey data were collected querying employment status, job type, and weekly hours, alongside a variety of well-validated measures of psychosocial functioning and general well-being. Parents provided data related to SES and their own educational and employment history (Mortimer et al., 1992). Results indicated that working a

small number of hours (that is, less than their sample's weekly average, which was 11.44 hours) was associated with favourable outcomes, such as less school-related problem behaviour, and a greater internal locus of control, higher levels of well-being for males, and less alcohol and nicotine use reported by females.

These authors also observed that positive gains associated with youth employment were lost as work intensity increased beyond the weekly mean (Mortimer et al., 1992). Females reported greater rates of depressed affect, negative self-talk, lower perceived well-being, and external locus of control when their employment was misaligned with their desired future career. For males, work stress was associated with alcohol use, and similar negative mental health outcomes endorsed by female youth, when they perceived that current job skills would not lend themselves to future employment. In sum, these authors found that it was the nature of youth employment and its consistency with future vocational aspiration that determined its impact on behaviour and mental health functioning, with youth working a manageable number of weekly hours showing gains in global well-being (Mortimer et al.).

With respect to heavy weekly employment schedules during the high school years, other research on housed youth has reported significant associations with substance abuse. Youth working 21 to more than 31 weekly hours was associated with binge drinking, marijuana and cocaine use in a study conducted on a representative ($N = 4800$) sample of American high school students (Valois, Dunham, Jackson, Waller, 1999). The results supported the authors' hypotheses that employment beyond modest part-time weekly hours was associated with a host of health risk behaviours. Severity of substance use increased proportionately with increasing intensity of weekly hours worked by youth in the sample (Valois et al., 1999).

Although they were conducted on samples of housed youth, results of these studies inform understanding of the costs associated with employment for youth in situations of homelessness. It is important to acknowledge that in a homeless youth population, job selection and hours employed per week are hypothesized to be dictated by the urgency of securing basic needs while homeless and newly re-housed, rather than job preferences and consideration of well-balanced schedules. These studies demonstrate well the costs associated with employment in youth, above and beyond academic considerations (Mortimer et al., 1992; Valois et al., 1999). Nevertheless, employment may be the factor responsible for re-housing in youth with histories of homelessness. Further, employment itself is considered to be a resilient outcome, as joining the work force, particularly for those who are not attending school, is considered to be a developmentally appropriate task of emerging adulthood. As such it is considered to be an indicator of resilience in the current investigation, although the risks associated with youth employment documented in the research on youth employment are understood to be present, and potentially amplified among youth who are homeless.

Employment in Homeless Youth

A recent cluster of studies have used employment as an outcome measure in examining the efficacy of short-term (Thompson et al., 2002) and longer-term/follow-up (Pollio et al., 2006, Slesnick, Kang, Bonomi & Prestopnik, 2007) evaluations of shelter and drop-in services for homeless youth.

Thompson et al. (2002) evaluated ten outcome variables at intake, and six-weeks after having received shelter services that lasted an average of 15 days. Outcomes were compared to a matched comparison group of N=47 housed youth receiving intensive mental health services for crisis intervention. Multivariate analyses revealed significant increases in employment and

decreases in being fired amongst the N=261 homeless youth who were interviewed at intake and post-discharge. Results were consistent among the matched comparison sample, leading to the conclusion that timely and intensive mental health crisis and homelessness/shelter services could remediate many of the developmental trajectories that had been disrupted by homelessness, or acute distress in the comparison sample. Notably, seventeen percent of the homeless sample had used post-discharge employment services, with similar rates of legal, health, and mental health service utilization which were brokered through discharge planning (Thompson et al.).

Longer-term studies examining outcomes in relation to homeless shelter and drop-in center services reported different findings. Slesnick et al., (2007) tracked baseline, six, and-twelve month outcomes in their study of N=172 youth receiving therapy and case management services through a homeless youth drop-in centre. Results indicated no difference in rates of employment over time, although the authors observed that longer durations of re-housing were significantly related to decreases in alcohol drug use (Slesnick et al.).

Significant change in employment was observed in Polio et al's (2006) longitudinal study of homeless shelter outcomes. However, youth were *less* likely to be employed at six-month versus six-week follow-up, which was interpreted as attenuation of the impact that shelter services had initially delivered. Polio et al. provided thoughtful commentary regarding the nature of services for North American homeless youth (short-term; intensive; associated with acute situations of homelessness), and suggested that a more sustained period of intervention would likely be tied to maintenance of more positive change over time. Polio et al. recommended follow-up services after discharge, substance abuse treatment, and family involvement whenever possible, particularly regarding planning the transition out of homeless shelter services, when youth newly re-housed may be most vulnerable to becoming homeless again.

Youth Homelessness and Resilience

Consideration of the events and circumstances that follow adversity (making resilient outcomes more or less likely) enable a comprehensive understanding of resilience mechanisms. In particular, longitudinal research that considers the individual young person, their social environment, and their greater socio-cultural context is recommended to understand resources and risk factors associated with resilient outcomes (Rutter, 2007).

Bronfenbrenner's (1989) theory of Social Ecology places individuals at the centre of a complex interplay of environmental and interdependent dimensions that both influence and respond to the individual. In other words, an individual's behaviour and experience is influenced by their individual characteristics, social networks, and community context. Ensuring that environmental factors are accounted for when considering predictors of resilience for youth who are homeless is important, as resilient outcomes are not a function of individual characteristic operating in isolation (Clapham, 2003; Luthar, Cicchetti & Becker, 2000).

In consultation with literature on adolescent homelessness and resilience, we selected predictors that were representative of individual functioning (i.e., mental health functioning and frequency of substance use), size and satisfaction with social networks, as well as frequency of using community services.

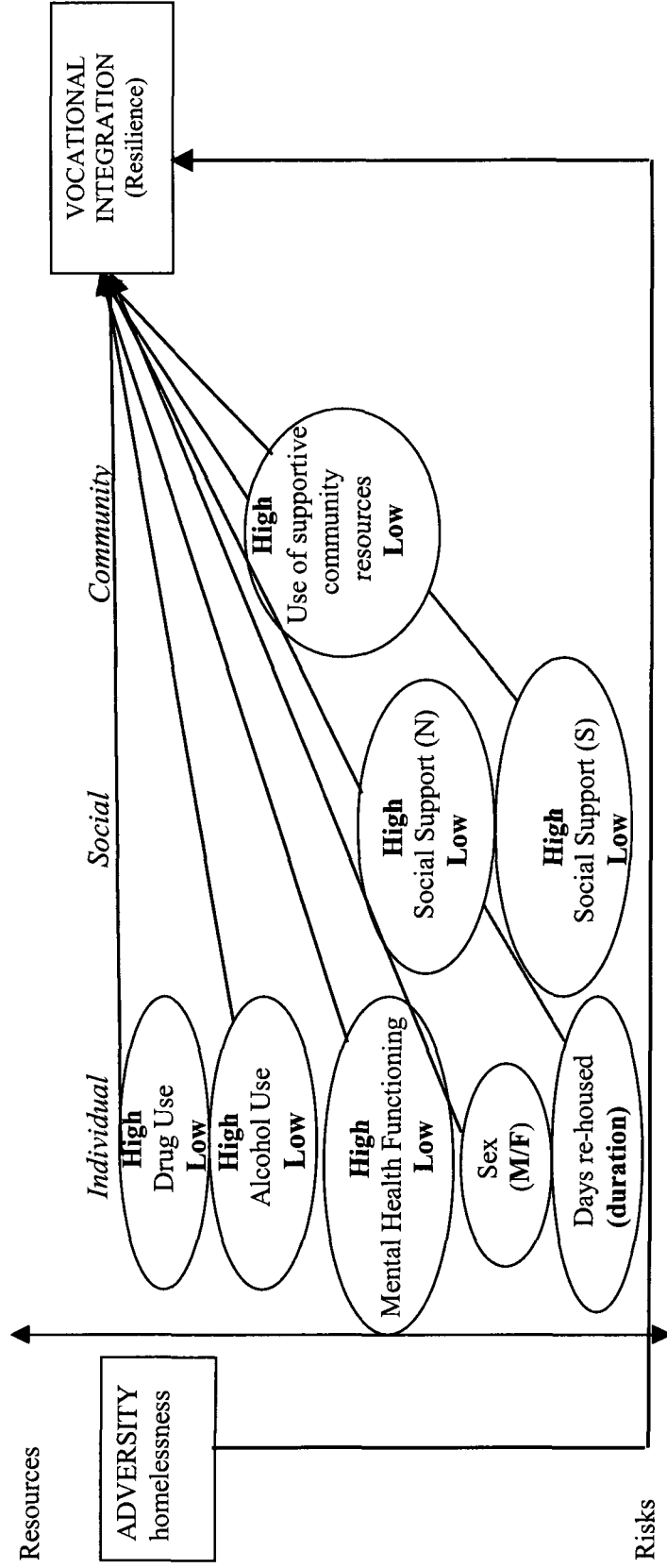
As shown in Figure 7, the model being tested in the current investigation is based upon an Ecological conceptualization of resilience, in which a combination of *individual*-, *interpersonal*-, and *community*-level factors predict the resilient outcome of being stably employed after a period of homelessness. *Individual* predictors in the model were sex, duration of re-housing at follow-up, level of mental health functioning, level of drug use, and level of

alcohol use. *Interpersonal* predictors were size and level of satisfaction with social networks.

The *community* predictor was level of use of supportive social/community resources.

Based on the model, it was hypothesized that being female, having higher levels of mental health functioning, engaging in lower levels of drug and alcohol use, being housed a longer duration, reporting greater satisfaction with social support, and having a greater use of social and community services would be associated with being stably employed.

Figure 7: Ecological resilience model predicting vocational integration



Note: Stable employment/vocational integration measured in the following three ways:

- 1 Employment at same worksite at follow-up for 90 days or longer (yes/no)
- 2 Number of days continuously employed at follow-up

Method

Participants

Data for this research were collected as part of the *Panel Study on Homelessness in Ottawa*, a longitudinal study focusing on identifying predictors facilitating or impeding exits from homelessness (Aubry, Klodawsky & Hay, 2003). For the present study, data collected from participants in the male and female youth subgroups were used (N=157 at Time 1; n=79 males, n=78 females; N=99 at Time 2; n=45 males, n=37 females). In line with the definition of the population served in emergency shelters for youth in Ottawa, “youth” were represented in the study by young people between 16 and 19 years-old at the time of the first interview. Data from youth who had dependent children between the ages of 0 – 4 years old living with them “most of time” were removed and considered separately (see Appendix A). This resulted in the removal of 17 cases. Therefore, the sample for study was N=82 participants who were not parents and who participated in both the first and follow-up interviews.

Measures

Alcohol use. The 4-item *CAGE Questionnaire* (Ewing, 1984) was used in the study to assess for the presence of problematic alcohol use.

Drug use. The 10-item Drug Abuse Screening Test (DAST-10; Skinner, 1982) was used to measure for the presence of problematic drug use in the study.

Mental health functioning. The presence of symptoms of mental illness was measured using the *SF-36 Health Survey* (SF-36: Ware, Kosinski, & Gandek, 1995).

Size of social network and satisfaction with social support. A shortened 5-item version of Sarason, Levine, Basham and Sarason’s (1983) *Social Support Questionnaire* (SSQ) was used to measure social support

Social service utilization. A measure of the utilization of social and community services created for the study was used to measure the extent of social service utilization (Aubry et al., 2007).

Duration of re-housing. Duration of re-housing at follow-up was measured through the use of the Housing Income and Services Timeline (HIST) (Toro et al., 1999), which asked individuals about their housing history including their housing status of participants at the point of the follow-up interview. If a participant was homeless at follow-up, his or her duration of re-housing was set at 0 days.

Employment status. The HIST (Toro et al., 1999) was also used to determine employment history of participants between the initial and follow-up interviews.

Proportion of time working. The date fields identified for each job in the HIST (Toro et al., 1999) were used to compute total number of days employed. Because the length of time between interviews varied somewhat for each respondent approximating two years, a proportional employment variable was calculated representing amount of time employed between interviews divided by amount of time between interviews.

Results

Housing, Employment, and Educational Status at Time 2

Over three-quarters of the final Time 2 sample of N= 82 youth were stably housed at follow-up (n=65, 79.3%). A total of 32 (71.1%) male and 33 (89.2%) female youth were housed for 90 days or longer. Significantly more male youth (n=13; 28.9%) were without stable housing compared with female youth (n=4; 10.8 %) ($\chi^2 (1) = 4.04, p = .04$).

Less than half of youth were stably employed at Time 2 (n=31; 37.8%), with slightly more female youth reporting employment stability (n=17; 45.9%) compared to male youth

($n=14$; 31.1%). Sex differences for employment stability were non-significant. The majority of stably employed youth were also stably housed (90 days or more) at follow-up ($n=27$; 87.1%). Of the youth ($n=51$; 62.2%) who were not stably employed, approximately one-quarter ($n=13$; 25.5%) also did not report stable housing at follow-up.

At Time 2 interview, a small number of youth were stably employed and attending school ($n=8$; 9.8%). A larger subgroup of youth was stably employed and not in school ($n=23$; 28.0%), while the largest subgroup at follow-up was neither stably employed nor attending school ($n=36$; 43.9%). A total of 15 youth (18.3%) were in school but not stably employed at Time 2.

Nature and Characteristics of Stable Employment at Follow-up

For youth working 90 days and longer, the number of consecutive days employed at follow-up for the 31 stably employed youth ranged from 90 to 853 days, ($M = 385.90$, $SD = 258.51$). In rare cases ($n=7$; 8.54%), duration of employment exceeded the duration of time that had elapsed between first and second interviews. In these cases, youth were homeless but employed at Time 1.

A total of 20 of the 31 stably employed youth provided complete details on their employment at Time 2. These youth reported working a mean of 121.38 hours per month ($SD = 45.58$), with a range of 30 to 180 hours. Table 11 presents the nature of employment (i.e., part-time or full-time), and the type of jobs youth described working. Full-time work follows Statistics Canada's (2008) definition of working 30 or more hours per week at a principal employment site (multiplied by 4 weeks = 120 or more hours per month). Accordingly, part-time work was defined by monthly hours worked that summed to fewer than 120 monthly hours. "Youth initiative employment" refers to employment facilitated by a local job match service for homeless youth in Ottawa known as the Rideau Street Youth Enterprises (RSYE). RSYE

supports homeless youth's vocational integration by matching them to jobs with private contractors, as well as with the municipality, for work opportunities such as public property landscaping, street-cleaning, etc. (RSYE, 2008).

Table 10.

Characteristics of Employment as Reported by Stably Employed Youth at Time 2

Type of Employment	Part-time <i>n</i> = 9 (45%)	Full-time <i>n</i> = 11 (55%) ^a	Total <i>n</i> = 20
Service / hospitality	2 (10.5)	5 (26.3)	7 (36.8)
Labour	2 (10.5)	3 (15.8)	5 (26.3)
Retail	4 (21.1)	1 (5.3)	5 (26.3)
Youth initiative	1 (5.3)	1 (5.3)	2 (10.5)
Average monthly income (<i>SD</i>) ^a	\$748.83 (\$158.84)	\$1250.20 (\$122.53)	\$931.37 (\$560.72)

Note: There were 31 stably employed youth at Time 2. However, income estimates were based upon the responses for 20, as seven youth did not report the hours they worked per month, and four youth described their work hours as “varied”.

^aOne stably employed youth working full-time did not describe the nature of his employment

Correlations Between Predictor and Outcome Variables

Time 1 data and Time 2 residualized change scores were used as predictors in the current study. Variables included size and satisfaction with social support, drug use, alcohol use, and mental health functioning. Social service utilization and duration of re-housing also were predictors, and were based upon Time 2 data only. Table 12 presents the correlations of Time 1 predictors and the two measures of resilient vocational outcomes, namely employment stability (i.e., working at the same job for 90 days or more) and proportion of days worked between Time 1 and Time 2 interview.

Table 11.

Correlation Between Predictors at Time 1 and Outcome Variables, Time 1 Data

Variable	1	2	3	4	5	6	7	8	9	10
1. Social support S	..	.60**	-.08	-.03	.19	.15	.03	-.20	.04	.03
2. Social support N		..	-.11	-.01	.11	.17	.14	-.13	.10	-.04
3. DAST			..	.60**	-.17	.06	.02	-.00	.15	.31**
4. CAGE				..	-.19	-.04	.14	-.02	-.03	.17
5. SF-36 MH					..	-.04	-.34**	-.40	-.05	.02
6. # days housed						..	.16	-.30**	.08	.28*
7. Sex ^d							..	-.07	.15	.09
8. Social service use ^a								..	.07	.12
9. Employment status ^b									..	.61**
10. % time working ^c										..

^aSocial service use between first and second interview. ^b Considered employed if working 90 days and longer at Time 2. ^c Total # of days working between Time 1 and Time 2 / total # days between Time 1 and Time 2. ^d 1 = female sex, 0 = male sex

As shown in Table 11, Time 1 drug use had a significant positive association with the proportion of time in which youth worked between interviews ($r = .31, p < .01$), such that youth who reported greater drug use at Time 1 also reported a higher proportion of time worked between interviews. Duration of re-housing had a significant positive association with proportion of time working between interviews ($r = .28, p < .04$), indicating that a greater amount of time housed was related to a greater proportion of time working between interviews. Greater work stability, measured by employment for 90 days or longer at follow-up also shared a significant association with greater proportion of time working between interviews ($r = .61, p < .01$).

Table 12 presents the correlations between the residualized change scores and the vocational outcome measures. As shown in Table 12, none of the residualized change variables were associated with employment stability. The residualized change scores for mental health functioning emerged as the only residualized variable with a significant correlation with duration of time working between the two interviews ($r = -.24, p < .04$).

Table 12.

Correlation Between Time 2 Residualized Change Scores and Outcome Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Social support S ^a	..	.22	-.20	-.04	.33**	-.08	-.02	.09	-.11	-.14
2. Social support N ^a		..	.01	.23*	.09	.01	.15	.09	.14	.00
3. DAST			..	.26*	-.02	-.23*	-.14	.05	-.06	-.06
4. CAGE				..	-.08	.07	-.07	-.11	-.22	-.17
5. SF-36 MH					..	-.03	-.17	-.17	-.10	-.24*
6. # days housed						..	.16	-.30**	.08	.28*
7. Sex ^b							..	-.07	.15	.09
8. Social service use ^c								..	.07	.12
9. Employment status ^d									..	.61**
10. % time working ^e										..

^aResidualized change scores. ^b1 = female sex, 0 = male sex. ^cSocial service use between first and second interview. ^dConsidered employed if working 90 days and longer at Time 2. ^eTotal # of days working between Time 1 and Time 2 / total # days between Time 1 and Time 2.

Predictors of Employment Stability

To determine how well Time 1, and residualized Time 2 measures predicted the resilient outcome of youth achieving employment stability (i.e., working at the same job for 90 days or more), two separate sequential logistic analyses were conducted. Variable entry for both sets of regression analyses followed our ecological model hypothesizing individual, social, and community predictors contributing to stable employment at follow-up. Accordingly, individual predictors (drug use, alcohol use, mental health status, sex, and duration of time re-housing in days) were entered into the first block of the regression equation, followed by social predictors (size and satisfaction with and social support) in the second block, followed by the community predictor (community and social service use) in the third and final block.

Results of analyses using Time 1 data are presented in Table 13. As shown in Table 13, among individual variables tested as predictors, drug use emerged as the only significant predictor ($\beta = .21, p. < .05$) of employment stability. Specifically, greater drug use at Time 1 predicted increased likelihood of employment for 90 days or longer at Time 2. Neither of the social predictors (i.e., size of social network and satisfaction with social support) nor the community predictor (i.e., level of use of social services) were associated with employment stability.

Table 13

Results of Sequential Logistic Regression Using Time 1 (T1) and Time 2 Variables to Predict Employment Stability

Variable	Block	β	Wald	α	Odds Ratio	95% Confidence Interval	
			Criterion			Lower	Upper
Constant	0	-.46	3.98
Drug use T1	1	.21	3.80	.05*	1.24	1.00	1.53
Alcohol use T1		-.40	2.49	.12	.67	.41	1.10
Mental health status T1		.01	.11	.74	1.01	.97	1.05
Sex		.87	2.56	.11	2.38	.82	6.90
Duration re-housed		.00	.08	.78	1.00	1.00	1.00
Drug use T1	2	.22	4.05	.04*	1.25	1.01	1.55
Alcohol use T1		-.42	2.65	.10	.66	.40	1.09
Mental health status T1		.01	.04	.84	1.01	.96	1.05
Sex		.80	2.09	.15	2.23	.75	6.58
Duration re-housed T2		.00	.03	.87	1.00	1.00	1.00

Table 13 (continued)

Variable	Block	β	Wald Criterion
Social support (S) T1		-.03	.01
Social support (N) T1		.17	.48
Drug use T1	3	.22	4.03
Alcohol use T1		-.41	2.53
Mental health status T1		.01	.10
Sex		.87	2.35
Duration re-housed		.00	.17
Social support (S) T1		.04	.02
Social support (N) T1		.15	.35
Social service utilization T2		.00	1.15

* $p < .05$; ** $p < .001$.

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α	Odds	95% Confidence Interval	
	Ratio	Lower	Upper
.92	.97	.54	1.75
.49	1.19	.73	1.94
.05*	1.25	1.01	1.56
.11	.66	.40	1.10
.76	1.01	.96	1.06
.13	2.38	.79	7.20
.68	1.00	1.00	1.00
.90	1.04	.56	1.92
.55	1.16	.71	1.90
.28	1.00	1.00	1.00

With drug use entered in the first block of variables, the sequential logistic regression equation was its strongest for the first step with 70.0% of respondents correctly classified (stably employed at follow-up yes/no), followed by 68.8% for the second step and 66.2% for the third step.

Table 14 presents the results of the second logistic regression testing residualized Time 2 change scores wherever possible as predictors of employment stability. Variable entry for this analysis was identical to the previous regression, with the first block of variables entered into the regression equation measuring individual predictors, the second block measuring social predictors, and the third block measuring the community predictor.

Table 14.

Results of Sequential Logistic Regression Using Residualized (R-Square) and Time 2 Variables to Predict Employment Stability

Variable	Block	β	Wald	α	Odds Ratio	95% Confidence Interval
			Criterion		Lower	Upper
Drug use (r-square)	1	.10	.82	.37	1.11	.89 1.38
Alcohol use (r-square)		-.45	3.32	.07	.64	.39 1.04
Mental health status (r-square)		-.02	.79	.38	.98	.93 1.03
Sex		.60	1.34	.25	1.82	.66 5.04
Duration re-housed T2		.00	.87	.35	1.00	1.00 1.00
Drug use (r-square)	2	.07	.36	.55	1.07	.85 1.36
Alcohol use (r-square)		-.56	4.42	.04*	.57	.34 .96
Mental health status (r-square)		-.03	.98	.32	.97	.93 1.03
Sex		.38	.49	.49	1.46	.50 4.27
Duration re-housed T2		.00	.71	.40	1.00	1.00 1.00

Table 14 (continued)

Variable	Block	β	Wald Criterion
Social support (S) (r-square)		-.35	1.26
Social support (N) (r-square)		.50	3.92
Drug use (r-square)	3	.06	.25
Alcohol use (r-square)		-.52	3.85
Mental health status (r-square)		.02	.51
Sex		.45	.66
Duration re-housed T2		.00	1.03
Social support (S) (r-square)		-.39	1.50
Social support (N) (r-square)		.49	3.71
Social service utilization T2		.00	.68

* $p < .05$; ** $p < .001$.

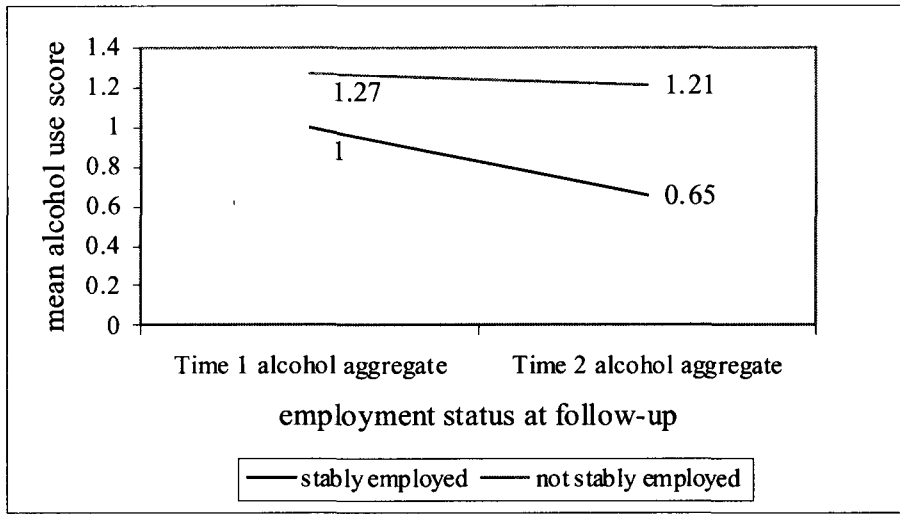
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α	Odds	95% Confidence Interval	
	Ratio	Lower	Upper
.26	.70	.38	1.30
.05*	1.65	1.01	2.72
.62	1.06	.84	1.35
.05*	.59	.35	1.00
.48	.98	.93	1.04
.42	1.57	.53	4.70
.31	1.00	1.00	1.00
.22	.68	.36	1.26
.05*	1.63	.99	2.69
.41	1.00	1.00	1.00

Among individual variables, the residualized change score for alcohol use at Time 2 ($\beta = -.56, p. < .05$) predicted employment stability. Among interpersonal variables, the residualized change score for the size of social network at Time 2 ($\beta = .50, p. = .05$) predicted employment stability. Finally, the community predictor of level of use of social services did not emerge as a significant predictor. Accurate classification of stable employment at follow-up was equal for the first two blocks of variable entry (70.8%, respectively), and improved with all variables included in the third final step of the equation (72.2%).

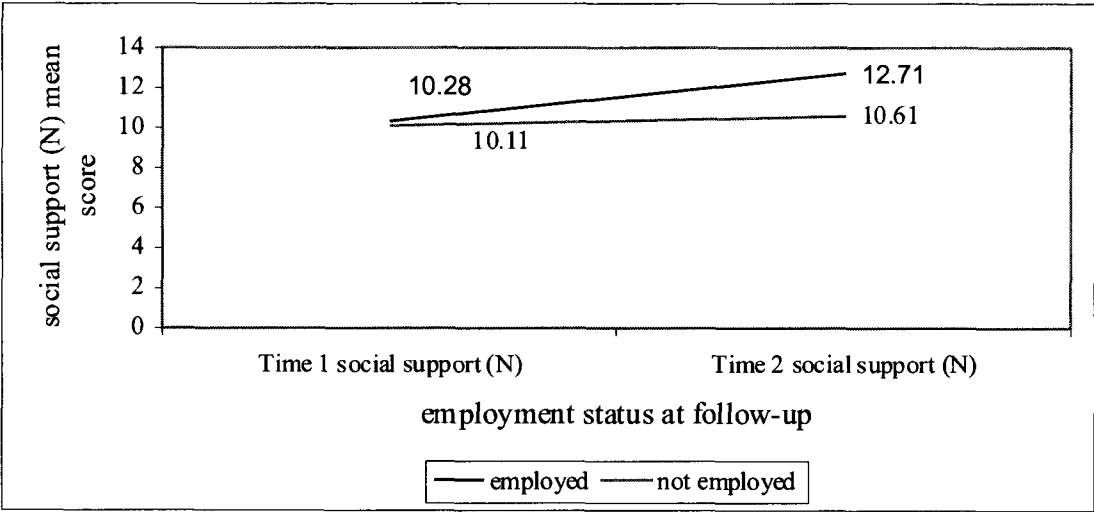
To determine the nature of the relationship between changes in alcohol use and employment stability at follow-up, changes in raw score measures on alcohol use were compared between youth who were employed at follow-up and youth who were not employed at follow-up. As shown in Figure 8, youth who were employed at follow-up showed a greater decrease in alcohol use aggregate scores from Time 1 to Time 2, with a group mean decreasing from 1 to 0.65 relative to youth who were not employed. Differences in alcohol use at Time 2 by employment status were significant ($t(79)=3.45 p<.01$). Youth who were unemployed at Time 1 and Time 2 showed only small decreases in their use of alcohol (Time 1, $M = 1.27$; Time 2, $M = 1.21$).

Figure 8. Time 1 and Time 2 Alcohol Use by Employment Status at Follow-Up



To determine the direction of the relationship between changes on the size of the social network variable and employment stability, changes in raw scores on the size of the social network were compared between youth who were stably employed and youth who were not stably employed. As shown in Figure 9, stably employed youth reported greater increases in size of social networks from Time 1 ($M=10.28$) to Time 2 ($M=12.71$) compared to youth who were not stably employed (Time 1, $M=10.11$; Time 2, $M=10.61$). Differences between group means (stably employed and not stably employed) on Time 2 residualized size of social networks were also significant ($t(81) -2.71 p <.01$).

Figure 9. Time 1 and Time 2 Social Support (S) by Employment Status at Follow-Up



Proportion of Time Employed Between Interviews

Two separate hierarchical multiple regressions were conducted to identify predictors of the proportion of time employed between interviews. Time 1 measures were entered as predictors in the first regression. Time 2 residualized change scores of continuous variables were entered as predictors in the second regression.

The same predictors used in the two previous regressions were entered into each multiple regression analysis following the same entry order, with individual predictors entered first, followed by social predictors, and then the community predictor. Results of analyses using Time 1 data are presented in Table 15. The combination of individual variables entered in the first block proved to be significant $F(5, 74) = 3.27, p = .01$ and accounted for 18% of the variance in proportion of time working. The second step involving social predictors was not significant, as neither of the social support variables predicted proportion of time working between interviews.

Use of supportive community services was entered into the final block as the community predictor. This final step of variable entry was significant $F(1, 71) = 5.76, p < .02$, accounting for an additional 6% of variability in the proportional measure of vocational integration. The full model was significant $F(8, 71) = 2.98, p = .01$, with all Time 1 variables accounting for 25% of unique variance in the proportional outcome measure.

Table 15.

Results of Linear Multiple Regression Using Time 1 and Time 2 Variables to Predict Proportion of Days Working (Total) by Number of Days Between Interviews

Variable	Block	β	R^2 change	R^2
Drug use (T 1)	1	.29*	.18	.18*
Alcohol use (T 1)		.02		
Mental health status (T 1)		.12		
Sex		.09		
Duration re-housed		.26*		
Drug use (T 1)	2	.28*	.01	.19*
Alcohol use (T 1)		.03		
Mental health status (t 1)		.14		
Sex		.11		
Duration re-housed (T2)		.27*		
Social support (S) (T 1)		-.06		
Social support (N) (T 1)		-.13		
Drug use (T 1)	3	.28*	.06	.25**
Alcohol use (T 1)		.03		
Mental health status (t 1)		.16		
Sex		.13		
Duration re-housed (T 2)		.34**		
Social support (S) (T 1)		.11		
Social support (N) (T 1)		-.15		
Social service utilization (T 2)		.26*		

Among individual variables, a higher level of drug use at time 1 ($\beta = .29, p < .05$) and a longer duration of time re-housed at time 2 ($\beta = .26, p < .05$) predicted greater proportion of time working between Time 1 and Time 2. As indicated the community variable was also significant predictor, with greater use of social / community services ($\beta = .26, p < .05$) predicting a longer proportion of time working between interviews.

Results using Time 2 residualized data are presented in Table 16. Among individual predictors that were examined, changes in mental health functioning ($\beta = -.27, p < .05$), and duration of re-housing ($\beta = .28, p < .05$) emerged as significant predictors, with the first step of variable entry uniquely and significantly accounting for 18% of variance in proportion of time working between interview $F(5, 66) 2.85, p < .02$. Entry of the social and community blocks of predictors accounted for only 2% and 3% more of variability and each of these steps were not significant. The final, full model with all variables entered into the regression equation was significant $F(8, 63) 2.19, p < .04$, and accounted for 22% of the variability in the proportional measure of vocational integration.

Table 16.

Results of Linear Multiple Regression Using Residualized and Time 2 Variables to Predict Proportion of Days Working (total) by Number of days Between Interviews

Variable	Block	β	R^2 change	R^2
Drug use (r-square)	1	.13	.18	.18*
Alcohol use (r-square)		-.20		
Mental health status (r-square)		-.27*		
Sex		.01		
Duration re-housed		.28*		
Drug use (r-square)	2	.10	.02	.19*
Alcohol use (r-square)		-.21		
Mental health status (r-square)		-.27*		
Sex		-.01		
Duration re-housed		.27*		
Social support (S) (r-square)		-.09		
Social support (N) (r-square)		.12		
Drug use (r-square)	3	.09	.03	.22*
Alcohol use (r-square)		-.18		
Mental health status (r-square)		-.22		
Sex		.01		
Duration re-housed		.31*		
Social support (S) (r-square)		-.11		
Social support (N) (r-square)		.10		
Social service utilization (r-square)		.18		

* $p < .05$; ** $p < .025$; *** $p < .001$.

To determine the direction of change in mental health status in relation to greater proportion of time worked at follow-up, difference scores were calculated (mental health at Time 1 minus Time 2) and a scatter plot was created and examined showing the relationship between these difference scores and the outcome variable measuring proportion of time employed at follow-up. The correlation between these variables was non-significant but positive in nature ($r = .18, p = .11$). Based on both the examination of the scatterplot and this correlation, it was concluded that *decreased* mental health functioning between Time 1 and Time 2 predicted a greater proportion of time worked over the course of the study. Finally, a longer duration of being housed predicted a greater proportion of time being employed.

Discussion

Compared to other longitudinal (Pollio et al., 2006) and shorter-term (six and twelve-month) follow-up studies on homeless youth tracking employment as an outcome variable (Slesnick et al., 2007), homeless youth in the current study attained stabilized housing at higher rates. A total of 79.3% homeless youth in our sample were housed for 90 days or longer at follow-up, whereas housing instability, characterized by moving into and out of homelessness was the ongoing reality for the majority of youth in Pollio et al.'s and Slesnick et al.'s studies. It is notable, however, that homeless youth in Pollio et al.'s study reported shorter durations of homeless episodes after receiving shelter services which the authors attributed to impact of services received. Shelter services used by youth in Polio et al.'s study ranged from addiction and mental health services to housing, legal, and employment services.

Significant increases in housing stability were not observed in Slesnick et al.'s (2007) study, although for those who did secure housing, the authors noted an association with decreased alcohol and drug use at follow-up. This finding is consistent with results of the

correlational analyses in the current study which show a relationship between decreased drug use (based on residualized change scores) and increased duration of re-housing. A possible explanation for the greater rates of formerly homeless youth achieving stabilized housing in our sample is the two year time-frame of the study, which tracked youth for more than twice the length of the previously cited investigations.

Another finding that is different from those of previous longitudinal studies on youth homelessness (Pollio et al., 2006; Slesnick et al., 2007) relates to employment. A total of 37.8% of our sample were stably employed for 90 days or longer at two-year follow-up, which is substantially greater than the 13% of youth employed at follow-up reported by Pollio et al., (2006). Moreover, the majority of employed youth at follow-up in the present study were not employed at the initial interview when they were homeless. In contrast, Slesnick et al. reported no change from baseline to 12-month follow-up in terms of homeless youth becoming employed. The type of work and whether or not the work was part-time or full-time has not been previously investigated among youth who have experienced homelessness and these findings are therefore new contributions to the literature made by the current study.

The stably employed youth in our sample described working primarily in retail, labour, and service/hospitality industries, with slightly more youth reporting full-time employment (55%) compared to those working part-time (45%). Only two youth reported working in a youth-engagement initiative brokered through homelessness drop-in services. Stably employed youth in our study worked between 3 months to over 2 years at the same employment setting as where they were working at the time of follow-up interview.

The objective of the study was to test a heuristic ecological model that identified predictors of homeless youth's achievement of employment stability and proportion of time

employed over a two-year period. The model hypothesized individual-, social-, and community-level factors as being related youth having positive employment outcomes. The factors were examined both as predictors at Time 1 when youth were homeless and as predictors in terms of change over the two year period of the study.

Predictors of Achieving Employment Stability Among Homeless Youth

Among individual factors, greater drug use at Time 1 predicted employment stability at follow-up. This result, which is in the opposite direction to that predicted, may be explained at least partially from findings of Rice et al.'s (2005) investigation of drug use and peer networks amongst homeless youth. Specifically, Rice et al. found that newly homeless youth initially used drugs when joining pre-existing social networks dense with drug-using homeless youth, but that over time, drug use discontinued amongst youth who had not used drugs previously. This led to the conclusion that a number of homeless youth may temporarily adopt the social conventions (drug use) of the networks they join in order to demonstrate acceptance of the groups' norms, but illustrated that problematic substance use did not necessarily develop, nor did drug use tend to persist over time if youth did not use drugs prior to becoming homeless.

An implication of Rice et al., 2005's findings relates to the conceptualization of risk amongst homeless youth. These authors demonstrated that drug use changes in relation to connectivity to social networks of other homeless youth leading to the conclusion that drug use may be more usefully measured over time. Our study's results are consistent with this conclusion, as they also indicate that changes in drug use over time is not predictive of employment stability at Time 2, or proportion of time worked over the course of the study. Future studies may usefully ask youth directly whether new friends they made since becoming homeless were a) drug users, and b) were helpful in connecting them to local employment

opportunities. Youth may also be usefully asked how they understand their substance use in relation to employment, and how their patterns of substance use changed in relation to homelessness, employment, and re-housing.

As mentioned, Rice et al. (2005) found that historically non drug-using youth were more likely to use drugs when newly homeless, upon entering social networks dense with other homeless drug-using peers. The researchers pointed out, however, that social networks and youths' relation to them were complex, and that initial drug use did not necessarily lead to continued drug use over time. It may be that drug use is an activity that assists homeless youth develop social connections that facilitate finding and employment, but that employment is sustained by decreasing drug use which in turn increases the likelihood of re-housing. In contrast to the association between greater drug use at Time 1 and greater employment stability at follow-up, decreased alcohol use emerged as a significant predictor of having achieved employment stability at follow-up.

Among social factors, our results showed that an increase social network based on residualized change scores at Time 2 predicted employment stability at follow-up. Of course this relationship may be bi-directional in that greater social networks increase employment opportunities for youth and, employment stability provides youth greater opportunities for augmenting their social networks.

The community factor of level of use social services was not predictive of achieving employment stability at follow-up, although it did predict the proportion of time employed. This result suggests that use of social services played a role in helping youth to become employed, possibly directly by providing vocational assistance indirectly through assisting them with issues faced in such areas as housing, mental health, and addictions.

Predictors of Proportion of Time Worked Over a Two-Year Period

In terms of individual-level predictors of proportion of time worked over the course of the study, a higher level of drug use at Time 1 emerged also as a significant predictor of proportion of time worked over a two-year period. The same interpretations as provided above for the relationship between greater drug use and employment stability can be applied for this relationship.

Other individual factors showing a significant predictive relationship to proportion of time worked over the two-year period of the study were diminished mental health functioning and greater duration of time housed at follow-up. A plausible explanation for the relationship between a decrease in mental health functioning and proportion of time employed is that maintaining employment despite acute stressors such as homelessness have costs in terms of psychological well-being. It is important to note that a number of youth in the study were employed for greater periods of time than they were housed. This finding is consistent with results described by Mortimer et al.'s (1992) study of housed youth working jobs that they felt were stressful, and in which they worked long weekly hours. Youth in our study who were employed for longer durations, but had diminished mental health functioning are understood to be exhibiting resilient outcomes, but at a cost.

Another possible explanation for employed youth reporting lower mental health functioning at Time 2 is that they may have a higher functioning peer group (other employed youth) to compare their well-being relative to youth who are still in transitioning from being homeless. Therefore, they report a lower level of mental health functioning. Alternately, unemployed youth may be defensive at Time 2, and may possibly report higher mental health functioning than they actually experience.

Increased duration of re-housing was also a significant predictor of having worked a greater proportion of time between interviews. In terms of resilience, it appears that stable housing is an important precursor of becoming vocationally integrated. Although previous studies have not examined predictors of employment beyond service utilization, where employment was an outcome tracked over time, stable housing has been linked to other positive outcomes, such as decreased alcohol and drug use, and improved mental health functioning (Slesnick et al., 2007). It is possible that if Slesnick et al. continued to track their sample for an additional follow-up year, becoming vocationally integrated would also be observed in the subset of youth in their sample who had become stably re-housed.

Increased use of supportive community services predicted increased proportion of time employed. This finding is supported directly through a short-term outcome study of shelter services (Thompson et al., 2002), which reported positive gains for homeless youth in relation to housing and employment observed six-weeks post-discharge. A longer-term follow-up study of homeless youth receiving extensive short-term residential shelter services (Pollio et al., 2006) noted that therapeutic gains were observed at 6 weeks after discharge. However patterns therapeutic gains were observed to decrease at 3 and 6-month follow-up compared to those observed more broadly at 6-week discharge (Pollio et al.). Further, post-discharge service use did not improve outcomes related to mental health functioning, or involvement in the criminal justice system, although the authors note that these services were likely sought by youth already encountering law and mental health difficulties. "Runaway behaviour" generally improved across all measurement points in their study, except for those using substances at 3 and 6-month follow-up (Polio et al.).

The significance of service use as a predictor of proportion of time employed in our study at Time 2 is likely related to the fact that the majority of stably working youth in our sample were also re-housed at follow-up. As such, it is assumed that the impact of services would be similar to that of youth whose housing needs were being addressed through residential shelter living (Pollio et al., 2006), which is to say, stronger than youth still struggling with homelessness. Our current study and the other longitudinal research cited support the contention that lack of stable housing appears to supplant therapeutic gains associated with service use, as long as homelessness continues.

Study Limitations

Novel contributions to the youth homelessness literature are generated from the current study, however there are also limitations. Firstly, our study's follow-up period was two years, which is possibly too short to capture developmental processes inherent to emerging adulthood. A second and more central conceptual limitation involves whether or not to consider employment as a resilient outcome amongst youth until they are stably re-housed. This consideration arises from the finding that substance use predicts employment amongst youth who are still homeless. Given that a relationship between substance use and employment is no longer present after youth are re-housed, it makes sense to prioritize housing prior to employment when conceptualizing positive outcomes.

A qualitative section in the interview protocol asking youth for their perceptions of the quality of their employment would have usefully added to our understanding of youth's experience of their work. Youth's perception of their employment quality and experience could add to what is understood regarding substance use, stress, and decreased mental health functioning amongst youth with histories of homelessness.

Finally, all variables in the proposed ecological prediction model were not supported. Considering youth homelessness ecologically is a strength of this study that would be repeated by the authors in further studies of youth homelessness. However, the linear conceptualization of the variables to the outcomes appears to not adequately capture the complexity and diversity of youths' experience when exiting homelessness.

Recommendations for Future Research

The current investigation conceptualized employment as an indicator of resilience, as it is a normative developmental task of emerging adulthood that may facilitate exit from the adverse circumstances of homelessness. In order to determine whether employment is facilitating or hindering global well-being and mental health functioning, future research should ask youth with histories of homelessness whether they perceive their current employment as consistent with their vocational aspirations, and whether they believe they are currently learning work skills they can use in the future. Previous research on employment amongst housed youth has supported these constructs in relation to better mental health and behavioural outcomes (Mortimer et al., 1992), provided that youth employment was also at a *modest* intensity with respect to weekly hours worked. Therefore, understanding how employment fits with homeless youths' desired future career may illuminate whether employment serves an ameliorative role, or whether it is primarily a source of stress.

A five-year follow-up period would allow for a more thorough investigation of how youth fully exit homelessness, and how their employment unfolds over time. Having a greater sample size, such as N=500 at baseline may enable a core sample to be tracked over time despite inevitable loss due to attrition. A methodology for tracking homeless populations has been developed to facilitate longitudinal studies (Aubry et al., 2004).

Kidd and Davidson (2006) also suggest measuring positive outcomes beyond re-housing, employment, and return to school, which take into consideration the unique set of circumstances inherent to youth in situations of homelessness. These may include tracking changes in alcohol and substance use over time, as well as other changes towards less self-endangering behaviour.

Program and Policy Implications

Our findings globally support a “Housing First” (Tsemberis, Gulcur & Nakae, 2004) approach to addressing homelessness in youth. Housing First refers to homelessness programming created in the United States to better serve chronically homeless, mentally ill individuals by providing them with stable, independent housing immediately. Housing First contrasts from the Continuum of Care model, which consists of moving homeless individuals through several levels of increasingly independent housing over time (Tsemberis et al.).

In the current study, results empirically support the premise that safe and secure lodgings are ideally introduced prior to efforts to engage marginalized youth vocationally, which follows the same principle as Housing First. As long as homelessness is an on-going concern, movement towards positive adaptation or resilience in youth, such as vocational integration, is not arrived at without other consequences (such as poorer mental health functioning). This finding extends to our other recent research on educational participation (Hyman et al., 2009). Resilience is always possible, but is helped substantially when housing comes first.

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CHAPTER 7

Discussion and Conclusions

This dissertation proposed and tested three Ecological Resilience Prediction Models (ERPMS). Outcomes predicted were related to becoming re-housed, educational participation, and working for income in a sample of youth with histories of homelessness.

Based on the structure of this dissertation, each resilient outcome was examined within a separate article that reviewed the literature in relation to the resilient outcome being predicted. The proposed models were explained, depicted and tested within each article. Of all the resilient outcomes predicted, youth at Time 2 interview were most likely to have become re-housed with the greatest frequency compared to participating in education or work.

Despite the theoretical promise of Ecological Systems Theory (Bronfenbrenner, 1989) in comprehensively examining youth's social context, as well as the recent support for examining longitudinal outcomes of homeless youth ecologically (Toro, Dworsky & Fowler, 2007), the variables in the ERPMS were only partially supported as predictors of resilient outcomes within the three articles contained within this dissertation.

Complexity of Risks and Resources

As demonstrated in other recent studies of homeless youth (Rice, Milburn, Rotheram-Borus, Mallett & Rosenthal, 2005) homeless youth's social contexts are complex, multi-determined, and embedded with factors that are meaningful at certain times which may be less so at others, based in part on how long youth have been homeless (Auerswald & Eyre, 2002; Rice et al.). The proposed ERPMS were linear and additive, and were developed from the hypothesis that more resources would be universally predictive of resilient outcomes.

An exception within this dissertation was the first article, which had the individual predictor of a shorter duration of time homeless prior to the study predicting re-housing. In fact, it was the sole predictor of re-housing that was supported by significant results, to the exclusion of any other predictors in the model emerging as significant. From this dissertation it appears clear that linear prediction models fail to explain the complexity of youth's ecological contexts as well as the critical role of timing with respect to becoming connected to the resources that facilitate re-housing, participating in school, and joining the work force.

The second article focused upon participation in school demonstrated that both female sex and increased duration of re-housing at Time 2 significantly predicted being in school at follow-up. Youth in school were less satisfied with social support than were youth out of school, despite higher satisfaction with social support at Time 2 reported for the overall sample. The finding that male youth are at higher risk remaining disengaged from school compared to female youth is consistent with the literature on educational outcomes in housed adolescents (Greene & Winters, 2006). This finding highlights the need for additional and specific efforts to be made to assist male youth to re-engage in their education. Duration of re-housing predicted returning to school in the second paper. Stable housing was understood to be the fundamental step that liberated youth to focus their energy on stabilizing other areas of their life, such as education.

The third article examining employment revealed that youth who were stably employed at Time 2 reported benefits of employment as well as costs. Benefits were decreased alcohol use at Time 2 which was a period of time that youth were more likely to be stably housed. However, stably employed youth at Time 2 also reported relatively decreased mental health functioning compared to youth who were not stably employed. Further, Time 1 drug use predicted employment stability. Other research has shown patterns of instrumental drug use amongst

newly homeless youth, wherein youth joining social networks of homeless peers that are dense with drug-using adopt drug using themselves for a time to gain access to the peer networks' social resources (Rice et al., 2005).

Results of the second and third article underscored the critical importance of becoming stably housed in order to participate in schooling and employment. Whether or not educational participation is associated with costs to well-being was beyond the scope of the current dissertation, but may be usefully investigated in future studies of youth homelessness. Due to the relevance of becoming re-housed and the critical role of timing in developmental models of predicting resilient outcomes in youth with histories of homelessness, Auerswald and Eyre's (2002) model can be adapted to describe resilience in homeless youth as it pertains to becoming re-housed.

Resilience Model of Youth Re-housing

Auerswald and Eyre (2002) developed a "Life Cycle Model of Youth Homelessness" to document the pathways into and out of homelessness. Based on in-depth qualitative transcriptions, their formulation of youth homelessness described entrenchment within a street subculture that became harder to disengage from once youth adapted and reached "stasis" within the street. Being on the street for longer durations of time meant becoming accustomed to the street culture norms, which in turn involved becoming estranged from mainstream (non street-involved) society.

Based on the results of this dissertation, in particular the finding that re-housing predicted participation in school and stable employment, Auerswald and Eyre's (2002) model can be adapted to develop a prediction model of resilient outcomes following housing stability. Stable housing at Time 2 was associated with other benefits such as improved mental health for the

overall sample. Stable employment was associated with a decreased alcohol. Therefore, re-housing is proposed to be the gateway that facilitates regaining equilibrium among newly housed youth.

The proposed Resilience Model of Youth Re-housing adopts a similar Life Cycle approach used by Auerswald and Eyre's (2002), but explains the opposite function. That is, Auerswald and Eyre's (2002) original model sought to explain adaptation of youth to homelessness. The resilience model of youth re-housing is based on the current dissertation and plots how the normative tasks of late adolescence and early adulthood can be best expected to unfold without risk to an already-vulnerable population of youth by first establishing stable housing. The resilience model of youth re-housing is depicted in Figure 10.

Homeless youth are depicted at the top left of the figure, as they first enter newly into becoming housed. Not every housing situation is tied to stability. Three months is the convention for defining housing stability in the *Panel Study* (Aubry et al., 2007). Importantly from a youth developmental perspective, it may take 90 days or so for youth to become accustomed to their new settings and to develop a sense of trust and security. Three months may also be a reasonable period of time for youth to determine whether they have the financial resources to maintain their living situations.

Moving counter-clockwise within Figure 10, over the course of 3 months time, youth are understood to be adapting to their housing stability and entering a stasis similar to that described by Auerswald and Eyre's Life cycle model (2002). However, in the resilience model of youth re-housing, youth are proposed to be re-adjusting to mainstream society that is not street involved, as housing will have disengaged them from affiliation with the street subculture. Results of this

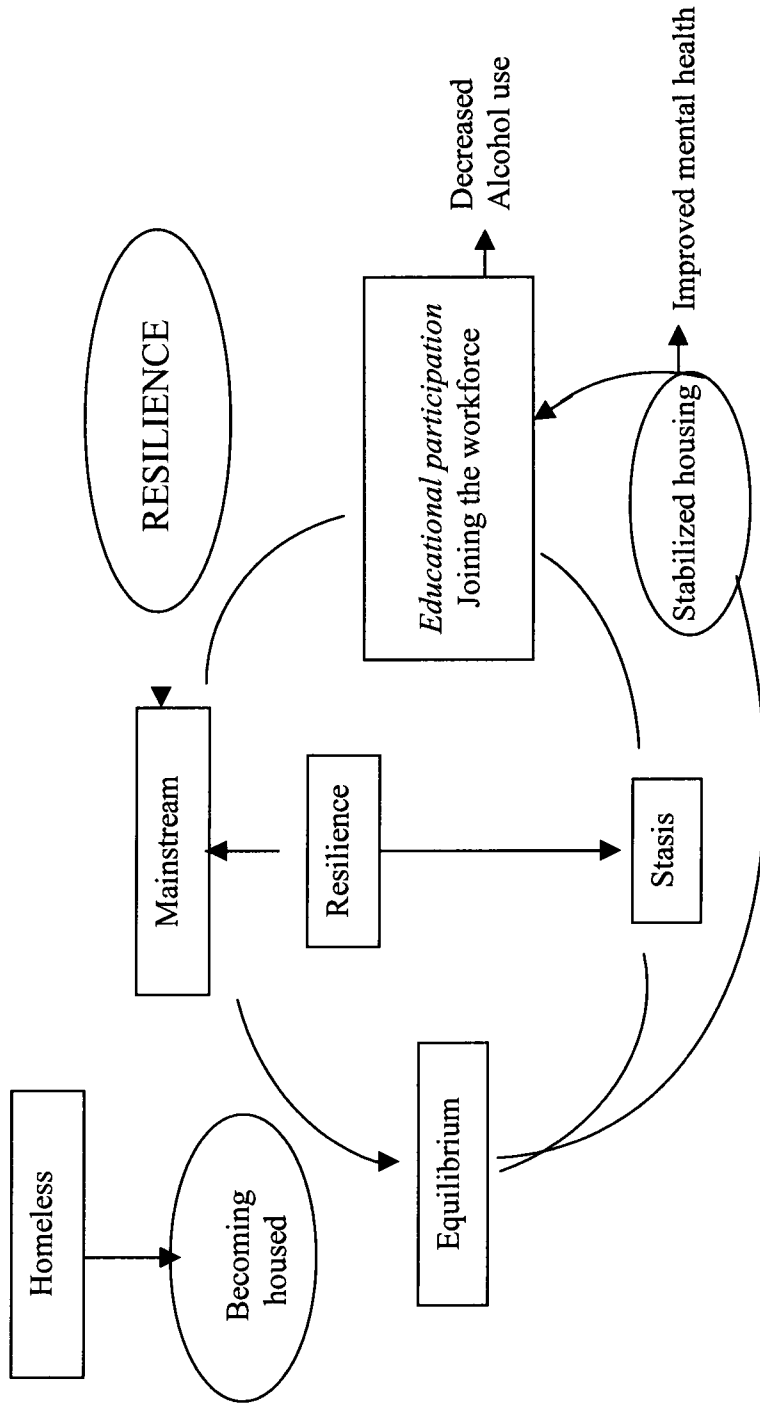
dissertation found an association between improved mental health and stable housing, which is depicted in a text box moving counter-clockwise past stasis.

Once youth are stably housed, results of this thesis show that they are more likely to be working. Employment was associated with decreased alcohol use in this dissertation. Educational participation is italicized, as it was not examined in the context of mental health functioning⁵. However, completing high school and continuing education are normative tasks of adolescence and emerging adulthood. If youth have reached housing stasis and show benefits from employment at 90 days of re-housing, then educational participation should be re-engaged if youth wish to complete or continue their studies.

The final text box denotes “mainstream,” which was the point of departure in Auerswald and Eyre’s Life cycle model (2002) depicting how youth first become homeless. In the resilience model of youth re-housing, it is the final step that indicates that youth have reached resilient outcomes with respect to their histories of homelessness; they are manifesting positive adaptation despite experiences of adversity, and at that time may be working and/or have returned to school as well as continuing to maintain their stable housing.

⁵ Educational participation was a dichotomous outcome, which limited the analyses. Further, the majority of participants (72%) were not participating in school at Time 2, which also limited comparisons between youth at Time 1 and Time 2.

Figure 10. Resilience Model of Youth Re-housing



Note: Adapted from Auerwald & Eyre, (2002), p. 625

The proposed model is predicted to require different methods for engaging male and female youth to regain housing and demonstrate resilient functioning over time. Results of the manuscript dedicated to participation in school in this dissertation indicated that female youth were more than four times more likely than male youth to be in school at follow-up. Results from the manuscript on housing found that female youth were re-housed for significantly longer durations than male youth at follow-up. Results from the manuscript on joining the workforce found that positive outcomes such as decreased alcohol use and improved mental health functioning for the *overall sample* only happened at follow-up interview, at which time the majority of participants were re-housed. Male youth appear to remain socially excluded from education and re-housing for longer durations than female youth. Longer durations of homelessness was the most robust predictor of remaining socially excluded in this dissertation.

It is possible that homeless male youth are struggling with social stereotypes of masculine and invulnerability, which may in turn make them less inclined than homeless female youth to ask for and seek out assistance. Alternately, male youth may be more focused upon earning money than returning to school. Future research would ideally ask homeless male youth about their experiences asking for help, finding housing, and returning to school versus work.

Limitations

The follow-up period for the *Panel Study* of 2 years is longer than other recent longitudinal studies of homeless youth (i.e., Pollio et al., 2006 and Slesnick et al., 2007, both of whom had a 1 year follow-up). However, as described throughout the thesis, it is possible that two years may be too short a duration to capture significant developmental shifts, such as changes in coping and sense of empowerment. A study time-frame of five years would more clearly capture shifts in identity and functioning that likely manifest over time. As well, a longer

study time-frame would enable distinction between what are valid effects of the constructs being measured versus what may be measurement issues arising from the instruments chosen in the interview battery; correlations between variables were generally quite low (see Tables 1 and 12).

Another limitation of the dissertation was the sample size, as on average at Time 2 the ratio of predictors to participants was 1 to 9. There were a few occasions in which univariate predictors had significant associations with the outcomes, but failed to reach significance in omnibus testing, likely due to insufficient statistical power. An example of this occurred in the manuscript focused on participation in school in relation to social service use, which significantly predicted participation in school at the univariate level. The significant univariate negative correlation with being in school (fewer social services utilized by those who returned to school) suggested that greater use of social services was associated with not being in school. Post hoc power calculations were computed (Pezzullo, 2009), which found that power for the test was .44. As such there was a 44% likelihood of correctly rejecting the null hypothesis. A sample size of $N = 96$ would have been required to minimally detect a significant difference in social service utilization in that manuscript (Pezzullo, 2009). In general, a larger sample size would have ensured that relationships, and their absence, were due to the constructs being measured rather than statistical power.

A final limitation of the dissertation is the fixed nature in which participants were asked whether they were employed (yes/no) or in school (yes/no) at follow-up. Dichotomous response options did not allow participants to describe their transitions into these outcomes. Experiences such as being registered for school and awaiting return, or waiting to hear back from a job interview were not captured the way the interview battery was structured for the dissertation. Allowing for a broader spectrum of questions about the process and transitions associated with

returning to school and work would have enabled a more elaborate analysis of these experiences, which is currently lacking in the adolescent homelessness literature.

The Critical Role of Antecedents to Youth Homelessness

Burt's (2007) summary of youth homelessness estimates in the United States reported yearly rates ranging between 1.6 to 1.7 million 12 to 17 year-olds, and 80,000 to 70,000 homeless youth between 18 to 19 years old. An important caution in interpreting these estimates noted by Burt was that they did not include youth who refused shelter and homelessness services, who are more likely to be *homeless for longer durations of time*.

Based on the results of the first article in this dissertation, as well as other studies (Auerswald & Eyre, 2002), being homeless for longer durations prior to the study was associated with less likelihood of becoming re-housed. It is very likely that youth who are homeless for longer durations do not have a home to which they are able to return.

It is useful to return to the antecedents of homelessness. If youth are homeless because they are running away from maltreatment perpetrated by a family member, or because they have grown up in the child welfare system, then singular program mandates of returning youth home are not feasible. Developing an appreciation for youth's understanding for their current homeless situation, as well as for what initially caused them to become homeless are believed to be the key steps in working effectively with them towards resolving their housing status.

Toro et al. (2007) have summarized a recent initiative geared towards decreasing homelessness in youth leaving the child welfare system in the United States. The Chaffee Foster Care Independence Program has doubled its funding to states such that 30% of funds are specifically designated for housing youth between the ages of 18 until they turn 21. Preliminary findings indicated that youth engaged within programs receiving these funds were less likely to

become homeless, and more likely to participate in post-secondary education (Burt, 2007; Toro et al.). Similar programming that takes the antecedents of youths' homeless circumstances into consideration, and provides timely housing – particularly for youth who have been homeless for long durations of time – may effectively end a pattern of homelessness that has the risk of continuing into adulthood.

Recommendations for Future Research

A recommendation for future research is to continue to examine resilience in homeless youth from an Ecological Systems perspective (Bronfenbrenner 1989). A more dynamic approach to model development and validation that is suitable for theory testing is structural equation modelling, which enables model fitting based on statistical testing such as confirmatory factor analysis and path analysis with latent variables (Kaplan, 2000). Fluidity in statistical model fitting would capture the dynamic interplay between risks and resources described by resilience theorists such as Masten (2000), while creating models that could be empirically validated.

Structural equation modelling does require a large sample size for adequate statistical power (Kaplan, 2000), and tracking homeless youth longitudinally is a time and resource intensive undertaking (Aubry et al., 2004). However, compared to research efforts that have been dedicated to understanding homeless adults with concurrent disorder over the last twenty years, there have been significantly fewer studies of homeless youth (Toro et al., 2007) despite the consideration that they may be the most vulnerable age group across the lifespan to become (Robertson & Toro, 1999).

As noted earlier in this thesis, a five-year follow-up period would allow for a more thorough investigation of how youth exit homelessness, and how their development unfolds over

time. Having a greater sample size, such as 500 at baseline may enable a sufficiently large enough sample to be tracked over time despite loss due to attrition. Involving homeless youth in the development of an interview protocol is recommended, as youth are the ideal candidates to speak to the issues that affect them (Children's Mental Health Ontario (2007)).

The observation that most homeless youth become housed has been recorded at a national level in the United States (Burt, 2007). That finding was replicated in this dissertation, based on a longitudinal sample of youth who were homeless from October 2002 to October 2003 and were contacted two years later. Future research is required to detect the specific mechanisms that facilitate resilient outcomes in homeless youth, and particularly *at what time* a focus on those outcomes becomes realistic and helpful rather than another source of stress which may compromise mental health functioning. Results of this dissertation suggest that other resilient outcomes normative to emerging adulthood such as participating in schooling and joining the work force is best initiated after housing stability has been attained.

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APPENDIX A

Secondary Analyses: New Parents

My son. I look forward to raising him . . . because it is a chance for me to relive my childhood and I will be able to give him things that I never had. The kind of love and respect a child should have, not like what I had. (Kidd & Davidson, 2007, p. 227)

A number of youth who were homeless at Time 1 interview had become parents at Time 2 interview. Some new parents who became re-housed had regained custody of children they were not living with at Time 1 interview as well. A total of 17⁴ youth from the original sample of N=99 youth who completed both Time 1 and Time 2 interviews had children between the ages of <1 year to 4-years old living with them at follow-up. Working from the assumption that parenting young children modifies youth's developmental trajectories compared to youth who are not parents, data from participants who were parents were removed from primary analyses within the three articles that comprise the core elements of this dissertation. There is a literature on homeless families, which is beyond the scope of this dissertation. Exploratory analyses on the three resilient outcomes of re-housing, educational participation, and working were conducted and are presented as follows.

Of the 16 youth who were parenting their children at follow-up interview, 3 (18.8%) were new fathers and 13 (81.3%) were new mothers. Eleven youth had one child, two youth had two children, and three youth had two children who ranged in ages between 3-weeks (twins) to 4 years old. A total of 3 parents indicated that they had children (number not specified) in the care of the Children's Aid Society.

All but one new parent was re-housed at follow-up. New parents described having been homeless between 1 to 33 months across their lifetime, with an average duration of 9.81 months

⁴ One participant had too much missing information to be included in data analysis. Removing that case resulted in 16 new parents.

homeless. A total of 13 (81.3%) of youth were housed for 90 days or longer at Time 2 interview, and therefore met criteria for attaining housing stability. They had been re-housed between 0 and 810 days ($M=455.25$ days, $SD=279.34$ days) with an average proportion of duration of time re-housed computed by time between re-interviews of 61.38%.

With respect to education, 1 parent's highest level of completed education was Grade 8 or less, 5 youth had completed Grade 9 and 10, 6 youth had completed Grade 11, and 4 youth had finished high school with diploma. A total of 5 (41.7%) parents were participating in school at Time 2 interview.

The majority of new parents ($n=13$; 81.3%) were not employed at Time 2 interview. Of those who were employed, only 1 (6.3%) was stably employed, which was defined by being employed at the same job for 90 days or longer at the job still held at Time 2 interview. Of the 3 new parents who were working at Time 2 interview, 1 worked part-time (30 hours per month), 1 described working "varied" monthly hours, and 1 worked full-time (140 hours per month). Types of jobs held by new parents were in the service, labour, and skilled trade industries.

New parents who were not employed between Time 1 and Time 2 interview described receiving social assistance, government support for personal needs allowance, and supplementing personal needs allowance with "odd jobs." Some youth described having been in jail, and others said that they had never worked, but went from their family's financial support to social assistance.

Based on these secondary analyses of new parents with histories of homelessness, it is apparent that re-housing and educational participation appear to be more accessible outcomes than employment based on Time 2 interviews. This may be due to the flexible arrangements of educational programs for young parents in Ottawa, as well as prioritized access to housing and

social benefits for homeless families compared to single homeless individuals. Another possibility is that new parenthood provided an exit from the youth street subculture that facilitated a corrective developmental trajectory, beginning with re-housing (Auerswald & Eyre, 2002).

For youth disengaged from the youth homelessness street subculture, becoming re-housed and focusing on becoming a parent may have also facilitated the conditions necessary to return to school. Early parenthood in youth with histories of homelessness is perhaps best understood as a pathway out of homelessness rather than a resilient outcome, as there are numerous stressors associated with being a young single parent with a complex history including homelessness. New parents have demonstrated notable gains by achieving stable housing, but they were also largely dependent upon social services, and will have limited earning potential without completing high school education (Statistics Canada, 2007). Further research with a larger sample is needed to specifically query how new parents became stably re-housed and engaged in educational programs and the work force, and how they provide care to their children despite the increased conditions of stress that accompany their changing roles.

Appendix B

PANEL STUDY ON HOMELESSNESS: PHASE 1
October 2, 2002

NAME _____ **Nickname** _____

Date of Birth _____

Family Citizenship: ___ Canadian ___ Other

Adult Female Citizenship: ___ Canadian ___ Other
Length of stay ___ <14 days ___ 14-26 days ___ 27-61 days ___ 62-154 days ___ >154 days

Adult Male
Length of Stay ___ <7 days ___ 7-29 days ___ 30-80 days ___ >80 days

Youth Male ___ **Youth Female** ___

Informed Consent Signed Y N
Consent to Contact City Signed Y N

Consent to Contact Friends, etc. Signed Y N

Participant Paid Y N

Receipt Signed Y N

Interviewer Name: _____

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DATE	HOUSING						INCOME/EMPLOYMENT	
05/00								
06/00								
07/00								
08/00								
09/00								
10/00								
11/00								
12/00								

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DATE	HOUSING					INCOME/EMPLOYMENT	
01/01							
02/01							
03/01							
04/01							
05/01							
06/01							
07/01							
08/01							
09/01							

DATE	HOUSING				INCOME/EMPLOYMENT
10/01					
11/01					
12/01					
01/02					
02/02					

Were you ever homeless (even for a day or two) for any period that we have not already recorded? Yes No *If NO, skip to 9*

If YES, a. when was this _____

b. where was this _____

c. how long were you homeless? _____

This question should be repeated for every period of unrecorded homelessness

Were you ever homeless (even for a day or two) for any other period that we have not already recorded? Yes No *If NO, skip to 9*

If YES, a. when was this _____

b. where was this _____

c. how long were you homeless? _____

Were you ever homeless (even for a day or two) for any other period that we have not already recorded? Yes No *If NO, skip to 9*

If YES, a. when was this _____

- b. where was this _____
- c. how long were you homeless? _____

B. SOCIAL SUPPORT

The following questions ask about people in your environment who provide you with help or support. Each question has three parts. For the first part, list all of people you know, excluding yourself, whom you can count on for help or support in the manner described. Please give the person's initials and their relationship to you.

7. Whom can you really count on to listen to you when you need to talk? Please tell me the initials of the person and his/her relationship to you.
- No one _____
- i. _____
 - ii. _____
 - iii. _____
 - iv. _____
 - v. _____
 - vi. _____

- 7 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction. USE CUE CARD*
- _____ very satisfied _____ satisfied _____ somewhat satisfied _____ dissatisfied _____ very dissatisfied

- 7.b In the past six months, how many times a month have you had contact with each of these people?

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

8. Whom could you really count on to help you out in a crisis situation, even though they would have to go out of their way to do so?

- No one _____
- i. _____
 - ii. _____
 - iii. _____
 - iv. _____
 - v. _____
 - vi. _____

- 8 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction. USE CUE CARD*
- _____ very satisfied _____ satisfied _____ somewhat satisfied _____ dissatisfied _____ very dissatisfied

- 8.b In the past six months, how many times a month have you had contact with each of these people? *(Only ask this about people who were not named in question 7)*

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

9. Whom can you really count on to be dependable when you need help?

- No one _____
- i. _____
 - ii. _____
 - iii. _____
 - iv. _____
 - v. _____
 - vi. _____

9 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction. USE CUE CARD*
 ___ very satisfied ___ satisfied ___ somewhat satisfied ___ dissatisfied ___ very dissatisfied

9 b. In the past six months, how many times a month have you had contact with each of these people? *(Only ask this about people who were not named in questions 7-8)*

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

10. With whom can you totally be yourself?

No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____

10 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction. USE CUE CARD*
 ___ very satisfied ___ satisfied ___ somewhat dissatisfied ___ dissatisfied ___ very dissatisfied

10 b. In the past six months, how many times a month have you had contact with each of these people? *(Only ask this about people who were not named in questions 7-9)*

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

11. Whom can you count on to console you when you are very upset?

No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____

11 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction. USE CUE CARD*
 ___ very satisfied ___ satisfied ___ somewhat dissatisfied ___ dissatisfied ___ very dissatisfied

11 b. In the past six months, how many times a month have you had contact with each of these people? *(Only ask this about people who were not named in questions 7-10)*

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

C. PERSONAL EMPOWERMENT

21. In the next set of questions I am going to ask you about the amount of control you feel you have over your life right now. You tell me how much you agree or disagree with the following statements. Please use the following scale to respond to the items - **USE CUE CARD**

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I generally accomplish what I set out to do.	1	2	3	4
b. I have a positive attitude about myself.	1	2	3	4
c. When I make plans, I am almost certain to make them work.	1	2	3	4
d. I am usually confident about the decisions I make.	1	2	3	4
e. I am often able to overcome barriers.	1	2	3	4
f. I feel powerless most of the time.	1	2	3	4
g. Making trouble never gets you anywhere.	1	2	3	4
h. You can't fight the government.	1	2	3	4
i. When I am unsure about something, I usually go along with the group.	1	2	3	4
j. Experts are in the best position to decide what people should do or learn. By experts we mean people like doctors, social workers, teachers, outreach workers, etc.	1	2	3	4
k. Most of the misfortunes in my life were due to bad luck.	1	2	3	4
l. Usually, I feel alone.	1	2	3	4
m. People are limited only by what they think possible.	1	2	3	4
n. I can pretty much determine what will happen in my life.	1	2	3	4
o. I am generally optimistic about the future.	1	2	3	4

F. HEALTH STATUS

(SF-36v2) These questions ask for your views about your health. **USE CUE CARDS FOR ALL SF-36 QUESTIONS - Q. 28-38**

41. In general, would you say your health is **USE CUE CARD**

_____ excellent _____ very good _____ good _____ fair _____ poor

42. Compared to one year ago, how would you rate your health in general now? **USE CUE CARD**

- _____ much better than one year ago
- _____ somewhat better than one year ago
- _____ about the same as one year ago
- _____ somewhat worse now than one year ago
- _____ much worse than one year ago

43. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so how much?
(You should use your judgement about asking these questions. If respondent is physically disabled and unable to do the activities, do not ask) **USE**

CUE CARD

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. <i>Vigorous Activities</i> , such as running, lifting heavy objects, participating in strenuous sports	_____	_____	_____
b. <i>Moderate Activities</i> , such as moving a table	_____	_____	_____
c. <i>Light Activities</i> , such as lifting or carrying a bag or purse	_____	_____	_____
d. Climbing several flights of stairs	_____	_____	_____
e. Climbing one flight of stairs	_____	_____	_____
f. Bending, kneeling or stooping	_____	_____	_____
g. Walking more than a mile	_____	_____	_____
h. Walking several hundred yards	_____	_____	_____
i. Walking one hundred yards	_____	_____	_____
j. Bathing or dressing yourself	_____	_____	_____

44. During the past 4 weeks, how much of the time have you had any of the following problems with your regular daily activities
as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a. Cut down on the amount of time you spent on your daily activities	_____	_____	_____	_____	_____
b. Accomplished less than you would like	_____	_____	_____	_____	_____
c. Were limited in the kind of activities	_____	_____	_____	_____	_____
d. Had difficulty performing activities (for example, it took extra effort)	_____	_____	_____	_____	_____

45. During the past 4 weeks, how much of the time have you had any of the following problems with your regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)? **USE CUE CARDS**

- | | All of
the time | Most of
the time | Some of
the time | A little of
the time | None of
the time |
|--|--------------------|---------------------|---------------------|-------------------------|---------------------|
| a. Cut down on the amount of time you spent on your regular activities | ___ | ___ | ___ | ___ | ___ |
| b. Accomplished less than you would like | ___ | ___ | ___ | ___ | ___ |
| c. Did activities less carefully than usual | ___ | ___ | ___ | ___ | ___ |

46. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends or groups?

USE CUE CARD

___ not at all ___ slightly ___ moderately ___ quite a bit ___ extremely

47. How much bodily pain have you had during the past 4 weeks? **USE CUE CARD**

___ none ___ very mild ___ mild ___ moderate ___ severe ___ very severely

48. During the past 4 weeks, how much did pain interfere with your normal daily activities? **USE CUE CARD**

___ not at all ___ a little bit ___ moderately ___ quite a bit ___ extremely

49. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks. **USE CUE CARD**

- | | All of
the time | Most of
the time | Some of
the time | A little of
the time | None of
the time |
|--|--------------------|---------------------|---------------------|-------------------------|---------------------|
| a. Did you feel full of life? | ___ | ___ | ___ | ___ | ___ |
| b. Have you been very nervous? | ___ | ___ | ___ | ___ | ___ |
| c. Have you felt so down in the dumps that nothing could cheer you up? | ___ | ___ | ___ | ___ | ___ |
| d. Have you felt calm and peaceful? | ___ | ___ | ___ | ___ | ___ |
| e. Did you have a lot of energy? | ___ | ___ | ___ | ___ | ___ |
| f. Have you felt downhearted and depressed? | ___ | ___ | ___ | ___ | ___ |
| g. Did you feel worn out? | ___ | ___ | ___ | ___ | ___ |
| h. Have you been happy? | ___ | ___ | ___ | ___ | ___ |
| i. Did you feel tired? | ___ | ___ | ___ | ___ | ___ |

50. During the *past 4 weeks*, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?
USE CUE CARD

___ all of the time ___ most of the time ___ some of the time ___ a little of the time ___ none of the time

51. How TRUE or FALSE is each of the following statements for you? **USE CUE CARD**

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
a. I seem to get sick a little easier than other people	___	___	___	___	___
b. I am as healthy as anybody I know	___	___	___	___	___
c. I expect my health to get worse	___	___	___	___	___
d. My health is excellent	___	___	___	___	___

G. SOCIAL SERVICES UTILIZATION

78. Do you get help from any of the following community services?
- | | | |
|---|---------|--------|
| Drop-In Centres (e.g. Centre 454, the Well, St. Joe's Women Centre) | ___ Yes | ___ No |
| City Social Services (e.g. EFA or welfare, Public Health, Housing) | ___ Yes | ___ No |
| Housing Services (e.g. Housing Help, Action Logement) | ___ Yes | ___ No |
| Employment Services (e.g. Causeway, Salvation Army) | ___ Yes | ___ No |

J. SUBSTANCE USE AND ABUSE

In this section I would like to ask you some questions about smoking, drinking alcohol and taking both prescription and street drugs.

a. Have you ever felt you ought to cut down on your drinking?	Yes	No
---	-----	----

b. Have people annoyed you by criticizing your drinking?	Yes	No
c. Have you ever felt bad or guilty about your drinking?	Yes	No
d. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye opener)?	Yes	No

110. In the past 12 months, how often did you drink alcoholic beverages? **USE CUE CARD** – (circle answer)

- 0= Never
- 1= Less than 1 time a month
- 2= 1-3 times a month
- 3= 1 time a week
- 4= 2-3 times a week
- 5= 4-6 times a week
- 6= Daily/1 time a day
- 7= 2-3 times each day
- 8= 4 or more times each day

111. Did you ever have a drinking problem? Yes ___ No ___

Drug Use

The following questions concern information about your potential involvement with drugs excluding alcohol and tobacco during the past 12 months. When the word drug abuse is used, I mean the use of prescribed or over-the-counter drugs in excess of the directions and any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g. marijuana, hash), solvents, tranquilizers (e.g. Valium), barbiturate drugs, cocaine, stimulants (e.g. speed), hallucinogens (e.g. LSD) or narcotics (e.g. heroin). Remember that the questions do not include alcohol or tobacco.

74. How often have you used these drugs in the past 12 months? **USE CUE CARD** (If never, skip to 118)

- 0= Never
- 1= Less than 1 time a month
- 2= 1-3 times a month
- 3= 1 time a week
- 4= 2-3 times a week
- 5= 4-6 times a week
- 6= Daily/1 time a week
- 7= 2-3 times each day
- 8= 4 or more times each day

116. What drugs did you use? _____
117. Which ones did you use most often? _____
118. Have you ever injected drugs in the last 12 months? _____ Yes _____ No

119. Next I'm going to ask you some questions about any drugs you may have used in the past 12 months. For each question I read, please answer yes or no.

DAST-10

	Yes	No
a. Have you used drugs other than those required for medical reasons?	Yes	No
b. Do you abuse more than one drug at a time?	Yes	No
c. Are you always able to stop using drugs when you want to?	Yes	No
d. Have you had "blackouts" or "flashbacks" as a result of drug use?	Yes	No
e. Do you ever feel bad or guilty about your drug use?	Yes	No
e. Does your spouse (or parents or someone close to you) ever complain about your involvement with drugs?	Yes	No
g. Have you neglected your family because of your use of drugs?	Yes	No
h. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
i. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
h. Have you had medical problems as a result of your drug use (such as memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No

120. Have you ever injected drugs? _____ Yes _____ No
- IF YES, a. How long ago?** _____
- b. Were you always able to get clean needles? _____ Yes _____ No

c. Have you ever shared needles with others? _____ Yes _____ No

K. DEMOGRAPHIC INFORMATION

In this section I would like to ask some questions about you so that we can know the range of people that are in our study.

121. Sex _____ Male _____ Female _____ Transgender

122. Date of Birth _____

123. Marital Status:

- 1 Single
- 2 Living with Romantic Partner/Common Law
- 3 Married
- 4 Separated, if YES, for how long have you been separated _____
- 5 Divorced, if YES, when were you divorced? _____
- 6 Widowed
- 7 Other _____

124. Which of the following best describes your sexual orientation? (Read list)

_____ heterosexual (straight) _____ gay _____ lesbian _____ bisexual _____ two spirited
_____ other, specify: _____

125. To which cultural group(s) would you say you belong? (include country that cultural group is from - if applicable)

126. Have you ever experienced discrimination for any reason (e.g. race, sex, age, homelessness, language)?

_____ Yes _____ No

Can you tell me a bit about it

127. Were you born in Canada?: _____ Yes _____ No **If YES, skip to #133**

128. When did you move to Canada?

142. How hopeful are you that your job will continue in the future? **USE CUE CARD**

- ___ Very hopeful ___ Unsure
___ Hopeful ___ Not Hopeful

141. Since you were 16 years old, approximately how many years have you spent working for pay?

142. Other than yourself, do you support anyone else? ___ Yes ___ No
If yes, who? _____

Children

145. How many children do you have? _____ (*If no children, skip to Q.147*)

146. What are their ages? _____

147. How many of your children normally live with you? _____

147 a. Are any of your children in the care of the Children's Aid Society? ___ Yes ___ No

148. Do you have any other dependents (by that we mean any other people that you are responsible for taking care of)?

___ Yes ___ No
If yes, who are they? _____

Education

96. Have you gone to school or taken any courses since our last interview, about two years ago? ___ Yes ___ No *If NO, skip to Q.99*

If yes, what type of courses have you taken/are taking? _____

97. a. Are you still in school? ___ Yes ___ No (*IF NO, skip to Q.99*)

b. Approximately, how many hours per week are you attending school? _____
 c. Is it part-time or full-time? _____ Part-time _____ Full-time

98. What factors made it possible for you to return/stay in school? _____

99. Are you hoping to return to school or to take courses? _____

100. What is the highest level of schooling that you have completed? (If education was acquired in another country, please try to determine Canadian equivalent)

- ___ Grade 8 or less
- ___ Grade 9 and 10
- ___ Grade 11
- ___ High school complete with no diploma
- ___ High school with diploma
- ___ Some trade, vocational, college or university but no diploma
- ___ Trade/vocational certificate
- ___ Apprenticeship certificate
- ___ College diploma (CEGEP)
- ___ Non-university certificate from college, school of nursing, technical institute
- ___ University certificate below Bachelor's degree
- ___ Bachelor's degree
- ___ University certificate above Bachelor's degree
- ___ First professional degree - veterinary, medical doctor, dental
- ___ Master's degree
- ___ PhD degree

___ Other, specify _____

101. Are you able to read and/or write English? _____ Read

102. What other language(s) can you read and/or write? Read _____

THANK YOU FOR YOUR TIME AND YOUR PARTICIPATION

Resilient outcomes in homeless youth 215

____ Write

_____ Write _____

Appendix C

PANEL STUDY ON HOMELESSNESS – PHASE II

November 29, 2004

NAME _____ Nickname _____

Date of Birth _____

Interviewer Name: _____
Location of Interview: _____ (or L.D. phone #) _____
Date of 1 st Interview: _____
Date of Interview: _____
In Person _____ Telephone _____
Time Started: _____ Time Ended: _____
Time Finished: _____

Informed Consent Signed	Y	N
Consent to Contact City Signed	Y	N
Participant Paid	Y	N
Receipt Signed	Y	N
Consent to Contact Friends, etc. Signed	Y	N

Thank you for agreeing to participate

in this follow-up interview

Phase 1 Information
Subgroup: _____ Date of Interview _____ Place of Interview _____

A: HOUSING/INCOME/EMPLOYMENT HISTORY

1a. I'm going to ask you about the places you have lived for the past two years. I'll be asking about the specific places in which you have stayed along with the dates that you stayed there. I'm also going to ask you about what you did to get money over the past two years.
 You were last interviewed by (*name of previous interviewer*) _____ (_____) months ago and at that time you were staying at _____ (*place of residence*).

When did you move from (_____)? _____ (day/month/year)

1b. Why did you leave this place?

SITE 1:

a. Where did you move to? (*address - or nearest intersection - and city*) _____

b. Who were you living with? _____

c. What type of housing was it? _____
 d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were at that address? (*Also probe 'unconventional employment'*)

<u>Financial Assistance</u>					
Dates:	_____	Source	_____	Amount per mth	_____
Dates:	_____	Source	_____	Amount per mth	_____
<u>Employment</u>					
Dates:	_____	Employment (job & sector)	_____	Pay rate	_____ Hrs. per mth
Dates:	_____	Employment (job & sector)	_____	Pay rate	_____ Hrs. per mth
<u>Other sources of income</u>					
Dates:	_____	Source	_____	Amount per mth	_____
Dates:	_____	Source	_____	Amount per mth	_____

f. When did you leave that place? _____ (day/month/year)

g. Why did you leave? _____

h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 2:

- a. Where did you move to? *(address – or nearest intersection - and city)* _____
- b. Who were you living with? _____
- c. What type of housing was it? _____
- d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were **at that address?**

<u>Financial Assistance</u>				
Dates:	_____	Source	_____	Amount per mth
Dates:	_____	Source	_____	Amount per mth
<u>Employment</u>				
Dates:	_____	Employment (job & sector)	_____	Pay rate
Dates:	_____	Employment (job & sector)	_____	Pay rate
<u>Other sources of income</u>				
Dates:	_____	Source	_____	Amount per mth
Dates:	_____	Source	_____	Amount per mth

- f. When did you leave that place? _____ (day/month/year)
- g. Why did you leave? _____
- h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 3:

- a. Where did you move to? *(address – or nearest intersection - and city)* _____
- b. Who were you living with? _____
- c. What type of housing was it? _____
- d. Did you consider yourself to be homeless at that time? Yes ___ No ___
- e. What were your major sources of income while you were **at that address?**

Financial Assistance

Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

Employment
 Dates: _____ Employment (job & sector) _____ Hrs. per mth _____
 Dates: _____ Employment (job & sector) _____ Hrs. per mth _____

Other sources of income
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

- f. When did you leave that place? _____ (day/month/year)
- g. Why did you leave? _____
- h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 4:

- a. Where did you move to? *(address - or nearest intersection - and city)* _____
- b. Who were you living with? _____
- c. What type of housing was it? _____
- d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were at that address?

Financial Assistance
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

Employment
 Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____
 Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____

Other sources of income
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

- f. When did you leave that place? _____ (day/month/year)
- g. Why did you leave? _____
- h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 5:

- a. Where did you move to? (*address – or nearest intersection - and city*) _____
- b. Who were you living with? _____
- c. What type of housing was it? _____
- d. Did you consider yourself to be homeless at that time? Yes ___ No ___
- e. What were your major sources of income while you were **at that address**?
- | | | | | |
|--------------------------------|-------|---------------------------|-------|-----------------------------------|
| <u>Financial Assistance</u> | | | | |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
| <u>Employment</u> | | | | |
| Dates: | _____ | Employment (job & sector) | _____ | Pay rate _____ Hrs. per mth _____ |
| Dates: | _____ | Employment (job & sector) | _____ | Pay rate _____ Hrs. per mth _____ |
| <u>Other sources of income</u> | | | | |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
- f. When did you leave that place? _____ (day/month/year)
- g. Why did you leave? _____
- h. What would have been helpful to keep you there? (*only if respondent was housed*) _____

SITE 6:

- a. Where did you move to? (*address – or nearest intersection - and city*) _____
- b. Who were you living with? _____
- c. What type of housing was it? _____
- d. Did you consider yourself to be homeless at that time? Yes ___ No ___
- e. What were your major sources of income while you were **at that address**?
- | | | | | |
|-----------------------------|-------|--------|-------|----------------------|
| <u>Financial Assistance</u> | | | | |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
| Dates: | _____ | Source | _____ | Amount per mth _____ |
| <u>Employment</u> | | | | |

Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____
 Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____
Other sources of income
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

- f. When did you leave that place? _____ (day/month/year)
 g. Why did you leave? _____
 h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 7:

- a. Where did you move to? *(address – or nearest intersection - and city)* _____
 b. Who were you living with? _____
 c. What type of housing was it? _____
 d. Did you consider yourself to be homeless at that time? Yes ___ No ___

- e. What were your major sources of income while you were at that address?

Financial Assistance
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____
Employment
 Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____
 Dates: _____ Employment (job & sector) _____ Pay rate _____ Hrs. per mth _____
Other sources of income
 Dates: _____ Source _____ Amount per mth _____
 Dates: _____ Source _____ Amount per mth _____

- f. When did you leave that place? _____ (day/month/year)
 g. Why did you leave? _____
 h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 8:

a. Where did you move to? (*address -- or nearest intersection - and city*) _____

b. Who were you living with? _____

c. What type of housing was it? _____

d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were at that address?

<u>Financial Assistance</u>			
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
<u>Employment</u>			
Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____
Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____
<u>Other sources of income</u>			
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____

d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were at that address?

<u>Financial Assistance</u>			
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
<u>Employment</u>			
Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____
Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____
<u>Other sources of income</u>			
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____	Amount per mth _____

f. When did you leave that place? _____ (day/month/year)

g. Why did you leave? _____

h. What would have been helpful to keep you there? *(only if respondent was housed)*

SITE 8:

a. Where did you move to? *(address - or nearest intersection - and city)*

b. Who were you living with?

c. What type of housing was it?

d. Did you consider yourself to be homeless at that time? Yes ___ No ___

e. What were your major sources of income while you were at that address?

Financial Assistance

Dates: _____	Source _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____

Employment

Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____
Dates: _____	Employment (job & sector) _____	Pay rate _____	Hrs. per mth _____

Other sources of income

Dates: _____	Source _____	Amount per mth _____
Dates: _____	Source _____	Amount per mth _____

f. When did you leave that place? _____ (day/month/year)

g. Why did you leave? _____

h. What would have been helpful to keep you there? *(only if respondent was housed)*

B. SOCIAL SUPPORT

The following questions ask about people in your environment who provide you with help or support. Each question has three parts. For the first part, list all of people you know, excluding yourself, whom you can count on for help or support in the manner described. Please give the person's initials and their relationship to you.

7. Whom can you really count on to listen to you when you need to talk? Please tell me the initials of the person and his/her relationship to you.

No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____

7 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied

7 b. In the past six months, how many times a month have you had contact with each of these people?

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

8. Whom could you really count on to help you out in a crisis situation, even though they would have to go out of their way to do so?

No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____

8 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied

8 b. In the past six months, how many times a month have you had contact with each of these people?

(Only ask this about people who were not named in question 7)

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

9. Whom can you really count on to be dependable when you need help?

No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____

9 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied

9 b. In the past six months, how many times a month have you had contact with each of these people?

(Only ask this about people who were not named in questions 7-8)

Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____
Initials _____	# of contacts/month _____	Initials _____	# of contacts/month _____

10. With whom can you totally be yourself?
 No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____
- 10 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ somewhat satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied
- 10 b. In the past six months, how many times a month have you had contact with each of these people?
(Only ask this about people who were not named in questions 7-9)
 Initials _____ # of contacts/month _____ # of contacts/month _____
 Initials _____ # of contacts/month _____ # of contacts/month _____
 Initials _____ # of contacts/month _____ # of contacts/month _____
11. Whom can you count on to console you when you are very upset?
 No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____
- 11 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ somewhat satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied
- 11 b. In the past six months, how many times a month have you had contact with each of these people?
(Only ask this about people who were not named in questions 7-10)
 Initials _____ # of contacts/month _____ # of contacts/month _____
 Initials _____ # of contacts/month _____ # of contacts/month _____
 Initials _____ # of contacts/month _____ # of contacts/month _____
12. Whom can you count on to help you when you have housing problems?
 No one _____
 i. _____ ii. _____ iii. _____
 iv. _____ v. _____ vi. _____
- 12 a. How satisfied are you with this level of support? *If respondent replied "No one" still rate the level of satisfaction.*
 _____ very satisfied _____ somewhat satisfied _____ somewhat dissatisfied _____ dissatisfied _____ very dissatisfied
13. How do they help you? _____

14. Are any of these people homeless? ___ Yes ___ No ___ DK If yes, give me the initials of those who are (initials)

Coping Response Inventory

17. In this section I am going to ask you about ways you've been coping with the stress in your life. There are many ways to try to deal with problems. These items ask what you've been doing to cope. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not – just whether or not you're doing it. Make your answers as true FOR YOU as you can. There are no 'right' or 'wrong' answers, so choose the most accurate answer for YOU – not what you think 'most people' would say or do. In answering how frequently you use a strategy, use the following scale. **USE CUE CARD**

<i>When coping with stress and problems...</i>	I HAVEN'T BEEN DOING THIS AT ALL	I'VE BEEN DOING THIS A LITTLE BIT	I'VE BEEN DOING THIS A MEDIUM AMOUNT	I'VE BEEN DOING THIS A LOT
a. I've been turning to work or other activities to take my minds off things	1	2	3	4
b. I've been concentrating my efforts on doing something about the situation I'm in	1	2	3	4
c. I've been saying to myself "this isn't real"	1	2	3	4
d. I've been using alcohol or other drugs to make myself feel better	1	2	3	4
e. I've been getting emotional support from others	1	2	3	4
f. I've been giving up trying to deal with it	1	2	3	4
g. I've been taking action to try to make the situation better.	1	2	3	4

<i>When coping with stress and problems...</i>	I HAVEN'T BEEN DOING THIS AT ALL	I'VE BEEN DOING THIS A LITTLE BIT	I'VE BEEN DOING THIS A MEDIUM AMOUNT	I'VE BEEN DOING THIS A LOT
h. I've been refusing to believe that it has happened	1	2	3	4
i. I've been saying things to let my unpleasant feeling escape	1	2	3	4
j. I've been getting help and advice from other people	1	2	3	4
k. I've been using alcohol or other drugs to help me get through it	1	2	3	4
l. I've been trying to see it in a different light, to make it seem more positive	1	2	3	4
m. I've been criticizing myself	1	2	3	4
n. I've been trying to come up with a strategy about what to do	1	2	3	4
o. I've been getting comfort and understanding from someone	1	2	3	4
p. I've been giving up the attempt to cope	1	2	3	4
q. I've been looking for something good in what is happening	1	2	3	4
r. I've been making jokes about it	1	2	3	4

<i>When coping with stress and problems...</i>	I HAVEN'T BEEN DOING THIS AT ALL	I'VE BEEN DOING THIS A LITTLE BIT	I'VE BEEN DOING THIS A MEDIUM AMOUNT	I'VE BEEN DOING THIS A LOT
s. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping	1	2	3	4
t. I've been accepting the reality of the fact that it has happened	1	2	3	4
u. I've been expressing my negative feelings	1	2	3	4
v. I've been trying to find comfort in my religion or spiritual beliefs	1	2	3	4
x. I've been trying to get advice or help from other people about what to do	1	2	3	4
y. I've been learning to live with it	1	2	3	4
z. I've been thinking hard about what steps to take	1	2	3	4
aa. I've been blaming myself for things that happened	1	2	3	4
bb. I've been praying or meditating	1	2	3	4
cc. I've been making fun of the situation	1	2	3	4

18. Are there other ways (that were not mentioned already) that you use to deal with a problem? _____

The Mentor Support Scale

19. Other than your parents or whoever raised you, do you have a role model or mentor who you go to for support and guidance? YES ___ NO ___
 "A mentor is not someone around your age or a boyfriend or girlfriend. He or she is an adult who is older than you, who has had more experience than you, and who has taken a special interest in you".

If NO, SKIP to Q. 20

If YES, continue with the mentor scale

Now, please tell me the extent that the following statements are true about this person using the following scale. **USE CUE CARD**

	NOT AT ALL	MOSTLY NOT	NEUTRAL (neither yes or no)	YES, FOR THE MOST PART	A HUGE AMOUNT
a. You could count on this person to be there for you	0	1	2	3	4
b. He or she believes in and cares deeply about you	0	1	2	3	4
c. He or she inspires you to do your best	0	1	2	3	4
d. Knowing him or her has really affected what you do and the choices you make	0	1	2	3	4
e. He or she is a model for the kind of person you would like to be	0	1	2	3	4

Prosocial Behaviour Measure

20. Below are a number of statements that may or may not describe you and how you get along with other people. Please indicate HOW MUCH EACH STATEMENT DESCRIBES YOU by using the following scale:
USE CUE CARD

	Does not describe me at all	Describes me a little	Somewhat describes me	Describes me well	Describes me greatly
a. When people ask me to help them I don't hesitate.	1	2	3	4	5
b. I never hesitate to help others when they ask for it.	1	2	3	4	5
c. When other people are around, it is easier for me to help needy others.	1	2	3	4	5
d. I respond to helping others best when the situation is highly emotional	1	2	3	4	5
e. Emotional situations make me want to help needy others	1	2	3	4	5
f. Its easy for me to help others when they are in a dire situation	1	2	3	4	5
g. I tend to help people who hurt themselves badly	1	2	3	4	5
h. I can help others best when people are watching me	1	2	3	4	5
i. I think that one of the best things about helping others is that it makes me look good	1	2	3	4	5
j. I tend to help needy others most when they do not know who helped them	1	2	3	4	5
k. I think that helping others without them knowing is the best type of situation	1	2	3	4	5

> **END OF YOUTH SECTION**

C. PERSONAL EMPOWERMENT

24. In the next set of questions I am going to ask you about the amount of control you feel you have over your life right now. You tell me how much you agree or disagree with the following statements. Please use the following scale to respond to the items - **USE CUE CARD**

	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I generally accomplish what I set out to do.	1	2	3	4
b. I have a positive attitude about myself.	1	2	3	4
c. When I make plans, I am almost certain to make them work.	1	2	3	4
d. I am usually confident about the decisions I make.	1	2	3	4
e. I am often able to overcome barriers.	1	2	3	4
f. I feel powerless most of the time.	1	2	3	4
g. Making trouble never gets you anywhere.	1	2	3	4
h. You can't fight the government.	1	2	3	4
i. When I am unsure about something, I usually go along with the group.	1	2	3	4
j. Experts are in the best position to decide what people should do or learn. By experts we mean people like doctors, social workers, teachers, outreach workers, etc.	1	2	3	4
k. Most of the misfortunes in my life were due to bad luck.	1	2	3	4
l. Usually, I feel alone.	1	2	3	4
m. People are limited only by what they think possible.	1	2	3	4
n. I can pretty much determine what will happen in my life.	1	2	3	4
o. I am generally optimistic about the future.	1	2	3	4

E. HEALTH STATUS

SF-36v2) These questions ask for your views about your health. **USE CUE CARDS FOR ALL SF-36 QUESTIONS - Q. 28-38**

28. In general, would you say your health is **USE CUE CARD**

_____ excellent _____ very good _____ good _____ fair _____ poor

USE CUE CARD

29. Compared to one year ago, how would you rate your health in general now?

- _____ much better than one year ago
- _____ somewhat better than one year ago
- _____ about the same as one year ago
- _____ somewhat worse now than one year ago
- _____ much worse than one year ago

30. The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so how much?
(You should use your judgement about asking these questions. If respondent is physically disabled and unable to do the activities, do not ask) **USE**

CUE CARD

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. <i>Vigorous Activities</i> , such as running, lifting heavy objects, participating in strenuous sports	_____	_____	_____
b. Moderate Activities, such as moving a table	_____	_____	_____
c. <i>Light Activities</i> , such as lifting or carrying a bag or purse	_____	_____	_____
d. Climbing several flights of stairs	_____	_____	_____
e. Climbing one flight of stairs	_____	_____	_____
f. Bending, kneeling or stooping	_____	_____	_____
g. walking more than a mile	_____	_____	_____
h. Walking several hundred yards	_____	_____	_____
i. Walking one hundred yards	_____	_____	_____
j. Bathing or dressing yourself	_____	_____	_____

31. During the past 4 weeks, how much of the time have you had any of the following problems with your regular daily activities as a result of your physical health?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
--------------------	---------------------	---------------------	-------------------------	---------------------

- b. Cut down on the *amount of time* you spent on your regular activities _____
- b. *Accomplished* less than you would like _____
- c. Did activities less carefully than usual _____

33. During the *past 4 weeks*, to what extent has your *physical health* or *emotional problems* interfered with your normal social activities with family, friends or groups?

USE CUE CARD
 _____ not at all _____ slightly _____ moderately _____ quite a bit _____ extremely

34. How much *bodily pain* have you had during the past 4 weeks? USE CUE CARD

_____ none _____ very mild _____ mild _____ moderate _____ severe _____ very severely

35. During the past 4 weeks, how much did pain interfere with your normal daily activities? USE CUE CARD

_____ not at all _____ a little bit _____ moderately _____ quite a bit _____ extremely

36. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please one answer that comes closest to the way you have been feeling. How much of the time during *the past 4 weeks*. USE CUE CARD

- a. Did you feel full of life _____ All of the time _____ Most of the time _____ Some of the time _____ A little of the time _____ None of the time
- b. Have you been very nervous? _____
- c. Have you felt so down in the dumps that nothing could cheer you up? _____
- d. Have you felt calm and peaceful? _____
- e. Did you have a lot of energy? _____
- f. Have you felt downhearted and depressed? _____
- g. Did you feel worn out? _____
- h. Have you been happy? _____
- i. Did you feel tired? _____

37. During the *past 4 weeks*, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

USE CUE CARD
 _____ all of the time _____ most of the time _____ some of the time _____ a little of the time _____ none of the time

38. How TRUE or FALSE is each of the following statements for you? USE CUE CARD

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
a. I seem to get sick a little easier than other people	_____	_____	_____	_____	_____
b. I am as healthy as anybody I know	_____	_____	_____	_____	_____
c. I expect my health to get worse	_____	_____	_____	_____	_____
d. My health is excellent	_____	_____	_____	_____	_____

F. SOCIAL SERVICES UTILIZATION

59. Now I'm going to ask you about social and community services you might have used in the past two years. By social and community services, I mean people whose job is to help you. For example, these services could include people who come see you where you live and help you with your daily life, as well as places you may go to get help in different areas of your life or to be with others.

Since we last interviewed you two years ago did you get help from any of the following social or community services?
 ASK about and CHECK all that apply.

- Shelters (such as the Mission, Cornerstone, the Family shelters, Interval House, the YSB Young Women's Shelter, Nelson House, Oshki Kizis Healing Lodge) (If yes), How many different times did you use these services in the past 2 years? _____
- Community Resource and Health Centres (such as the CMHA, Community Health Centres, Site Van, Outreach Services, public health nurses) (If yes), How many different times did you use these services in the past 2 years? _____
- Addiction Programs
 - Self-help (such as Alcoholics Anonymous, Gamblers' Anonymous, Narcotics Anonymous)
 - Organizations (such as - Harvest House, Billy Buffett's, Amethyst)
 (If yes), How many different times did you use these services in the past 2 years? _____
- Crisis Counselling (such as Distress Centre, Tel-aide, Mobile Mental Health Crisis Unit) (If yes), How many different times did you use these services in the past 2 years? _____
- Religious Organizations (such as Jewish Family Services, Ottawa Inmercity Ministries, Capital City Mission) (If yes), How many different times did you use these services in the past 2 years? _____
- Housing Services (such as Action-Logement, Housing Help)

- (If yes), How many different times did you use these services in the past 2 years? _____
- Drop-Ins (such as YSB Drop-In, Operation Go Home, The Well, St. Joe's Women's Centre, Centre 454) (If yes), How many different times did you use these services in the past 2 years? _____
- First Nations/Inuit/Métis Organizations (such as Wabano Centre for Aboriginal Health, Oshki Kizis Healing Lodge, Tungasuvvingat Inuit, Odawa Native Friendship Centre, Pinganodin Lodge, Minwaashin Lodge) (If yes), How many different times did you use these services in the past 2 years? _____
- Supportive Housing Services (such as Options Bytown, Ottawa Salus, Harmony House, Daybreak Non-Profit, Elizabeth Fry Society, John Howard Society (If yes), How many different times did you use these services in the past 2 years? _____
- Legal Services (such as Legal Aid/Legal Clinics, Elizabeth Fry Society, John Howard Society) (If yes), How many different times did you use these services in the past 2 years? _____
- Disability Organizations (such as ODSP) (If yes), How many different times did you use these services in the past 2 years? _____
- Food Banks or Food Cupboards (If yes), How many different times did you use these services in the past 2 years? _____
- Other organizations/services (such as YM/YWCA, Youville Centre, Boys and Girls Club of Ottawa, Causeway, Ottawa-Carleton Immigrant Services, Bruce House, Para-Transpo, Laundry Co-op, Snowsuit Fund, Christmas Exchange)
 - Please specify _____ (If yes),
 - How many different times in the past two years? _____

__H. SUBSTANCE USE AND ABUSE

In this section I would like to ask you some questions about smoking, drinking alcohol and taking both prescription and street drugs.

Smoking

69. Do you smoke cigarettes? ___ Yes ___ No **If NO, skip to Q.71**

70. If so, how many cigarettes do you smoke per day? _____

Alcohol

71. CAGE: Please answer the following questions about your drinking in the past 12 months. For each question I read, please answer yes or no.

a. Have you ever felt you ought to cut down on your drinking?	Yes	No
b. Have people annoyed you by criticizing your drinking?	Yes	No
c. Have you ever felt bad or guilty about your drinking?	Yes	No
d. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eye opener)?	Yes	No

72. In the past 12 months, how often did you drink alcoholic beverages? **USE CUE CARD** – (circle answer)

- 0= Never
- 1= Less than 1 time a month
- 2= 1-3 times a month
- 3= 1 time a week
- 4= 2-3 times a week
- 5= 4-6 times a week
- 6= Daily/1 time a day
- 7= 2-3 times each day
- 8= 4 or more times each day

73. Did you ever have a drinking problem? Yes ___ No ___

Drug Use

The following questions concern information about your potential involvement with drugs excluding alcohol and tobacco during the past 12 months. When the word drug abuse is used, I mean the use of prescribed or over-the-counter drugs in excess of the directions and any non-medical use of drugs. The various classes of drugs may include: cannabis (e.g. marijuana, hash), solvents, tranquilizers (e.g. Valium), barbiturate drugs, cocaine, stimulants (e.g. speed), hallucinogens (e.g. LSD) or narcotics (e.g. heroin). Remember that the questions do not include alcohol or tobacco.

74. How often have you used these drugs in the past 12 months? **USE CUE CARD** (*If never, skip to 79*)

- 0= Never
- 1= Less than 1 time a month
- 2= 1-3 times a month
- 3= 1 time a week
- 4= 2-3 times a week
- 5= 4-6 times a week
- 6= Daily/1 time a week
- 7= 2-3 times each day
- 8= 4 or more times each day

75. What drugs did you use? _____

76. Which ones did you use most often? _____

77. Have you ever injected drugs in the last 12 months? _____ Yes _____ No

78. Next I'm going to ask you some questions about any drugs you may have used in the past 12 months. For each question I read, please answer yes or no.

DAST-10

a. Have you used drugs other than those required for medical reasons?	Yes	No
b. Do you abuse more than one drug at a time?	Yes	No
c. Are you always able to stop using drugs when you want to?	Yes	No
d. Have you had "blackouts" or "flashbacks" as a result of drug use?	Yes	No
e. Do you ever feel bad or guilty about your drug use?	Yes	No
f. Does your spouse (or parents or someone close to you) ever complain about your involvement with drugs?	Yes	No
g. Have you neglected your family because of your use of drugs?	Yes	No

h. Have you engaged in illegal activities in order to obtain drugs?	Yes	No
i. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
i. Have you had medical problems as a result of your drug use (such as memory loss, hepatitis, convulsions, bleeding, etc.)?	Yes	No

79. Have you ever had a drug problem? _____

I. DEMOGRAPHIC INFORMATION

In this section I would like to ask some questions about you so that we can know the range of people that are in our study.

80. Marital Status:
- 1 Single
 - 2 Living with Romantic Partner/Common Law
 - 3 Married
 - 4 Separated, if YES, for how long have you been separated _____
 - 5 Divorced, if YES, when were you divorced? _____
 - 6 Widowed
 - 8 Other _____

81. Which of the following best describes your sexual orientation? (Read list)
- _____ heterosexual (straight) _____ gay _____ lesbian _____ bisexual _____ two spirited
- _____ other, specify: _____

82. Are you a Canadian citizen? YES NO *If YES, skip to Q. 85.*
83. What is your immigration status?
 ___ landed immigrant ___ refugee claimant ___ diplomatic status ___ visitor status
 ___ other (specify): _____
84. Why did you leave your country of origin?

85. Which language(s) can you speak or understand now? English French Other _____
86. Have you ever experienced discrimination? *If yes, please explain* _____

Income and Employment

87. Are you currently working for pay? YES NO *IF YES, SKIP to Q. 90*
88. Are you currently looking for a job? YES NO
89. How hopeful are you that you will get a job in the future? **USE CUE CARD**
 ___ Very hopeful
 ___ Hopeful
 ___ Unsure
 ___ Not Hopeful
90. When you are working, what kind of work do you normally do? _____

91. Do you support anyone other than yourself? Yes ___ No ___
If YES, who? _____

Children

92. How many children do you have? _____ *If NO children, skip to Q.96.*

93. What are their ages? _____

94. How many of your children normally live with you? _____

95. Are any of your children in the care of the Children's Aid Society? Yes ___ No ___

Education

96. Have you gone to school or taken any courses since our last interview, about two years ago? Yes ___ No *If NO, skip to Q.99*
If yes, what type of courses have you taken/are taking? _____

97. a. Are you still in school? Yes ___ No *(If NO, skip to Q.99)*

b. Approximately, how many hours per week are you attending school? _____

c. Is it part-time or full-time? Part-time ___ Full-time ___

98. What factors made it possible for you to return/stay in school? _____

99. Are you hoping to return to school or to take courses? _____

100. What is the highest level of schooling that you have completed? (If education was acquired in another country, please try to determine Canadian equivalent)

- Grade 8 or less
- Grade 9 and 10
- Grade 11
- High school complete with no diploma
- High school with diploma
- Some trade, vocational, college or university but no diploma
- Trade/vocational certificate
- Apprenticeship certificate
- College diploma (CEGEP)
- Non-university certificate from college, school of nursing, technical institute
- University certificate below Bachelor's degree
- Bachelor's degree
- University certificate above Bachelor's degree
- First professional degree - veterinary, medical doctor, dental
- Master's degree
- PhD degree
- Other, specify _____

101. Are you able to read and/or write English?

_____ Read _____ Write

102. What other language(s) can you read and/or write? Read _____

_____ Write

THANK YOU FOR YOUR TIME AND YOUR PARTICIPATION!