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Access to Care and the Impact of Inequality Among Individuals with a History of Mental Illness

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Abstract

Using an Intersectionality framework, a secondary analysis of pre-existing data from the CURA2 Poverty and Social Inclusion study (Forchuk et al., 2010-2015) was used to explore the relationship between experiences of oppression and self-rated health among a cross-section of 293 community dwelling participants with a mental illness. Binary logistic regression was used to estimate the association between self-rated health and social identity (gender, ethnicity, education, homelessness, employment, disability); health care access was tested for both mediating and moderating effects. The final model explained between 18.9-25.2% of the variance in self-rated health; four independent variables made unique statistically significant contributions to the model (education, employment, disability, unmet health need). There were no significant 3-way or 2-way interactions. Findings highlight the impact of social identity in shaping health. Further research is needed to facilitate greater understanding of the underlying factors that contribute to health inequalities among individuals who suffer from a mental illness.

Keywords
Mental health, inequality, Intersectionality, axes of oppression, access to care

Co-Authorship Statement

Heather Atyeo completed the following work under the supervision of Dr.Cheryl Forchuk and advisement of Dr.Mark Speechley, who will be co-authors on the publication resulting from this manuscript.

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Chapter 1

Introduction

Background and Significance

The effects of mental illness are multifaceted and widespread, and can contribute to significant impairment or disadvantage in multiple life domains. While some aspects of treatment and healing take place at the individual level, the promotion of wellbeing and equity within broader socio-political systems is integral to the recovery process. In Canada, where an estimated 6.7 million people (19.8%) currently live with a mental illness (Mental Health Commission of Canada [MHCC], 2011), continued mental healthcare reform has shifted the context of psychiatric treatment toward community-oriented practices that place greater emphasis on improving quality of life, honoring personal choice and promoting social and functional wellbeing as precursors to successful community integration (MHCC, 2009; Nelson, Lord & Ochoka, 2001). Yet despite efforts to re-conceptualize and restructure mental health service delivery, challenges in community capacity to address an increasing demand for community-based service and support has imposed limits on the extent to which this ideal for recovery has been achieved (Canadian Mental Health Association [CMHA], 2010; Kirby & Keon, 2006; MHCC, 2009). Furthermore, social determinants – which are largely determined by socio-political processes - have been recognized as playing a significant role in shaping health; however, the Canadian healthcare system remains largely focused on the biomedical physiologic aspects of health (McGibbon, 2012a; McPherson & McGibbon, 2010; Raphael, 2011). Optimizing community integration and facilitating recovery for individuals who struggle with a mental illness necessitates a broader approach to health and wellbeing and a greater range and scope of service among treatment and support programs.

Symptom severity and an individual's ability to effectively cope can be influenced by a number of intrinsic or extrinsic personal factors as well as socially and politically mediated processes. Achieving and maintaining a state of wellbeing within the community for those who struggle with a mental illness requires a system of care that is flexible to respond to each unique individual and adapts with ease to variations in treatment and support-related needs over time. For example, an interpersonal stressor such as the loss of a loved one may contribute to an increase in symptoms and need for greater levels of support temporarily or long term. Similarly, for someone who subsists on a fixed income, receiving notice of a rent increase may create considerable stress and threaten one's ability to provide for other basic needs; additional support may be required in order for that individual to cope and connect with needed resources. The actual intensity of support that is needed is time sensitive, however, level of need is likely to vary over time. A key to maintaining stable health within the community in either scenario involves ensuring that adequate services are available to provide support and advocacy at both the individual (micro) and broader systems (macro) levels specifically when needs arise. The current reality within the Canadian healthcare system however, is that these types of supports are not always readily accessible when they are needed. Presently, individuals with mental health concerns can wait several months for appropriate community-based services (Canadian Mental Health Association [CMHA], 2010; Kirby & Keon, 2006; MHCC, 2009). At the same time, there is increased reliance on emergency departments (Coristine et al., 2007; Romanow, 2002; SW-LHIN, 2009, 2014) and police services (Durbin, Lin & Zaslavksa, 2010; Forchuk, Jensen, Martin, Csiernik & Atyeo, 2010; Wilson-Bates, 2008) as a first point of contact to assist those experiencing mental health crises; this reflects a system of care that appears incapable, or ill equipped, to address the complex and varied needs of this population.

Beyond the challenges faced by both community and hospital based systems to manage client volumes and address need for service in a timely and efficient manner, mental health service delivery in Canada is limited by its adherence to a medicalized approach to care. Within a medical model of care, access to publicly funded service hinges on fulfillment of diagnostic criteria or other clinical indicators; quite often, this translates to a system of care where pharmacotherapy and symptom management are a mainstay of treatment (McGibbon, 2009; McGibbon, 2012a; Raphael, 2011; Rossiter & Morrow, 2011). Individuals who experience a range of difficulties related to mental health yet who do not fulfill criteria for a diagnosis of a mental illness according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013) may not qualify for service in the first place, or they may receive interventions that fail to adequately address the underlying socio-political factors that contribute to poor health when the root causes of their illness are not purely psychological or physiologic (Rossiter & Morrow, 2011). Social determinants of health are frequently overlooked by programs that adopt a standard medical approach (McGibbon, 2009; McGibbon, 2012a; Raphael, 2011); persistent negative health effects that arise as a result of these systemic shortcomings are subsequently treated as though they stem from individual characteristics such as treatment resistance or non-compliance, lack of motivation or lifestyle choice (Crowe, 2006; Lowenberg, 1995; McGibbon, 2009). However, the power differentials and related health consequences that evolve through such processes play a major role in terms of mediating access to the material and social resources that foster healing for individuals with a mental illness (McGibbon, 2009; Raphael, 2011; Rossiter & Morrow, 2011). For example, many individuals subsisting on a disability or otherwise fixed income as a result of a mental or physical illness face limited options with respect to procurement of safe, affordable housing (Bryant, 2009). This

in turn influences one's proximity to resources and the ability to provide for one's basic needs; when income is diverted toward higher cost living expenses such as rent and/or transportation, this leaves less money to ensure provisions for basic needs such as a nutritious diet and in some cases medications. Processes such as these contribute to a range of physical and mental health consequences and carry tremendous potential to impact recovery and wellbeing. Greater understanding of the broader socio-political context within which mental illness occurs is therefore necessary in order to support implementation of interventions that contribute to positive and meaningful experiences of recovery for those who struggle with mental health concerns.

Study Purpose

Power relationships encompass experiences of privilege or disadvantage; on a very basic level this includes possession or lack of material and/or social resources and supports. Power itself is acquired, maintained or lost through socially and/or politically mediated processes that dictate one's access to and ability to benefit from relevant resources and supports; power relationships may also influence resiliency and resistance to oppressive forces (McGibbon, 2012b; Raphael, 2011). The purpose of this study was to examine the influence of power relationships in shaping experiences of health among individuals who report a history of mental illness. Specifically, self-reported health was examined in relation to gender, ethnicity, social class and (dis)ability where (dis)ability reflects the degree to which one is involved and able to participate equitability in occupational and/or vocational roles (McGibbon, 2009; Raphael, 2009). Access-related issues and experiences of oppression were also considered.

Theoretical Background

Intersectionality Theory

Intersectionality theory is rooted in a belief that power structures and power relationships

create a foundation within which health is inherent (Davis, 2008; Hankivsky & Christoffersen, 2008; McCall, 2005). Health inequalities arise through complex and mutually reinforcing interrelationships between socially mediated processes and experiences of oppression or marginalization (Hankivsky & Christofferson, 2008). As a research paradigm, this innovative approach falls within the critical domain and builds on the social determinants of health literature. Researchers who adopt this approach seek to understand and address dynamic multi-level social, structural and political factors that contribute to variations in health (Hankivsky & Christoffersen, 2008; McGibbon, 2009; McGibbon & McPherson, 2011; Raphael, 2007). Intersectionality theory attempts to capture the complexity of lived experience while recognizing the interactive effects of multiple categories of identity such as gender, race, sexual orientation, disability or class (Bowleg, 2012; Collins, 1990; Crenshaw, 1995; Davis, 2008; Hankivsky et al., 2010; Hankivsky & Christoffersen, 2008; McCall, 2005). No single category of identity is assumed to be more important than another and the multifaceted nature of social processes is acknowledged as an authentic reflection of real life experience (Hankivsky & Christoffersen, 2008: Hankivsky, 2012). Intersecting axes of oppression are interdependent and impart synergistic – beyond additive - effects that reinforce experiences of social and health inequality (Dhamood & Hankivsky, 2011; Kelly, 2009; McCall, 2005; Rogers & Kelly, 2011). With a focus on illuminating micro and macro-level phenomena that interface with health-related experiences and outcomes, a framework such as Intersectionality holds considerable promise within the field of health research.

Conclusions

Mental health care practices and approaches that encompass broad definitions of wellbeing and recovery and seek to address the underlying factors that contribute to poor health

are increasingly relevant within Canada. While efforts to adapt to evolving community-based needs remain ongoing, mental health care systems across Canada remain fraught with service gaps and inadequacies that hinder health. Moreover, individuals with a mental illness continue to struggle to access appropriate care at the right time and to achieve their full potential when it comes to wellness (MHCC, 2009; SW-LHIN, 2014). Efforts to adopt a more holistic approach in the provision of appropriate mental health service and support necessitates a greater understanding of the power related processes that give rise to health inequalities among individuals who struggle with mental health challenges in our communities. Research approaches that adopt Intersectionality theory as a framework create an opportunity to examine the influence of interconnected experiences of social privilege or disadvantage in relation to health outcomes; this in turn will generate greater understanding of the processes that precipitate, perpetuate and maintain varying extremes of inequality among individuals who suffer from a mental illness. Knowledge generated from research such as this will offer insight into the strengths and limitations of current mental health care systems and practices, and further to this will support development of meaningful interventions aimed at reducing social and health disparities thus enhancing experiences of wellness and recovery for individuals who experience a range of mental health challenges or concerns.

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Chapter 2

Manuscript

Individuals faced with mental health challenges occupy unique social and geographic locations as they navigate life; their individual experience of disability may be compounded by intersections of age, race, social class, experiences of isolation or exclusion and other social categories of identity (Hankivsky & Christoffersen, 2008; McPherson & McGibbon, 2010; Rossiter & Morrow, 2011). At these intersections, varying extremes of privilege or disadvantage are produced through differential access to both informal and formal supports and resources (Rossiter & Morrow, 2011). Socio-political processes alter the path toward wellness and recovery for individuals struggling with a mental illness; further inquiry exploring the nature and impact of such processes is therefore warranted in order to achieve a holistic understanding of the factors that contribute to health and wellbeing among this population.

Theoretical Framework

Intersectionality theory was derived through black feminist scholarship with early conceptualizations appearing in the 1960's and 70's around the time that gender and race emerged as social categories of identity (Davis, 2008; McCall, 2005). The term *Intersectionality* became known through the writings of Kimberlé Crenshaw – a Critical Race theorist - who identified shortcomings of both feminist and anti-race discourse in addressing the struggles faced by women of colour who experienced abuse (Crenshaw, 1995). Recognition of historical context as a factor that influences the experience of marginalization is central to an intersectional approach as is the explicit examination of power relationships embodied by intersecting categories or *axes* of oppression (Hankivsky & Christoffersen, 2008; Hankivsky et al., 2010; McCall, 2005). Self-reflection regarding one's own elite status as a researcher and efforts to

embrace a participatory action-oriented approach are considered fundamental to intersectional research (Davis, 2008; Davy, 2011; Hankivsky et al., 2010; Hankivskey & Cormier, 2011; Kelly, 2009). With a commitment to social justice and an overarching goal of deconstructing inequalities in health (Hankivsky & Christoffersen, 2008), Intersectionality theory becomes a particularly useful tool for consideration within mental health care research.

Intersectional inquiry uncovers processes whereby: 1) an individual/social group is marked as *different* (*race, gender*); 2) a process of differentiation is observed (*racialization, gendering)*; and 3) systems of domination become readily apparent (e.g. *colonialism – racism; patriarchy - sexism*) (Dhamoon & Hankivsky, 2011). Multiple categories of difference are mutually reinforcing and create widening extremes of inequality. Neglecting to appreciate these points of intersection may lead to assumptions or conclusions that fail to encompass the full experience of oppression; such oversight or omissions serve to reinforce invisible suffering among marginalized groups (Collins, 1990; Crenshaw, 1995; McCall, 2005). Intersectionality theory holds considerable potential to uncover meaningful insights with respect to socially constructed and hence modifiable factors that shape experiences of health. Thus, Intersectionality theory was used as a guiding framework within the current study to examine the interrelationships between social categories of identity, experiences of oppression and ultimately, the impact of these processes on overall health.

Review of the Literature

Search Methods

A comprehensive review of the literature was conducted to examine the relationship between Intersectionality and health outcomes within mental health related research. CINAHL, PsychInfo, ProQuest, Scopus, and PubMed databases were accessed using a combination of key

search terms including *Intersectionality* and/or *power relations, mental health* and/or *psychiatr, health status* and/or *outcomes*. Inclusion criteria consisted of articles that were written in English; sample 18-65 years of age; and publication within the past 15 years to ensure relevance to current mental health care reform movements (MOHLTC, 2003; SW-LHIN, 2014). Articles were excluded if they did not include mental health as an input or outcome variable, or were otherwise not relevant to mental health populations. Additional search strategies included ancestry search of reference lists of relevant articles that adopted an Intersectionality approach as well as descendent search involving articles that cited relevant source materials.

The above noted search strategies uncovered a total of twenty-one unique articles that were specific to this area of study, suggesting that Intersectionality remains an underdeveloped area of existing mental health literature. Among these, seven articles consisted of discussion papers that highlighted the relevance of Intersectionality within mental health care and related research. Only eleven studies examined the experiences of health among individuals struggling with a mental illness (including addiction) using an Intersectionality approach. Of these studies, five were qualitative, five were quantitative, and one employed a mixed-methods design. An additional three studies that considered the influence of power relationships on physical and/or mental health status were also included; while these studies did not specifically incorporate an Intersectionality approach to analysis, they did address the issue of health and social inequality specific to this population. All quantitative studies that were located involved secondary analysis of pre-existing datasets using a cross-sectional survey design while qualitative studies consisted of both primary and secondary research.

Axes of Oppression

Although limited in breadth and scope, the literature consistently reveals that aspects of

identity – gender, ethnicity, single parenthood, disability status (mental health, including addiction) and poverty – are contextualized and shaped through socially mediated processes that interact to influence experiences of marginalization and health (Benbow, Forchuk & Ray, 2011; Bungay, Johnson, Varcoe & Boyd, 2010; Cairney et al., 2014; Collins, von Unger & Armbrister, 2008; Creswell, 2014; Grollman, 2012; Rosenfield, 2012; Seng, Lopez, Sperlich, Hamama & Reed Meldrum, 2012; Smye, Browne, Varcoe & Josewski, 2011; Van Herk, Smith & Andrew, 2011). Social processes mitigate the degree of relative power – or lack thereof – possessed by an individual or group (Benbow et al., 2011; Bungay et al., 2010; Collins et al., 2008; Smye et al., 2012; Van Herk et al, 2011) thus impacting intrinsic and extrinsic factors that either support or hinder health. These same processes influence subsequent life experiences as well as the types of services and resources that are available to an individual or group. Oppression and inequality appear to arise through the interplay of these multiple and dynamic social processes; health occurs where the axes of such processes and experiences begin to intersect and may occur through 1) direct impact on physical and/or mental health status; 2) risk exposure; and/or 3) access to material and social resources (Benbow et al., 2011; Bungay et al., 2010; Collins et al., 2008; Smye et al., 2011; Van Herk et al., 2011) (Figure 1). Understanding the health consequences that arise through intersecting axes of oppression is essential to fully appreciating wellbeing and recovery for individuals who struggle with mental health challenges.

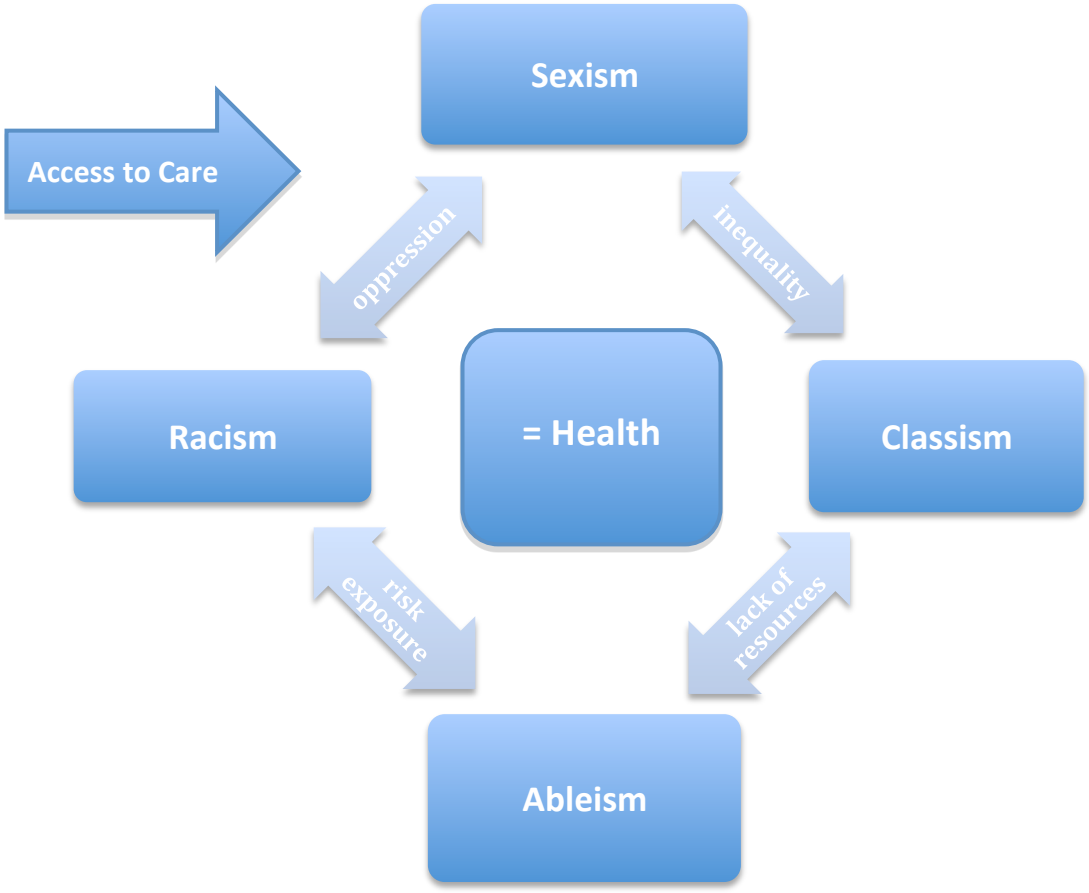

Figure 1: Conceptual model depicting the influence of mutually reinforcing intersecting oppressions on health.

Intersecting Identities: Direct Health Effects

Multiple experiences of oppression influence health through the interplay of micro and macro level phenomena that produce immediate and lasting health consequences. Across studies, differential health effects were observed on the basis of race, gender, sexual identity, neighbourhood, social class and employment status; multiple experiences of oppression contributed to widening extremes of inequality and poor health (Grollman, 2012; Hamelin & Hamel, 2009; McIntyre, Williams, Lavorato & Patten, 2012; Puig-Barrachina, Malmusi,

Martinez & Benach, 2011; Mereish, 2012; Rosenfield, 2012; Seng et al., 2012). Grollman (2012) suggests that experiences of oppression are not uncommon, with seventy-eight percent of youth (ages 15-25 years) across the USA (N=1052) experiencing at least one form of discrimination; those who cited multiple forms of discrimination (60%) reported higher levels of depression and poorer ratings of overall health. Similar sequelae were reported by Seng and colleagues (2012) who found that scores for discrimination were negatively correlated with quality of life across a US sample of English speaking mothers expecting their first child (N=619). Black women were the most disadvantaged group in terms of income and education; they also experienced the greatest exposure to trauma and reported a higher incidence of post-traumatic stress disorder (Seng et al., 2012). Minority status interacted with other social categories of difference to produce significant health disparity compared to other groups. While isolated experiences of oppression certainly have a detrimental impact on health, it is the interactive and mutually reinforcing nature of multiple intersecting experiences of oppression that is especially damaging.

Experiences of oppression can be merciless and uncompromising. While the immediate impact of marginalization may seem readily apparent, deep-seated consequences may impair social and occupational functioning across multiple domains and persist throughout life. Canadian youth who experienced childhood hunger have a much higher risk for developing mental health problems including depression and suicidal thoughts later in life; moreover, amplified risk is seen among those who have faced further disadvantage on the basis of gender, parental disability and/or disrupted family relations while growing up (McIntyre, Williams, Lavorato & Patten, 2012). The social, emotional and physical effects of hunger and malnutrition become intertwined with poverty to create a reality that is characterized by chronic affliction and relentless disparity. The entrenched and lasting nature of interconnected processes such as these

are reinforced by Hamelin and Hamel (2009) who compared experiences of homeless persons in metropolitan Quebec (N=458) to Canadian norms (N=82,000); food insecurity was associated with poorer physical and mental health outcomes for both groups, however the health effects among current or formerly homeless participants were far greater than those observed among Canadians in general. Specifically, food insufficiency predicted greater likelihood of depression (OR 2.9, 95% CI 1.4-5.8) and other emotional disorders (OR 3.3, 95% CI 1.6-6.8), poorer ratings of self-reported health (OR 2.9, 95% CI 1.5-5.6) and multiple chronic co-morbid health conditions (OR 2.8, 95% CI 1.5-5.2) including heart disease (OR 5.4, 95% CI 1.7-16.9) and obesity (OR 4.5, 95% CI 1.8-11.5) among the homeless subgroup (Hamelin & Hamel, 2009). While generalizability is limited as a result of discrepancies in how data was collected and used for comparison, findings such as these begin to shed light on the synergistic health effects and sequelae that arise through intersecting axes of oppression.

Interconnected Social Processes: Indirect Health Effects

Experiences of power (or powerlessness) alter perceived sense of self and personal meaning ascribed to various life experiences, including the nature and quality of personal and professional relationships that evolve as one navigates life and attempts to access a range of services and supports (Benbow et al., 2011; Bungay et al., 2010; Cairney et al., 2014; Collins et al., 2008; Smye et al., 2011; Van Herk et al., 2011). Collins and colleagues (2008), for example, found that inner city Latina women with a history of mental illness (N=32) internalized experiences of stigma to such an extent that this influenced how they saw themselves in terms of social hierarchy within their culture and local communities; this in turn impacted their personal goals and aspirations for the future. Specifically, women in this study identified that having a diagnosis of a serious mental illness had a negative impact on their feelings of self-worth and

perception of their skills, abilities and life potential; for many of these women, this meant that they were more likely to accept a disability pension than explore educational or occupational pursuits. Disability status also contributed to a greater likelihood of remaining in an unhappy or unsafe relationship for fear that as a result of having a mental illness, they were less desirable as a mate and had fewer perceived options for finding a compatible life-partner. In fact, many women believed that disclosing their history of mental illness within intimate relationships would lead to abandonment (Collins et al., 2008). Socially constructed experiences of identity were interconnected and contributed to variations in health and wellbeing through processes that contributed to loss of power and invisible suffering among the women involved in this study.

Further support linking social identity and health is offered by Benbow and colleagues (2011) who described how social categories of identity – including gender, single parenthood, minority status and poverty – contributed to feelings of humiliation, shame and powerlessness among a sample of homeless mothers (N=54) with a history of mental illness. These interrelated experiences produced direct negative effects on health and wellbeing as well as hindered access to resources that would support and promote health, including safe housing and employment (Benbow et al., 2011). Similarly, Van Herk and colleagues (2011) found that single parent status, gender, Aboriginal identity and experiences of poverty had a profound impact on perceptions of health and wellbeing among Aboriginal mothers (N=21) who were seeking care for themselves and their young families. Women described feeling punished by the system for their disadvantaged status; moreover, they felt judged on the basis of social and structural processes beyond their control. For example, situations of extreme poverty contributed to difficulties in providing for basic needs for themselves and their children. Involvement of child protection services reinforced a sense of powerlessness; these mothers perceived that their parenting

abilities were being called into question without recognition for the systemic factors that hindered their ability to provide for their children. Those who were subject to multiple forms of disadvantage – such as homelessness, involvement with the criminal justice system, darker skin tone, and age related vulnerability or discrimination – were particularly oppressed (Van Herk et al., 2011). Complex social processes and experiences of oppression viewed in isolation fail to capture the multifaceted and dynamic nature of social and health disparity; awareness and exploration of the processes that evolve where axes of oppression meet and intersect is integral toward realizing authentic experiences of health, wellbeing and recovery for individuals who suffer from a mental illness (including addiction).

Risk Exposure: Extremes of Inequality

Intersecting categories of social identity influence health through a number of unique pathways, including risk exposure and/or socio-structural processes that influence health behaviour. As previously mentioned, women in Collins and colleagues (2008) study identified that having a mental illness influenced intimate relationships such that women who felt powerless against the effects of stigma and discrimination were frequently tolerant to abusive relationships for fear that they had few alternatives. While both interpersonal and treatment related factors influenced decisions around condom use, study participants were less inclined to insist on use of barrier protection during sexual contact in new or casual relationships because they believed this would increase risk for rejection (Collins et al. 2008). Thus unique and interconnected social processes left these women vulnerable to situations of trauma/abuse, disempowerment and increased risk for sexually transmitted infections.

Risk exposure was highlighted by Bungay and colleagues (2010) who studied inner city women (N=126) struggling with addiction to crack cocaine in western Canada; intersecting

categories of social identity had a profound impact on health and wellbeing among the women involved in this study. The majority of participants reported daily use of crack cocaine and lived in situations of extreme poverty; housing options were precarious and unsafe at best. Participants described limited access to medical care and/or counseling that was sensitive to their complex needs and marginalized experiences leaving significant social and health issues inadequately addressed or treated, particularly around issues of chronic pain and dental abscess/infection. Unstable housing often meant that women engaged in drug use outdoors however, policing practices aimed at public safety drove women to conceal their behaviours by hiding out in dark alleys or other unsafe locations. This decreased visibility among their peer group thus preventing women from looking out for one another and disrupted an established, albeit informal, safety network. While confiscation of drug paraphernalia by police contributed to greater likelihood of sharing equipment by passive or active choice in general, a gendered pattern of coercion and/or threat of violence from male drug users was readily apparent in terms of influencing one's decision to share equipment. Regardless of the reason, sharing of drug paraphernalia increased risk for community acquired pneumonia and other communicable diseases (Bungay et al, 2010). Intersecting axes of oppression within this context contributed to widening extremes of inequality and carried tremendous health consequences; findings of this study also suggest that existing health and social services fail to adequately appreciate and address the unique needs of marginalized populations. Unmet physical and mental health related needs may contribute to worsening or prolonged experiences of addiction and further undermines health among an already vulnerable population. Greater understanding of the various socio-structural processes at play – including factors that increase acute on chronic health risk - is required in order to establish authentic and meaningful strategies aimed at reducing health and social inequality; this

includes looking beyond seemingly self-destructive patterns of behaviour to the underlying processes and structures that reinforce mental illness and addiction.

Multiple Systems of Power: Differential Access to Care

Access to care embodies much more than availability of service; quality of the health related encounter and flexibility of supports to address a range of complex needs in a respectful and client-centred manner are equally important. These principles of accessibility are reinforced by Smye and Colleagues (2011) who explored the experiences of individuals accessing methadone maintenance treatment (MMT) (N=39) in western Canada. Participants in this study reported multiple co-morbid physical and mental health problems coupled with a profound history of abuse and extreme poverty. While harm reduction approaches generally seek to empower individuals to reclaim their lives and move toward improved health despite addiction, Smye and Colleagues found that treatment-related factors were simultaneously a hindrance to wellbeing and recovery. Stigma associated with MMT and reliance on health care providers as gatekeepers who mediate continued access to treatment served to reinforce pre-existing power dynamics and subjective experiences of *othering* (being labeled as different). Further to this, participants described that limits and constraints imposed on them as a result of MMT impeded access to stable housing and social supports, including family. For instance, requirements around clinic attendance and methadone carries (a privilege granted only following a period of successful treatment allowing clients self-manage doses at home) prevented many participants from moving to safer neighbourhoods and - in some situations - from visiting children and relatives residing in other communities. Participants described feeling punished for their addiction which fueled feelings of mistrust and resentment toward the health care system and the helping fields in general (Smye et al., 2011). While harm reduction strategies seek to promote

health through flexible approaches and individualized care, the power differentials that arise through treatment related processes must be recognized and addressed within the plan of care if a genuine reduction in health and social inequality is to be achieved.

Provider attitude was also discussed among several studies as a key factor mediating access to health related resources across sectors; participants who felt labeled, judged, misunderstood or otherwise *less important* described considerable difficulty navigating programs and services intended to offer assistance or reprieve from their ailments or marginalized circumstances (Bungay et al., 2010; Smye et al, 2011; Van Herk et al., 2011). Discrimination from potential landlords and employers similarly reinforced experiences of oppression and an unremitting cycle of health and social inequality (Benbow et al., 2010). Health care and social service providers need to shift focus from addressing only immediate health needs or concerns to deconstructing inequality in a much broader sense.

Summary of Reviewed Literature

In summary, although the literature on Intersectionality theory in mental health research is not extensive, the qualitative studies that do exist offer rich portrayals that illustrate the complex pathways through which experiences of oppression influence health (Benbow et al., 2011; Bungay et al., 2010; Collins et al., 2008; Smye et al., 2011; Van Herk et al., 2011) while quantitative studies substantiate the interrelated and lasting nature of these relationships (Grollman, 2012; Rosenfield, 2012; Seng et al., 2012). Furthermore, these studies are reflective of the Canadian experience (Benbow et al., 2011; Bungay et al., 2010; Smye et al., 2011; Van Herk et al., 2011), include Aboriginal representation (Bungay et al., 2010; Smye et al., 2011; Van Herk et al., 2011) and many are participatory action oriented and solution focused (Benbow et al., 2011; Bungay et al., 2010; Collins et al., 2008; Smye at all, 2011; Van Herk et al., 2011).

Quantitative studies included nationally representative samples in both Canada (Cairney et al., 2014; Hamelin & Hamel, 2009; McIntyre et al., 2012) and the USA (Grollman, 2012; Mereish, 2012; Rosenfield, 2012) and offer consideration for mitigating factors that help to explain paradoxical health effects in the presence of multiple, interconnected vulnerabilities - for instance the influence of self-salience on internalizing versus externalizing mental health disorders - which may otherwise obscure meaningful findings (Rosenfeild, 2012). However, further research – particularly primary research studies that investigate health outcomes using an Intersectionality approach – is needed to validate the utility of Intersectionality as a useful research approach. As well, an in-depth gender analysis is not included as a component of any of the studies reviewed and while reference to geographic isolation and rural issues are noted (Smye et al., 2011) the existing literature consists of primarily urban samples. Establishment of analytic strategies that sufficiently capture the interactive effects among intersecting experiences of oppression and subsequent influence on health, wellbeing and recovery among those who struggle with mental health issues and concerns are also imperative.

Methodology

Problem Statement

Power relationships play a significant role in shaping health and wellbeing among Canadians; experiences of privilege and/or social disadvantage across multiple categories of identity gives rise to differential access to resources that are needed to enhance health while simultaneously imparting direct and indirect threats to wellbeing. Mental health care systems in Canada remain focused on disease processes and illness related factors as clinical indicators for treatment while neglecting to address the underlying structures and processes that undermine health. Understanding the interconnected pathways through which social processes influence

health is a necessary first step toward the establishment and integration of meaningful interventions that support recovery from mental illness and addiction in a much broader sense.

Research Questions

Using categories of social identity (gender, ethnicity, social class and [dis]ability) and experiences of social disadvantage as proxies that represent cumulative experiences of oppression, the following research questions were addressed:

1.To what extent do indicators of oppression influence self-rated health among individuals with a history of mental illness (including addiction)?

2. How do access related issues – such as the availability of sensitive, appropriately matched health care - influence the relationship between experiences of oppression and self-rated health?

Hypotheses

1. Categories of social identity (gender, ethnicity, social class and [dis]ability) will interact to produce variations in self-rated health scores among individuals with a history of mental illness (including addiction);
2. Individuals who report multiple experiences of disadvantage on the basis of the above noted categories of social identity will report poorer ratings of overall health;
3. Access to care will interact with experiences of social disadvantage (oppression) to influence self-rated health, thereby acting as a moderating – rather than mediating – variable.

The relationship between social processes and health is supported in the literature, with multiple experiences of disadvantage or oppression contributing to poorer physical and mental health outcomes (Hamelin & Hamel, 2009; Rosenfield, 2012; McIntyre et al., 2012; Seng et al., 2012). Although further testing is needed to infer causality, the interconnected and reciprocal

relationships that occur between intersecting axes of oppression contribute to widening extremes of health inequality (Grollman, 2012; Rosenfield, 2012). While access related issues appear to influence the relationship observed between oppression and health, the nature of this relationship is not well understood. It could be argued that social identity influences access to care which in turn influences self-rated health; access, in this particular instance, would be viewed as a mediating variable accounting for an indirect relationship observed between social identity and health. However, the literature specific to Intersectionality research in mental health does not fully support this perspective; while access related issues are viewed as relevant to health outcomes, access alone does not explain the untoward negative health effects observed among individuals who experience social disadvantage (Bungay et al., 2010; Smye et al., 2011; Van Herk et al., 2011). Alternatively, access to care may function as a moderating variable where access influences the strength or direction of the relationship (Polit & Beck, 2012) between social identity and health. In this study, access to care was approached from both perspectives in order to determine whether access influenced health via an indirect (mediating) effect versus a statistically different interactive (moderating) effect.

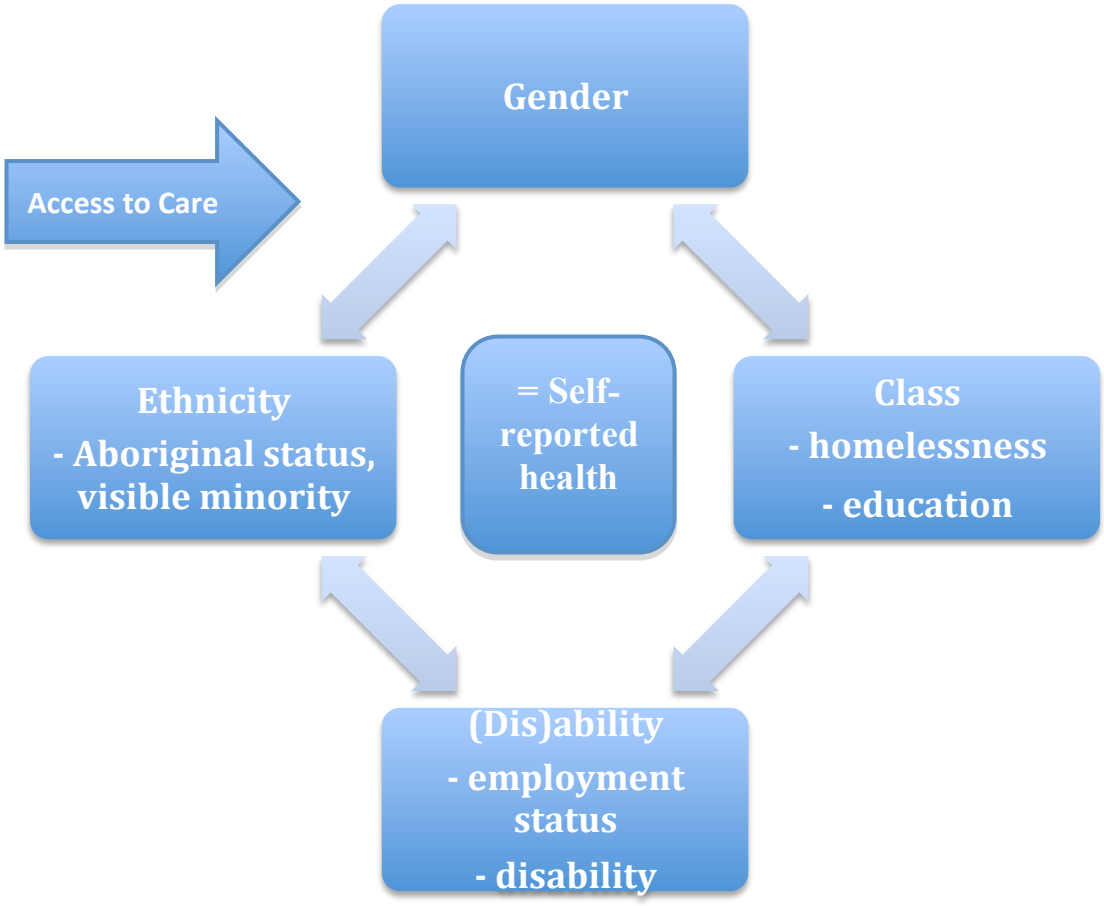

Figure 2: Hypothesized relationship between indicators of oppression and health

Study Design

A cross-sectional analysis of pre-existing data collected as part of a five-year Community-University Research Alliance (CURA2) was conducted in order to examine the relationship between social categories of identity, oppression and health among individuals with a history of mental illness. The CURA2: Poverty and Social Inclusion study (Forchuk et al., 2010-2015) was funded through the Social Sciences and Humanities Research Council (SSHRC) and used a non-experimental, participatory action research approach. An overall aim of the CURA2 study involved understanding the experiences of poverty and social inclusion among

individuals who have struggled with a history of psychiatric illness. With a focus on examining experiences of oppression in relation to health outcomes among those who struggle with mental health challenges (including addiction), this secondary analysis is well aligned with CURA2 overarching goals.

Setting

The CURA2 project took place in a naturalistic setting in London, Ontario, Canada, and surrounding area. The study sample was composed of participants from both urban and rural centres and therefore offered a mixture of experiences and perspectives that were reflective of the broader Canadian experience compared to exclusively urban or exclusively rural settings.

Sample

A cross-sectional selection of data collected during years one and two of the CURA2 project was used for secondary analysis; this community sample included data for 380 psychiatric survivors (190 men and 190 women) who were 18-75 years of age, fluent in English and have struggled with a psychiatric illness, including addiction, for a minimum of one year. Potential participants were excluded if they were incapable of providing informed consent or if they have been diagnosed with an organic brain disorder such as dementia. Assuming that 20% of participants would report their health as fair or poor, a minimum sample size of 220 participants was needed (110 cases, 110 controls) to permit detection of an odds ratio of 2.5 with statistical significance (power 0.8, $p<0.05$) (Peat, Mellis, Williams & Xuan, 2002). This represents a clinically relevant increased risk for poor health based on the proposed variables of interest (Peat et al., 2002) and is consistent with previous studies that have examined the relationship between social categories of identity in relation to self-reported health (Hinze, Lin & Andersson, 2012; Prus, 2011; Veenstra, 2011). As the CURA2 total sample in year one included

380 participants, sample size was deemed sufficient for the purposes of the current study and analysis plan.

Operational Definitions

Dependent Variable

Self-reported health served as the primary outcome measure (dependent variable [DV]) and was obtained using the National Population Health Survey (NPHS) (Statistics Canada, 2012) where participants were prompted to rate their general health according to a 5-point Likert scale consisting of categorical responses that range from excellent, very good, good, fair or poor. As a reflection of physical and mental wellbeing, self-reported general health is considered a reliable and valid measure of overall health (Idler & Benyamini, 1997; Prus, 2011).

Independent Variables

Independent variables (IV) consisted of the following social categories of identity: *gender, ethnicity, social class and (dis)ability status*:

- G*ender* was obtained using the Migration Instrument (Garceau et al., 2010-2015). Gender is more reflective of a socially constructed experience and was therefore preferred over measures of *sex*. Participants were asked to self-identify as male, female or transgendered.
- *Ethnicity* was derived using the Migration Instrument (Garceau et al., 2010-2015) and was categorized as European/Caucasian, Aboriginal, visible minority or other.
- *Social class* encompasses experiences such as poverty and refers to social standing on the basis of factors such as income and education. For the purposes of this study, highest level of education achieved (completed elementary school, secondary or post-secondary diploma or degree) and lifetime history of homelessness served as proxies for social class

and were obtained using the demographic questionnaire. Current and formerly homeless subgroups were combined on the basis of similar risk exposure (Hamelin & Hamel, 2009). Individual or household income was not used as a measure of social class; as a result of having a mental illness, many participants involved in this study received a disability income and/or social welfare. Among those who were employed, there are often limits imposed on the amount of supplemental income they are permitted to earn in order to continue to qualify for benefits. As a result, the anticipated variability of income within this study sample was insufficient to support comparison of income groups.

- (*Dis)ability status* reflects the degree to which one is involved and able to participate in occupational and/or vocational roles. This encompasses socio-relational components that influence opportunity and equity in terms of income, employment and wage earnings (McGibbon, 2009; Raphael, 2009). For the purposes of this study, employment status and self-reported long-term disability or handicap were used to represent *dis(ability)* status and were obtained using the NPHS (Statistics Canada, 2012).

Mediating Variable

Access to care was examined for mediating effects between independent variables and self-rated health and was defined as any experience within the past 12 months in which a participant had identified 1) access to a regular medical doctor and/or 2) any unmet health need; both items were obtained using the NPHS (Statistics Canada, 2012).

Moderating Variables

All significant predictor variables in the base model were tested for interactive effects in relation to the outcome variable. Interaction terms were also applied to access related predictor variables.

Table 1

Summary of Variables and Measures

Variable	Operational Definition	Instrument	Item Description	Year of CURA2 data collection
Self-Rated Health (DV)	Participant rating of general health as excellent, very good, good fair or poor	National Population Health Survey	Single item categorical response	Year 1
Gender (IV)	Male, Female or Transgendered	Migration Instrument	Single item categorical response	Year 2
Race (IV)	European/Caucasian, Aboriginal, visible minority or other	Migration Instrument	Single item categorical response	Year 2
Class (IV)	1. Highest level of education achieved (elementary, secondary or post-secondary) 2. Lifetime history of homelessness: (current or past)	Demographic Questionnaire	Single item categorical response Single item categorical response	Year 1
(Dis)ability (IV)	1. Employment status 2. Self-reported long-term disability or handicap	NPHS	Single item categorical response Single item categorical response	Year 1
Access to Care *(*MV)	Any experience within the past 12 months in which the participant has identified: 1. lack of access to a regular health care provider (doctor) 2. A time when you felt that you needed heath care but you didn't receive it? (Unmet health need)	NPHS	Single item categorical response Single item categorical response	Year 1

* Dependent variable (DV), independent variable (IV), mediating variable (MV)

Instruments

The *demographic questionnaire* (Appendix A) is a 38 item questionnaire used to elicit details regarding socio-demographic variables pertaining to the study sample; this tool was developed by the CURA2 research team specifically for this study. The *National Population Health Survey* (NPHS) (Appendix B) was developed by Statistics Canada and was utilized 1994 through 2012 to collect nationwide data regarding health status and related behavioural and socio-demographic factors among Canadians (Statistics Canada, 2012). The NPHS is considered a reliable and valid tool used to guide health care decision making in Canada (Statistics Canada, 2012); it may be adapted for cross-sectional use or longitudinal survey design and has been used in previous studies adopting an Intersectionality framework to explore factors influencing health among Canadians (Cairney et al., 2014; Prus, 2011; Veenstra, 2011). The NPHS is organized into subsections that include questions regarding health behaviours and conditions, disability status, health service utilization, social and lifestyle factors and mental health indicators within the previous twelve months. This 137-item questionnaire was administered in year 1 of the CURA2 study and was used to elicit measures of health and wellbeing including self-reported health, disability, employment status and health care utilization as well as access to care. The *Migration Instrument* (Appendix C) was developed by researchers at Laurentian University collaborating as part of a related CURA study entitled Poverty, Homelessness and Migration (Garceau et al., 2010-2015) and focuses on the issue of homelessness in the north; the Migration Instrument seeks to identify factors that influence migratory patterns including homelessness and transiency and also contains detail regarding gender, language and ethnicity in addition to employment and income supports. The Migration Instrument was introduced as a CURA2 measure during year 2 of data collection as part of a collaborative effort to compare issues of

homelessness and migration in northern communities compared to southern Ontario. This 26-item questionnaire was used to elicit data regarding gender and ethnicity/race. Data regarding ethnicity/race including Aboriginal identity was not captured in year 1; as such, the study sample was reduced to include participants who were captured longitudinally in both years 1 and 2. While the demographic questionnaire elicits data regarding participant sex, the *Migration Instrument* targets gender which is more consistent as a measure of social identity.

Data Collection Procedures

The demographic questionnaire, NPHS and Migration Instrument were administered in structured-interview format by trained research assistants as part of the CURA2 research questionnaire package. The letter of information for the CURA2 study was reviewed and informed consent obtained prior to this 1.5 to 2 hour interview; participants were informed as part of the consent process that de-identified data would be retained for future secondary analyses. Participants received an honorarium of $20 to compensate them for their time. Data was audited by trained research staff, entered into Microsoft Access and then exported to SPSS.

Data Analysis

Data was analyzed using SPSS statistics version 22. Descriptive statistics were generated to assess demographic characteristics of the study sample. Univariate analyses to explore the relationship between variables were conducted using Kendall's tau and Chi Square. Binary logistic regression was then used to estimate the association between self-rated health (DV) and social categories of identity. The model contained six independent variables including gender, ethnicity, class (education, lifetime history of homelessness), and (dis)ability (employment status, presence of a long-term disability or handicap). Independent variables were coded dichotomously with the exception of education, which contained three possible responses

(elementary, secondary or post-secondary schooling) to indicate highest level of education achieved; variables were entered as a base model with and without interaction terms (Models 1 and 2) to permit examination of the synergistic (beyond additive) effects among independent variables. Access related variables (access to a regular medical doctor, unmet health need) were included as part of a third model to assess for mediation effects in relation to independent variables (indicators of oppression) and the outcome variable, self-rated health. Interaction terms were also used to test for moderation effects between independent and access related variables in relation to self-rated health (Model 4). Age, smoking status and body mass index were treated as confounders and adjusted in the model so that the independent variables of primary interest were independently associated with the dependent variable. Missing data were managed using listwise deletion (Polit & Beck, 2012).

Findings and Interpretation

Demographic Data

The final study sample included N=293 participants who completed the NPHS in year 1 and the Migration Instrument in year 2; 87 (23%) participants from the original sample of 380 were lost to follow up in that year. Descriptive statistics for the main study group were compared and contrasted with the omitted group (N=87) that was lost to follow up in year 2; overall, the demographic profile for both groups was similar (see Appendix D). As previously discussed in the analysis section, the Migration Instrument contained two primary variables of interest (gender, ethnicity) that were not captured elsewhere and therefore, only participants who completed both questionnaires were included for analysis. Descriptive statistics were generated to examine continuous demographic variables while frequency tables were used for categorical data; these are summarized in Appendix D. The average age of the study sample was 41.9 years

and there were roughly equal female (50.5%) versus male (49.5%) participants. The majority of participants were of European or Caucasian background (78.5%) with a smaller subset who were Aboriginal (15.7%) or visible minority (3.8%). The most commonly reported mental health diagnosis within the sample was mood disorder (66.2%) with a high rate of co-occurring addiction (74.7%). The most commonly occurring addictions included tobacco (64.5%), caffeine (30.0%) followed by cannabis (28.5%); addiction to alcohol (19.8%) and other street drugs were much less frequent (1.7-9.6%). Two-thirds (66.9%) of participants were taking medications for treatment of a mental health related issue while 61.1% reported a history of psychiatric hospitalization(s). A range of chronic physical illnesses (63.8%) were also reported; these are outlined in Appendix D. The majority of participants (76.5%) had access to a regular medical doctor; 38.2% of the sample reported presence of an unmet health need (within the 12 months prior). Greater than one-half (63.8%) of participants reported experiencing homelessness at some point in their life; among those who had been homeless, 64.1% reported multiple episodes homelessness.

Variables of Interest

Dependent and independent variables were examined using frequency tables and graphs in order to observe general distribution and patterns within the dataset (Appendix E). Variables (self-rated health, gender, ethnicity, education, employment status, long-term disability, access to regular medical doctor, presence of unmet health need) were examined and collapsed where appropriate, particularly where item responses were low in frequency. For example, ethnicity was originally grouped according to four possible responses (European origins, Aboriginal, visible minority and other) and was recoded to reflect one of two categories - European (Caucasian) origins or Aboriginal/visible minority - in order to ensure adequate cell size upon

entry into the regression model for further analysis; justification for this grouping was based on the concept of oppressed versus non-oppressed group. Similarly, the 'other' grouping for education, which contained only a single response, was collapsed to reflect college, university or trade school. Smoking status was recoded to reflect current smoking or non-smoking status (from current, occasional or non-smoker). Body mass index (BMI) was calculated based on participants' self-reported weight and height and was grouped according to weight categories of normal, under/over or obese. The remaining independent variables were dichotomous in their original format. Variables were examined in terms of frequencies of response as an isolated variable (Appendix D) and also in relation to the outcome variable (Appendix E) in order to ensure adequate variability of response and adequate cell size within the proposed regression model.

Univariate Analyses

Univariate analyses conducted to explore the relationship between the dependent variable, independent and confounding variables included Chi-square test for independence (Appendix F). Specifically, independent and confounding variables were examined in relation to the outcome variable, self-rated health, as both a dichotomous and as an ordinal variable. Pearson Chi-square value reached significance for: employment; disability; and presence of an unmet health need in relation to dichotomized general health rating (see Table 2) indicating that the null hypothesis (H_0) can be rejected and that there is a difference in self-rated health among participants who are working compared to those who are not working; there is a difference in self-rated health among participants who report a long-term disability compared to those who do not report a disability; and, there is a difference in self-rated health among those who report an unmet health related need compared to those who have their health needs met. Pearson Chi-

square value did not reach significance for smoking status; gender; ethnicity; education; homelessness; or access to a regular medical doctor in relation to dichotomized general health rating. There is therefore no difference in crude (unadjusted) self-rated health among participants on the basis of smoking, gender, ethnicity, education, homelessness or access to a regular medical doctor.

Table 2
Comparison of Social Identity and Access related issues in relation to Self-Rated Health (dichotomous)

Variable	Excellent, Very Good or Good Health	Fair or Poor Health	Pearson Chi Square	p value[b]
Smoker/ Non-Smoker	51.2% (107) 53.8% (43)	48.8% (102) 46.3% (37)	0.07[a] (*1 df*)	0.797
BMI Underweight Normal weight Overweight Obese	 61.5% (8) 56.4% (53) 51.5% (35) 44.2% (38)	 38.5% (5) 43.6% (41) 48.5% (33) 55.8% (48)	3.26 (*3 df*)	0.353
Gender (Male)/ (Female)	54.9% (79) 49.0% (72)	45.1% (65) 51.0% (75)	0.079[a] (*1 df)*	0.375
Ethnicity (European Caucasian) / (Aboriginal, visible minority)	 54.7% (128) 40.4% (23)	 45.3% (106) 59.6% (34)	3.23[b] (*1 df*)	0.052
Education 8 years or less 9-12 years 12 years or more	 50.7% (69) 61.2% (52) 42.0% (29)	 49.3% (67) 38.8% (33) 58.0% (40)	5.69 (*2 df*)	0.058
History of Homelessness/ Never Homeless	48.4% (90) 58.1% (61)	51.6% (96) 41.9% (44)	2.16 (*1 df*)	0.142
Employed/ Not Employed	68.8% (55) 45.5% (95)	31.3% (25) 54.5% (114)	11.66 (*1df*)	**<0.01**
Long-term Disability/ No Disability	41.3% (64) 64.7% (86)	58.7% (91) 35.3% (47)	14.74 (*1df*)	**<0.01**
Access to regular doctor/ No regular doctor	51.1% (114) 54.4% (37)	109 (48.9%) 31 (45.6%)	0.011 (*1 df*)	0.634
Unmet Health Need/ Health Needs Met	34.8% (39) 62.4% (111)	65.2% (73) 36.7% (67)	19.79 (*1 df*)	**<0.01**

a. Continuity correction was used for 2x2 tables
b. p values are generated from comparisons of excellent/very good/good health and fair/poor health using chi square analysis

A similar pattern was observed when self-rated health was coded as an ordinal variable with the exception that the Pearson Chi-square value for homelessness did reach significance (see Table 3) indicating that the null hypothesis (H_0) can be rejected and that there is a difference in self-rated health among participants who had experienced homelessness compared to those who had not.

Table 3
Comparison of Social Identity and Access related issues in relation to Self-Rated Health (ordinal)

Variable	Excellent or Very Good Health	Good Health	Fair or Poor Health	Pearson Chi Square	p value[a]
Smoker/ Non-Smoker	24.9% (52) 26.3% (21)	26.3% (55) 27.5% (22)	48.8% (102) 46.3% (37)	0.15 (*2 df*)	0.93
BMI Underweight Normal weight Overweight Obese	 23.1% (3) 26.6% (25) 29.4% (20) 19.8% (17)	 38.5% (5) 29.8% (28) 22.1% (15) 24.4% (21)	 38.5% (5) 43.6% (41) 48.5% (33) 55.8% (48)	5.00 (*6 df*)	0.544
Gender (Male)/ Gender (Female)	29.9% (43) 21.1% (31)	25.0% (36) 27.9% (41)	45.1% (65) 51.0% (75)	2.95 (*2 df*)	0.228
Ethnicity (European Caucasian) / (Aboriginal or visible minority)	 26.9% (63) 19.3% (11)	 (27.8% (65) (21.1% (12)	 45.3% (106) 59.6% (34)	3.79 (*2 df*)	0.150
Education 8 years or less 9-12 years 12 years or more	 25.0% (34) 29.4% (25) 20.3% (14)	 25.7% (35) 31.8% (27) 21.7% (15)	 49.3% (67) 38.8% (33) 58.0% (40)	5.71 (*4 df*)	0.222
Homeless/ Not Homeless	20.4% (38) 34.3% (36)	28.0% (52) 23.8% (25)	51.6% (96) 41.9% (44)	6.82 (*2 df*)	**<0.05**
Employed/ Not Employed	38.8% (31) 20.1% (41)	30.0% (24) 25.4% (53)	31.3% (25) 54.5% (114)	14.97 (*2 df*)	**<0.01**
Long-term Disability/ No Disability	18.7% (29) 33.1% (44)	22.6% (35) 31.6% (42)	58.7% (91) 35.3% (47)	16.16 (*2 df*)	**<0.01**
Access to regular doctor/ No regular doctor	25.1% (56) 26.5% (18)	26.0% (58) 27.9% (19)	48.9% (109) 45.6 (31)	0.23 (*2 df*)	0.892
Unmet Health Need/ Health Needs Met	14.3% (16) 32.0% (57)	20.5% (23) 30.3% (54)	65.2% (73) 37.6% (67)	21.89 (*2 df*)	**<0.01**

a. p values are generated from comparisons of excellent/very good health, good health and fair/poor health using chi square analysis

Collinearity

Collinearity diagnostics and correlation analysis using Kendall's tau were carried out to further examine the relationship between variables of interest and assess for multicollinearity. Independent variables that are highly correlated are problematic in that they can interfere with accurate interpretation of results and this is therefore important to assess when approaching analyses that incorporate regression. Collinearity statistics were generated for dependent, control and independent variables (Appendix G) and revealed tolerance values of >.1 and variance inflation factor (VIF) values that were consistently less than 10 across all variables; these findings indicate that the variables contained within the model were not highly intercorrelated.

Kendall's tau-b, a statistical test that is appropriate for use with ordinal (ranked) data (Munro, 2005), was used to assess for specific correlations between study variables (Appendix G). A number of statistically significant correlations were observed between variables with the exception of gender, which did not demonstrate any significant correlations. The strongest correlation was observed between smoking and homelessness where a weak positive relationship was noted (t_b=.311, p<.001); multicollinearity was therefore not a concern in reference to the proposed regression analysis.

Weak correlations were noted between the dependent variable, self-rated health, and the following independent variables: employment (t_b=.-.209, p<.001), disability (t_b=.233, p<.001) as well as unmet health need (t_b=.268, p<.001). None of the independent or control variables were highly correlated with the dependent variable suggesting that while there appear to be independent associations between the dependent and several independent variables, these variables are unlikely to represent strong predictors of self-rated health.

Predicting Self-Rated Health using Logistic Regression

Preliminary analyses demonstrated a significant relationship between the outcome variable, self-rated health, and several independent variables (homelessness, employment status, disability, unmet health need). At the same time, an absence of significant relationships was demonstrated between self-rated health and several other variables of interest (gender, ethnicity, education, access to a regular medical doctor). The theoretical basis of this study (Intersectionality theory) suggests that through real life social processes, these variables are all interconnected and interact to influence experiences of social and health inequality (Dhamoon & Hankivsky, 2011; Kelly, 2009; McCall, 2005; Rogers & Kelly, 2011). As the main variables of interest (gender, ethnicity, education, homelessness, employment, disability) were supported within the literature as influencing health, the decision was made to retain all variables within the regression model in order to assess for interactive effects between and among variables, and also to control for confounding effects. The two variables representing access related issues (access to a regular medical doctor, unmet health need) were retained within the model for similar reasons. Establishing predictors of self-rated health within the context of this study sample was considered a primary focus of the analysis; determining interactive effects between and among variables was a secondary, yet equally relevant, focus. Age and smoking status were retained as confounding variables however, body mass index (BMI) was dropped due a high incidence of missing cases (n=31); an absence of significant relationship with the dependent variable as demonstrated through Chi-square test for independence reinforced that this would not significantly alter results whereas further limiting sample size on account of missing data certainly would.

The regression model was initially approached from both binary and ordinal perspectives

and the outcome variable was recoded separately to suit either model. It was hypothesized that the ordinal model would allow greater variability in response and subsequently offer more accurate predictors of self-rated health however, given the relatively small sample size (N=293) cell size was reduced to less than 15 for some item responses and therefore increased risk for type II error due to inadequate statistical power. The base model proved a good fit using either approach and yielded very similar results (Appendix H). The variance in self-rated health accounted for by the base model was slightly greater for the binary model (15-20%) compared to the ordinal model (16.1-18.3%) and significant predictors of self-rated health were identical in either model. Similar findings were noted when access related variables were added, where again, the binary model accounted for slightly better variance in self-rated health compared to the ordinal model without any noted discrepancies in significant predictors of self-rated health. The binary model was subsequently chosen as the preferred model for analysis as it was seen as a slightly better fit for the proposed analysis with the advantage of greater ease of interpretation.

Following this initial deliberation of approaches, binary logistic regression was subsequently undertaken to assess the impact of several categories of social identity on the likelihood that participants would rate their (general) health as fair or poor. Four models were employed to test for predictors of self-rated health (Table 4).

Table 4

Logistic Regression Models Predicting Likelihood of Rating Health as 'Fair or Poor'

	Model 1	*Model 2*	*Model 3*	*Model 4*
	Binary Logistic Regression			
DV	Self-Rated Health (dichotomized: 0 - 'excellent, very good or good' 1 - 'fair or poor'			
Controls	Age – continuous variable Smoking Status 0 – No 1 – Yes			
IV	Gender 0 – Male 1 – Female Ethnicity 0 – European origins (Caucasian) 1 – Aboriginal or Visible minority Education 1 – Grade School 2 – High School 3 – College/University or Trade Lifetime History of Homelessness 0 – No 1 – Yes Current Employment 0 – No 1 – Yes Long-term Disability 0 – No 1 – Yes			
Mediating/ Moderating Variables			Access to Regular Medical Doctor 0 – No 1 – Yes Unmet Health Need 0 – No 1 – Yes	
Interaction terms		*2-way, 3-way*		*2-way, 3-way*
Omnibus Tests of Coefficients	X^2 (7, N=286) = 46.13, p<0.001	X^2 (15, N=286) = 57.45, p<0.001	X^2 (N= 285) = 59.14), p<0.001	X^2 (N=285) = 62.92), p<0.001

Model 1 contained six independent variables (gender, ethnicity, education, lifetime history of homelessness, current employment status and history of long-term disability) (Appendix I). The full model containing all predictors was statistically significant, X^2 (7, N=286) = 46.130 p<.001, indicating that the model was able to distinguish between participants who rated their health as 'fair or poor' or as 'good, very good or excellent'. Hosmer and Lemeshow Test was not statistically significant (p=0.95) indicating the null hypothesis can be rejected and that the model is a good fit. The model as a whole explained between 15.0% (Cox and Snell R square) and 20.0% (Nagelkerke R squared) of the variance in self-rated health, and correctly classified 64.0% of cases. As shown in Table 5, only three of the independent variables made a unique statistically significant contribution to the model (education, employment status and disability). The strongest predictor of rating general health as 'fair or poor' was disability status, recording an odds ratio of 3.23. This indicated that participants who reported presence of a long-term disability were 3 times more likely to rate their health as 'fair or poor' compared to participants who did not report a disability, controlling for all other factors in the model. The odds ratio of 0.293 for current employment was less than 1 indicating that participants who were employed were 0.293 times less likely to rate their health as 'fair or poor', controlling for all other factors in the model. Participants who reported grade school or high school as their highest level of education achieved were less likely (OR 0.415 and 0.297, respectively), to rate their health as 'fair or poor' compared to participants who completed college or university, controlling for all other factors in this model.

Table 5
Logistic Regression Predicting Likelihood of Rating Health as 'Fair or Poor'

Model	1	2	3	4
Variables	Odds ratio (95% C.I.)*			
Age	1.00 (.98-1.02)	1.00 (0.98-1.02)	1.01 (.99-1.03)	1.01 (0.99-1.03)
Smoking Status	0.76 (0.41-1.4)	0.78 (0.41-1.51)	0.84 (0.44-1.60)	0.87 (0.46-1.68)
Gender	1.20 (0.72-2.01)	1.23 (0.73-2.09)	1.05 (0.61-1.79)	1.02 (0.59-1.77)
Ethnicity	1.91 (0.99-3.71)	2.58 (0.23-29.05)	1.97 (0.99-3.90)	1.69 (0.70-4.09)
Education				
< 8 years	**0.41 (0.21-0.83)**	1.01 (0.36-2.89)	**0.41 (0.20-0.84)**	0.63 (0.26-1.52)
9-12 years	**0.30 (0.14-0.62)**	0.27 (0.07-1.05)	**0.31 (0.15-0.66)**	0.42 (0.17-1.06)
12 years+ (ref.cat)	**1.0**	1.0	**1.0**	1.0
Homelessness	1.06 (0.58-1.9)	0.91 (0.49-1.70)	0.98 (0.53-1.84)	0.96 (0.51-1.81)
Current Employment	**0.29 (0.15-0.56)**	0.32 (0.10-1.01)	**0.29 (0.15-0.57)**	**0.25 (0.11-0.58)**
Disability	**3.23 (1.90-5.50)**	**5.48 (1.71-17.55)**	**2.68 (1.54-4.55)**	**2.80 (1.41-5.55)**
Access to regular medical doctor			1.35 (0.69-2.64)	1.26 (0.64-2.49)
Unmet health need			**2.77 (1.54-4.96)**	**6.37 (1.33-30.58)**

* $p < 0.05$ shown in bold

Model 2 contained the same controls and predictors that were outlined in model 1; interaction terms were used to test for relationships among variables that were identified as significant predictors of self-rated health (education, current employment, disability) as well as ethnicity where reported p value approached significance (Appendix I). The overall model was statistically significant, X^2 (15, N=286) = 57.45 p<.001, indicating that the model was able to distinguish between participants who rated their health as 'fair or poor' or as 'good, very good or excellent'. Hosmer and Lemeshow Test was not statistically significant (p=0.37) suggesting the model was a good fit. The model as a whole explained between 18.3% (Cox and Snell R square) and 24.4% (Nagelkerke R squared) of the variance in self-rated health, and correctly classified 63.6% of cases. There were no significant 3-way or 2-way interactions among the variables tested and thus, these interaction terms were dropped from the model.

In Model 3, access related issues (access to a regular medical doctor, presence of an unmet health need) were examined for mediation effects in relation to self-rated health and social categories of identity (gender, ethnicity, education, lifetime history of homelessness, current

employment status and history of long-term disability) that were included in Model 1 (Appendix F). The full model containing all predictors was statistically significant, X^2 (9, N=285) = 59.153 p<.001, indicating that the model was able to distinguish between participants who rated their health as 'fair or poor' or as 'good, very good or excellent'. The model as a whole explained between 18.9% (Cox and Snell R square) and 25.2% (Nagelkerke R squared) of the variance in self-rated health, and correctly classified 69.1% of cases suggesting an overall improvement in the model. As shown in Table 5, four of the independent variables made a unique statistically significant contribution to the model (education, employment status, disability and unmet health need). The strongest predictor of rating general health as 'fair or poor' was presence of an unmet health related need, recording an odds ratio of 2.77. This indicated that participants who reported the experience of an unmet health related need – i.e. they were unable to access health care when it was needed – were 2.77 times more likely to rate their health as 'fair or poor' compared to participants who did not report the experience of an unmet health need, controlling for all other factors in the model. Similarly, participants who reported a long-term disability were 2.68 times more likely to rate their health as 'fair or poor' compared to participants who did not have a long-term disability, controlling for all other factors in the model. As in Model 1, participants who completed grade school or high school as their highest level of education achieved were less likely (OR 0.408 and 0.313 respectively) to rate their health as 'fair or poor' compared to participants who were college/university graduates.

Model 4 contained interaction terms to test the relationship between access related variables and significant predictors of self-rated health that were identified in Model 1 and 3; because 'access to a regular medical doctor' was not a significant predictor of self-rated health, interaction terms were tested for 'unmet health need' alone in relation to significant social

predictors of health (Appendix I). Omnibus tests of model coefficients was statistically significant, X^2 (14, N=285) = 62.92 p<.001, indicating that the model was able to distinguish between participants who rated their health as 'fair or poor' or as 'good, very good or excellent'. Hosmer and Lemeshow Test was not statistically significant (p=0.867) suggesting the null hypothesis can be rejected and that the model is a good fit. The model as a whole explained between 19.9% (Cox and Snell R square) and 26.6% (Nagelkerke R squared) of the variance in self-rated health, and correctly classified 69.5%. However, there were no significant 3-way or 2-way interactions among the variables tested.

Intersecting Axes of Oppression: Testing the Framework

Interaction terms applied to the base model (Model 2) failed to demonstrate any moderating effects between and among predictor variables in relation to self-rated health. The presence of reciprocal, intersecting experiences of oppression in relation to the outcome variable was therefore not supported. The variance accounted for in self-rated health improved when access related issues were entered into the model (Model 3) (18.9-25.2% from 15-20%) suggesting an overall improvement in the model. Access related issues - specifically unmet health need – was found to be a significant predictor of self-rated health however, this relationship did not explain or account for the relationship between social predictors in the base model and self-rated health. Therefore, access related issues did not mediate the relationship between predictor variables and self-rated health. When interaction terms were applied to unmet health need and other significant predictor variables within the model (Model 4), there were no significant 2-way or 3-way interactions observed; therefore access to care did not moderate the relationship between social identity and self-rated health.

Discussion

Power relationships play a central role in shaping health through the interplay of multiple interconnected experiences of oppression (Hankivsky & Christoffersen, 2008; Hankivsky et al., 2010; McCall, 2005). Findings of this study indicate that the likelihood of rating health as 'fair or poor' is strongly associated with aspects of social identity including education, employment status, and presence of a long-term disability or handicap. Surprisingly, participants with more years of education were more likely to report health as 'fair or poor' compared to those with less education; this finding is inconsistent with previous studies exploring social inequality in relation to health (Hinze, 2012; Prus, 2011; Veenstra, 2011) and warrants further study to understand the nature of this relationship to determine if this is an isolated or spurious finding specific to this population or if this can be replicated elsewhere. Employment status and presence of a long-term disability or handicap predicted health in the expected direction. Each of these variables represent modifiable aspects of functional wellbeing and present an opportunity to develop targeted interventions aimed at improving health among individuals who struggle with a mental illness by restoring power and reducing health and social inequality on the basis of these factors.

Presence of an unmet health need was also strongly associated with health and was defined as any experience within the previous year in which participants felt they required health care, yet did not receive it. Although the majority of the study sample reported access to a regular medical doctor, this was not found to be a significant predictor of health within the context of this study. Together, these findings reinforce that access to care represents more than simple availability of service; access encompasses socially and politically mediated processes that influence inequality and subsequently health. Understanding these processes on both a micro and macro level is therefore relevant to health promotion and treatment efforts as we move

toward enhancing mental health care and related supports and services in the community.

Age, smoking status, gender and lifetime history of homelessness were not significant predictors of self-rated health within the current study; these findings were consistent with univariate analyses exploring the relationship between each variable and self-rated health, with the exception of homelessness. Within the ordinal model, Pearson Chi-square value for homelessness did reach significance (see Table 3) suggesting that there was difference in self-rated health among participants who had experienced homelessness compared to those who had not. However, homelessness was not a significant predictor of self-rated health when tested as part of either ordinal or binary regression models (Appendix H). While ethnicity was not a significant predictor of self-rated health, the p value approached significance (p 0.052) in both the base model (Model 1) and the access related model (Model 3) suggesting that sample size and inadequate power were factors limiting analysis. Further research to clarify the relationship between homelessness, ethnicity and health is needed on a much larger scale in order to determine whether a relationship between these variables does in fact exist and whether a type II error in this particular instance occurred.

An Intersectionality framework for understanding health was ultimately was not supported by this study. The absence of significant interactions observed between and among independent variables in the both the base model (Model 2) and access related model (Model 4) reaffirm that further research is needed in order to fully comprehend how interconnected axes of oppression translate to experiences of health inequality. It is generally accepted that a much larger sample size is required to support detection of significant interactions within regression analyses (Munro, 2005; Peat, Mellis, Williams & Xuan, 2002). Therefore, disregarding the merits of an Intersectionality approach within mental health research at this point in time would

be premature.

Implications and Recommendations

While the utility of an Intersectionality approach within mental health care and related research remains unclear, this study revealed that several aspects of social identity in addition to unmet health need were strongly associated with health among individuals living with a mental illness in the community. Interventions targeted to understanding the influence of employment and (dis)abilty are essential to supporting health. Developing client-centred goals around these facets of identity is one way in which nurses can initiate a process of meaningful change that seeks to promote restoration of power to individuals who struggle with a mental illness. Connecting clients to resources such as supported employment programs or working with a client more specifically to minimize the impact of a particular disability or handicap are examples of ways in which the impact of health inequalities can be ameliorated through empowering processes. Consideration of the factors that influence or precipitate experiences of unmet health need are also critical to restoring power to marginalized groups. Mental health care practices that encourage a warm transfer, where there is overlap of services when referral is required, may help to minimize the struggles individuals face when accessing similar or unrelated services across multiple organizations. Integrating all of these factors as a routine component of nursing assessment and care and advocating for interprofessional and cross-sectoral collaboration will promote optimal health and wellbeing among individuals living with a mental illness (including addiction) as they work toward achieving their ideals for recovery.

Study Limitations

This study involved secondary analysis of pre-existing data collected as part of the CURA2 Poverty and Social Inclusion study (Forchuk et al., 2010-2015); analysis was therefore

limited to a pre-determined set of variables and instruments that were tailored to address the overall aims and goals of the primary study. Questionnaires may have captured data that was only partially relevant to the present study; for example, access to a regular medical doctor was used a proxy to represent access to healthcare. Within the Canadian healthcare system, Nurse Practitioners play a vital role with respect to enhancing access to care across a variety of settings (Nurse Practitioners' Association of Ontario, 2014); the wording of this item as a component of the NPHS excludes other providers of healthcare who may offer similar scope of practice in terms of assessment and management of health related issues yet do not hold the title of 'medical doctor'. As well, variables that were used for analysis were drawn from a total of three separate instruments across two years of study; while social variables were relatively fixed and unlikely to change significantly from one year to the next, this does raise concern with respect to reliability and validity of the study measures (Polit & Beck, 2012).

The CURA2 study employed a stratified sampling design based on housing type and employment status. In the present study, the sample was reduced to include participants who were captured in both year one and year two of the CURA2 study in order to elicit data pertaining to gender and ethnicity. While employment status varied slightly between the final sample (N=293) and those lost to follow up (N= 87) in year two (27.3% versus 14.9% respectively), current living arrangements were not considered or compared in the present study which therefore limits generalizability. The omitted group who were lost to follow up in year 2 reported a slightly higher incidence of lifetime history of homelessness (77.0% versus 63.8%); the homeless subpopulation may therefore be underrepresented in the retained sample (N=293).

Although an interesectionality framework was not supported by this research, sample size was a limiting factor in the present analysis and the possibility of type II error cannot be

excluded. Analytic strategies that employ an Intersectionality framework are considerably underdeveloped in the area of mental health research; as such, further quantitative study that involves primary research is needed to develop and perfect approaches that adequately uncover the impact of intersecting axes of oppression in relation to health outcomes is needed. Further qualitative research that utilizes an Intersectionality approach is also needed to better understand the nature and impact of interconnected social processes and the influence of such experiences in shaping health.

Lastly, the cross-sectional nature of this study limits causal inferences that can be drawn in relation to any significant associations observed between independent and dependent variables (Munro, 2005; Polit & Beck, 2012). While the use of logistic regression allows for prediction of self-rated health using the independent variables included within this model, the term prediction, itself, is used within the context of the present study. Findings should therefore be interpreted with appropriate caution and causal inferences cannot be generalized to the wider population.

Conclusions

Intersectionality theory offers a medium through which the complex, mutually reinforcing and synergistic effects of intersecting axes of oppression that fuel health inequality can be deconstructed and better understood. In a climate that is ever-changing and continuously evolving, innovative perspectives and solutions are needed to support meaningful change from a health promotion and treatment perspective as it relates to mental health care and related practices. Empowering individuals who struggle with a mental illness (including addiction) to lead fulfilling, socially connected lives as valued members of the community necessitates elimination of the power differentials that serve to marginalize vulnerable groups. Within the current study, a significant relationship was observed between several facets of social identity

(employment status, long-term disability) and health; coupled with access related issues (unmet health need), findings such as these reinforce a need to restructure and reframe interventions and supports within health, social service and housing and other related sectors. Although an Intersectionality framework was not supported, further research to refine analytic strategies may support advancement of this approach.

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Chapter 3

Implications, Recommendations and Conclusions

Summary of Key Findings

Within a setting of continued mental health reform, the need to investigate and develop novel approaches that address the socio-political processes that contribute to health inequality among individuals with mental illness is quite compelling (Hankivsky & Christoffersen, 2008; McGibbon, 2009; McGibbon & McPherson, 2011; Raphael, 2011). Mental health care systems and programs, as they currently exist, are compromised in their capacity to meet the evolving needs and growing demand for community-based service in a timely and efficient manner (CMHA], 2010; Kirby & Keon, 2006; MHCC, 2009; SW-LHIN, 2014). Findings of this study demonstrate significant associations between categories of social identity and poor health, including those related to social class (education) and ability (employment status, disability). Presence of an unmet health need was also strongly associated with health. Although an Intersectionality framework was not supported by this analysis, these findings create an opportunity to re-conceptualize approaches to enhancing experiences of wellbeing and recovery among individuals living with a mental illness and to develop innovative strategies and interventions aimed at reducing health inequality using a more holistic and flexible approach.

Implications for Nursing Practice

Establishing meaningful and lasting change with respect to mental health service delivery requires a process of critical inquiry that seeks to identify and address the underlying factors that precipitate poor health on both an individual (micro) and broader systems (macro) level. Nursing and related health disciplines are charged with the task of examining unique experiences of health inequality and engaging in interventions that seek to restore power to disadvantaged or

marginalized individuals and groups. While the utility of an Intersectionality approach within the context of providing mental health care remains unclear, this study does affirm that several aspects of social identity were strongly associated with health among individuals living with a mental illness in the community. Interventions targeted to understanding the influence of employment and (dis)abilty are therefore essential to supporting health. Developing client-centred goals around these facets of identity is one way in which nurses can promote restoration of power to individuals who struggle with a mental illness. Facilitating linkage to resources such as supported employment programs or working with a client more specifically to minimize the impact and perhaps overcome a particular disability or handicap are examples of ways in which the impact of health inequality can be ameliorated through empowerment-based nursing interventions.

Consideration of the factors that influence or precipitate experiences of unmet health need are also critical to restoring power to marginalized groups. Assessing the nature of health care related interactions and exploring aspects of care that support clients in working toward self-identified goals, as well as the factors that reinforce pre-existing power differentials are foundational to addressing access related issues within healthcare. Power imbalances may occur somewhat unintentionally within the provider-client relationship; however, being cognizant of one's own attitude and reserving judgments are important aspects of providing competent care (Smye et al., 2011; Van Herk et al., 2011). Reasons precipitating unmet health need in this study are cited in Appendix D. Individuals struggling with mental health concerns who sense they are judged or poorly understood by the professionals who are caring for them may be less likely to return for care. For example, a client with comorbid mental health issues and chronic pain who was fired by a previous family doctor for requesting early release on a narcotic prescription may

feel discouraged from reaching out for support in other areas of the healthcare system. Without appropriate care, this individual's health is likely to deteriorate. An appropriate nursing response in this circumstance would be to explore the underlying physical, mental health and social factors that contribute to health inequality and to acknowledge the power imbalances that occur within the client-provider relationship. While there may be some aspects of care that are non-negotiable, such as having the client sign a narcotic contract with the new prescriber (as is common practice across primary health care settings), efforts to honour and work toward client identified goals help to shift the dynamic of the relationship such that the client experiences more control. Factors that contribute to the quality of the health care interactions are very much related to access. Efforts to understand these access related issues from the clients perspective enables nursing professionals to work toward eliminating or at least minimizing barriers to care. Advocating on a broader systems level for changes that minimize victim blaming practices and penalizing clients for perceived non-compliance are also essential. Adopting a flexible approach and making a concerted effort to delineate the nature and impact of care related experiences that hinder health or otherwise influence client engagement is an important element of care that will allow nurses to fully support individuals living with a mental illness in the community to reach their full potential in terms of achieving wellness and promoting optimal recovery.

Mental health care practices that encourage a warm transfer, where there is overlap of services when referral to supplementary resources is required, may also help to minimize the struggles individuals face when accessing similar or unrelated services across multiple organizations. While mental health care systems often attempt to streamline intake processes and strive to offer seamless service, individuals struggling with mental health concerns in the community are frequently able to access emergency/crisis based assessments more readily than

longer term supports and resources. For some individuals, this may translate to scenarios where they undergo frequent assessment while awaiting service; mental health care practices that support a warm transfer may help to minimize frustration experienced by the client when they undergo repeated assessment. At the same time, this allows individuals with mental health concerns (including addiction) to play a more active, yet supported role, throughout the process of navigating care systems. Integrating these factors as a routine component of nursing assessment and care will promote optimal health and wellbeing among individuals living with a mental illness (including addiction) as they work toward achieving their ideals for recovery. Tailoring a client-centred approach to envelop aspects of social identity and inequality in this manner will require a shift in care practices; however, nurses are uniquely positioned within the health care system to integrate a holistic approach such as this as a consistent part of care planning.

Policy Recommendations

In employment settings, policies and practices that foster inclusive processes and flexibility during times of illness are needed in order to maximize functional abilities and improve quality for life individuals living with a mental illness in the community. In Ontario, the Accessibility for Ontarians with Disabilities Act (AODA) (2005) stipulates that by 2025, individuals with any disability will be legally entitled to accommodations across a range of settings. Implementing this provincial legislation within the context of supporting individuals with a mental health related disability, specifically, will require an empowering and sensitive approach to assessing individual and collective needs that support inclusion. The principles outlined in the *Health and Psychological Safety in the Workplace Standard* developed by the MHCC (2013) is one tool that may prove useful across these settings in terms of promoting

psychologically sensitive approaches to working with and supporting individuals with a mental illness in employment and related settings.

Additionally, efforts to ensure that health services, including mental health care, are accessible are equally important. As previously mentioned, redefining conceptualizations of access to care and strategizing ways to overcome factors that influence experience of healthcare are increasingly relevant. Support services that offer flexible, yet intensive, case management support for those based on degree of need and provide a warm transfer - where services overlap - if and when referral is needed is one promising strategy in which barriers to accessibility are minimized. Organizational policies that's reinforce and support practices such as these hold potential to minimize experiences of powerlessness for individuals living with a mental illness in the community and can be applied across sectors to support continued recovery.

Recommendations for Future Research

Findings pertaining to education in relation to health in this study were inconsistent with findings reported elsewhere in the literature, where more years of education was associated with a reduced likelihood of rating health as poor (Hinze, 2012; Prus, 2011; Veenstra, 2011); further quantitative study is needed to determine whether this finding is an isolated occurrence or spurious result specific to this study sample, or whether this is something that can be replicated elsewhere. Research to clarify the relationship between homelessness, ethnicity and health on a much larger scale is also warranted in order to determine whether a relationship between these variables does in fact exist. Although these variables were not significant predictors of self-rated health, univariate analyses did demonstrate a relationship between homelessness and health when self-rated health was treated as an ordinal variable; similarly, although not a significant predictor of health, ethnicity consistently approached significance (p 0.052) within the regression model

raising the question of whether inadequate sample size was a potential limiting factor. Qualitative research exploring the nature of the relationship between these variables and health among individuals living with a mental illness in the community, along with examination of additional aspects of social identity that may influence this relationship would generate further insight regarding the role these variables play in relation to mental health recovery and wellbeing.

Although an Interesectionality framework was not supported by this research, sample size was a limiting factor in the present analysis and the possibility of type II error cannot be excluded. Analytic strategies that employ an Intersectionality framework are considerably underdeveloped in the area of mental health research; further quantitative and qualitative primary research may help to advance analytic approaches that capture the impact of intersecting axes of oppression in relation to health outcomes and experiences of health.

Conclusions

Individuals living with a mental illness in the community face continued struggles and challenges with respect to achieving optimal health, wellbeing and recovery. Empowering individuals who struggle with a mental illness (including addiction) to lead fulfilling, socially connected lives as valued members of the community necessitates elimination of the power differentials that serve to marginalize vulnerable groups. Re-examining the factors that contribute to social and health inequality coupled with thoughtful consideration regarding the way in which mental health care and related services are offered are essential precursors to instituting mental health care practices that truly support individuals with a mental illness in the community to reach their full potential with respect to optimal recovery and wellbeing. While findings of this study reinforced an association between categories of social identity and poor

health, further research is needed to understand the nature and impact of oppression in shaping experiences of health.

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Appendix A
Demographics Questionnaire

Age: _____ years

Date: _____**, 20** _____
Code: _____

Sex: _____

Family

Marital status:

- ☐ Single/ Never Married
- ☐ Separated/ Divorced
- ☐ Widowed
- ☐ Married/ Common Law
- ☐ Other: (specify) _____

Do you have any children?

☐ Yes ☐ No

IF YES,

Number of children: Over 18 _____, Under 18_____

Do you currently have custody?

☐ Yes ☐ No ☐ Other _____

Are you currently in contact with one or more members of your family?

☐ Yes ☐ No

What is your current living arrangement?

- ☐ Lives with parent(s)
- ☐ Lives with spouse/partner
- ☐ Lives with other relative
- ☐ Other _____
- ☐ Lives alone
- ☐ Lives with unrelated person
- ☐ Inpatient

Education, Employment and Income

Highest Level of Education:

- ☐ Grade School
- ☐ High School
- ☐ Community College/ University
- ☐ Other _____

Are you currently employed?

- ☐ Yes (specify) _____
- ☐ No

In the past year, has your economic status (check one):

☐ Greatly worsened
☐ Somewhat worsened
☐ Stayed the same
☐ Somewhat improved
☐ Greatly improved

Date: _____, 20 _____
Code: _____

In the past year, has your income (check one):

☐ Greatly worsened
☐ Somewhat worsened
☐ Stayed the same
☐ Somewhat improved
☐ Greatly improved

In the past 5 years, has your economic status (check one):

☐ Greatly worsened
☐ Somewhat worsened
☐ Stayed the same
☐ Somewhat improved
☐ Greatly improved

In the past five years, has your income (check one):

☐ Greatly worsened
☐ Somewhat worsened
☐ Stayed the same
☐ Somewhat improved
☐ Greatly improved

Mental Health and Addictions

Psychiatric diagnoses: (check all that apply)

☐ Developmental handicap
☐ Disorder of childhood/adolescence
☐ Substance-related disorder
☐ Schizophrenia
☐ Mood Disorder
☐ Anxiety Disorder
☐ Organic Disorder
☐ Personality Disorder
☐ Other (specify): _____
☐ Unknown

Are you currently on any medication for mental health issues?

☐ Yes ☐ No

Specify type or if unknown give name of drug:

☐ antidepressant (e.g. Paxil, Seroquel)
☐ mood stabilizer (e.g. Epival, Lithium)
☐ antianxiety (e.g. Ativan, Clonazepam)
☐ antipsychotic (e.g. Risperidone, Seroquel)
☐ assistance with substances (methadone, antabuse)
☐ pain medication (e.g. Tylenol, Advil)
☐ Other (specify): _____

Date: _____, 20 _____
Code: _____

Have you ever been on any medication for mental health issues?
☐ Yes ☐ No

Specify type or if unknown give name of drug:
- ☐ antidepressant (e.g. Paxil, Seroquel)
- ☐ mood stabilizer (e.g. Epival, Lithium)
- ☐ antianxiety (e.g. Ativan, Clonazepam)
- ☐ antipsychotic (e.g. Risperidone, Seroquel)
- ☐ assistance with substances (methadone, antabuse)
- ☐ pain medication (e.g. Tylenol, Advil)
- ☐ Other (specify): _____

Age at first contact with mental health system: _____ years

Have you ever had a psychiatric hospitalization?
☐ Yes ☐ No

IF YES

Age at first Psychiatric hospitalization: ___

Number of Psychiatric Admissions in last year: ___

Duration of most recent hospitalization: ___

How long since last admission: ___

Estimated total number of psychiatric hospitalizations: ___

Do you currently have any substance/addiction issues?
☐ Yes ☐ No

IF YES, please specify:
- ☐ Alcohol
- ☐ Tobacco
- ☐ Caffeine
- ☐ Marijuana
- ☐ Cocaine/Crack
- ☐ Hallucinogens
- ☐ Heroin
- ☐ Prescription drugs (specify) _____
- ☐ Other (specify): _____

Have you had any substance/addiction issues in the past? **Date: _____, 20 _____**
☐ Yes ☐ No **Code: _____**

IF YES, please specify:
- ☐ Alcohol
- ☐ Tobacco
- ☐ Caffeine
- ☐ Marijuana
- ☐ Cocaine/Crack
- ☐ Hallucinogens
- ☐ Heroin
- ☐ Prescription drugs (specify) _____
- ☐ Other (specify): _____

Do you have any chronic physical illness?
☐ Yes ☐ No

IF YES, please specify:
- ☐ Diabetes
- ☐ Heart condition
- ☐ Arthritis
- ☐ High blood pressure
- ☐ Cancer, specify_____
- ☐ Respiratory illnesses
- ☐ Kidney/Urinary illnesses
- ☐ Hepatitis/Liver illnesses
- ☐ Epilepsy
- ☐ Autoimmune diseases (Crohn's, Lupus, Ulcerative Colitis)
- ☐ HIV/AIDS
- ☐ Osteoporosis
- ☐ Neurological/brain disorder
- ☐ Other (specify): _____

Have you ever had a head injury?
☐ Yes ☐ No

How old were you when this happened (first)? _____
How many times injured? _____

Have you ever been homeless?
☐ Yes ☐ No

How old were you when this happened first? _____
How many times homeless? _____

Appendix B
Poverty & Social Inclusion
National Population Health Survey (NPHS)

General Health **Date: _____, 20 _____**
Code: _____

The first section of this survey deals with various aspects of your health. I'll be asking about such things as physical activity, social relationships and health status. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being.
I'll start with a few questions concerning your health in general.

1. In general, would you say your health is:
☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

2. Thinking about the amount of stress in your life, would you say that most days are:
☐ Not at all stressful
☐ Not very stressful
☐ A bit stressful
☐ Quite a bit stressful
☐ Extremely stressful

3. In general, would you say that your eating habits are:
☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

4. How satisfied are you with your life in general? Would you say you are:
☐ Very satisfied
☐ Satisfied
☐ Neither satisfied nor dissatisfied
☐ Dissatisfied
☐ Very dissatisfied

Sleep
1. How long do you usually spend sleeping each night?
☐ Under 2 hours
☐ 2 hours – less than 3 hours
☐ 3 hours – less than 4 hours
☐ 4 hours – less than 5 hours
☐ 5 hours – less than 6 hours
☐ 6 hours – less than 7 hours
☐ 7 hours – less than 8 hours
☐ 8 hours – less than 9 hours
☐ 9 hours – less than 10 hours
☐ 10 hours – less than 11 hours
☐ 11 hours – less than 12 hours
☐ 12 hours or more
☐ Don't know or Declined

2. How often do you have trouble going to sleep or staying asleep?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

3. How often do you find your sleep refreshing? By refreshing, we mean restful.

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

4. How often do you find it difficult to stay awake when you want to?

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

Height and Weight

1. How tall are you without shoes on?

☐ Less than 1 ft. (12 inches or 29.2cm)
☐ 1'0 to 1'11 (12-23 inches or 29.2-59.6cm)
☐ 2'0 to 2'11 (24-35 inches or 59.7-90.1cm)
☐ 3'0 to 3'11 (36-47 inches or 90.2-120.6cm)
☐ 4'0 to 4'11 (48-59 inches or 120.7-151.0cm)
☐ 5'0 to 5'11 (60-71 inches or 151.1-181.5cm)
☐ 6'0 to 6'11 (72-83 inches or 181.6-212.0cm)
☐ 7'0 and over (212.1cm and over)
☐ Don't know or declined (Move on to question 3)

2. Select the exact height.

____ feet ____ inches (or _____ cm)

3. How much do you weigh?

_____ (☐ pounds or ☐ kilograms) ☐ Don't know or declined

Health Care Utilization

Now I'd like to ask about your contacts with health professionals during the past 12 months.

1. In the past 12 months, have you been a patient overnight in a hospital, nursing home or convalescent home?

☐ Yes ☐ No ☐ Don't know ☐ Declined

2. For how many nights in the past 12 months? _____

3. Not counting when you were an overnight patient, in the past 12 months, how many times have you seen or talked on the telephone about your physical, emotional or mental health with:

a) A family doctor or general practitioner: _____

b) An eye specialist (eg. ophthalmologist or optometrist): _____

c) Any other medical doctor (eg. surgeon, allergist, gynecologist or psychiatrist): _____

d) A nurse for care or advice: _____

e) A dentist or orthodontist: _____

f) A chiropractor: _____

g) A physiotherapist: _____

h) A social worker or counselor: _____

i) A psychologist: _____

j) A speech, audiology or occupational therapist: _____

4. Do you have a regular medical doctor?

☐ Yes ☐ No

5. In the past 12 months, have you attended a self-help group meeting such as AA or a cancer support group?

☐ Yes ☐ No

6. In the past 12 months, have you seen or talked on the telephone to an alternative health care provider such as an acupuncturist, homeopath or massage therapist about your physical, emotional or mental health?

☐ Yes ☐ No (Move on to question 8)

7. Who did you see or talk to? (Mark all that apply)

☐ Massage therapist
☐ Acupuncturist
☐ Homeopath or naturopath
☐ Feldenkrais or Alexander teacher
☐ Relaxation therapist
☐ Biofeedback teacher
☐ Rolfer
☐ Herbalist
☐ Reflexologist
☐ Spiritual healer
☐ Religious healer
☐ Other - specify: _____

8. During the past 12 months, was there ever a time when you felt that you needed health care but you didn't receive it?

☐ Yes ☐ No (Move on to section 'Home Care')

9. Think of the most recent time, why didn't you get care? (Mark all that apply)

☐ Not available - in the area

☐ Not available - at time required (e.g., doctor on holidays, inconvenient hours)
☐ Waiting time too long
☐ Felt would be inadequate
☐ Cost
☐ Too busy
☐ Didn't get around to it or didn't bother
☐ Didn't know where to go
☐ Transportation problems
☐ Language problems
☐ Personal or family responsibilities
☐ Dislikes or afraid of doctors
☐ Decided not to seek care
☐ Other – Specify: _____

10. Again, thinking of the most recent time, what was the type of care that was needed? (Mark all that apply)

☐ Treatment of – a physical health problem
☐ Treatment of – an emotional or mental health problem
☐ A regular check-up (including regular pre-natal care)
☐ Care of an injury
☐ Other – Specify: _____

Home Care

Home care services are health care or homemaker services received at home. (Examples are nursing care, help with bathing or housework, respite care and meal delivery).

1. Have you received any home care services in the past 12 months with the cost entirely or partially covered by government?

☐ Yes ☐ No ☐ Don't know or declined

(If No, Don't know or declined move on to question 3)

2. What type services have you received? (Mark all that apply).

☐ Nursing care (e.g. dressing changes)
☐ Other health care services (e.g., physiotherapy, nutrition counseling)
☐ Personal care (e.g., bathing, foot care)
☐ Housework (e.g., cleaning, laundry)
☐ Meal preparation or delivery
☐ Shopping
☐ Respite care (i.e., caregiver relief program)
☐ Other – Specify: _____

3. Have you received any other home care services in the past 12 months, with the cost **not** covered by government (for example, care provided by a spouse or friends)?

☐ Yes ☐ No ☐ Don't know or declined

(If No, Don't know or declined, move on to section 'Restriction of Activities')

4. Who provided these other home care services? (Mark all that apply)

☐ Nurse from private agency
☐ Homemaker from private agency
☐ Neighbor or friend
☐ Volunteer
☐ Other – Specify: _____

5. What type of services have you received from the identified person(s)? (Mark all that apply).

☐ Nursing care (e.g., dressing changes)
☐ Other health care services (e.g., physiotherapy, nutrition counseling)
☐ Personal care (e.g., bathing, foot care)
☐ Housework (e.g., cleaning, laundry)
☐ Shopping
☐ Respite care (i.e., caregiver relief program)
☐ Other – Specify: _____

Restriction of Activities

The next few questions deal with any health limitations which affect your daily activities. In these questions, 'long-term conditions' refer to conditions that have lasted or are expected to last 6 months or more.

1. Because of a long-term physical or mental condition or health problem, are you limited in the kind or amount of activity you can do:

a) At home?
☐ Yes ☐ No ☐ Declined

b) At school?
☐ Yes ☐ No ☐ Declined ☐ N/A (not in school)

c) At work?
☐ Yes ☐ No ☐ Declined ☐ N/A (doesn't work)

d) In other activities such as transportation to or from work or school or leisure time activities?
☐ Yes ☐ No ☐ Declined

2. Do you have any long-term disabilities or handicaps?
☐ Yes ☐ No ☐ Declined

IF YES: **(NPHS Page 5 of 28)**

a) What is the main condition or health problem causing you to be limited in your activities?

_____

b) Which one of the following is the best description of the cause of this condition?

- ☐ Injury – at home
- ☐ Injury – sports or recreation
- ☐ Injury – motor vehicle
- ☐ Injury – work-related
- ☐ Existed at birth
- ☐ Work environment
- ☐ Disease or illness
- ☐ Natural aging process
- ☐ Psychological or physical abuse
- ☐ Other – specify: _____

3. The next few questions may not apply to you, but we need to ask the same questions to everyone. Because of any condition or health problem, do you need the help of another person:

a) In preparing meals?
☐ Yes ☐ No

b) In shopping for groceries or other necessities?
☐ Yes ☐ No

c) In doing normal everyday housework?
☐ Yes ☐ No

d) In doing heavy household chores (such as washing walls or yard work)?
☐ Yes ☐ No

e) In personal care (such as washing, dressing or eating)?
☐ Yes ☐ No

f) In moving about inside the house?
☐ Yes ☐ No

g) In going outdoors in any weather?
☐ Yes ☐ No

Stress

The next part of the questionnaire deals with different kinds of stress. Although the questions may seem repetitive, they are related to various aspects of a person's physical, emotional and mental health.

I'll start by describing situations that sometimes come up in people's lives. As there are no right or wrong answers, the idea is to **choose the answer best suited to your personal situation**. I'd like you to tell me if these statements are true for you at this time by answering 'true' if it applies to you now or 'false' if it does not.

1. You are trying to take on too many things at once.
☐ True ☐ False ☐ Declined

2. There is too much pressure on you to be like other people.
☐ True ☐ False

3. Too much is expected of you by others.
☐ True ☐ False

4. You don't have enough money to buy the things you need.
☐ True ☐ False

QUESTIONS 5-7 ARE FOR INDIVIDUALS WHO ARE MARRIED OR COMMONLAW ONLY.

5. Your partner doesn't understand you.
☐ True ☐ False

6. Your partner doesn't show enough affection.
☐ True ☐ False

7. Your partner is not committed enough to your relationship.
☐ True ☐ False

8. You find it is very difficult to find someone compatible with you.
☐ True ☐ False

9. Do you have any children?
☐ Yes ☐ No ☐ Don't know or declined

QUESTIONS 10-11 ARE FOR INDIVIDUALS WITH CHILDREN ONLY.

10. At least one of your children seems very unhappy.
☐ True ☐ False

11. At least one child's behavior is a source of serious concern to you.
☐ True ☐ False

12. Your work around the home is not appreciated.
☐ True ☐ False

13. Your friends are a bad influence.
☐ True ☐ False

14. You would like to move but you cannot.
☐ True ☐ False

15. Your neighborhood or community is too noisy or too polluted.
☐ True ☐ False

16. You have a parent, a child or a partner who is in very bad health and may die.
☐ True ☐ False

17. Someone in your family has an alcohol or drug problem.
☐ True ☐ False

18. People are too critical of you or what you do.
☐ True ☐ False

Work Stress

Now I'm going to read you a series of statements that might describe your job situation.

1. Do you currently work at a job or business?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined move on to section 'Mastery')

2. Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree. If you have more than one job, just think about the main one.

a) Your job requires that you learn new things.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

b) Your job requires a high level of skill.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

c) Your job allows you freedom to decide how you do your job.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

d) Your job requires that you do things over and over.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

e) Your job is very hectic.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

f) You are free from conflicting demands that others make (on the job).
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

g) Your job security is good.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

h) Your job requires a lot of physical effort.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

i) You have a lot to say about what happens in your job.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

j) You are exposed to hostility or conflict from the people you work with.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

k) Your supervisor is helpful in getting the job done.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

l) The people you work with are helpful in getting the job done.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

3. How satisfied are you with your job?
☐ Very satisfied
☐ Somewhat satisfied
☐ Not too satisfied
☐ Not at all satisfied

Mastery

Now I'm going to read you a series of statements that people might use to describe themselves. Please let me know if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree.

1. You have little control over the things that happen to you.
☐ Strongly agree
☐ Agree

☐ Neither
☐ Disagree
☐ Strongly disagree
☐ Don't know or Declined (Move on to section 'Coping')

2. There is no way you can solve some of the problems you have.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

3. There is little you can do to change many of the important things in your life.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

4. You often feel helpless in dealing with problems of life.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

5. Sometimes you feel that you are being pushed around in life.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

6. What happens to you in the future mostly depends on you.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

7. You can do just about anything you really set your mind to.
☐ Strongly agree ☐ Agree ☐ Neither ☐ Disagree ☐ Strongly disagree

Coping
Now a few questions about the stress in your life.

1. In general, how would you rate your ability to handle unexpected and difficult problems? (for example, a family or personal crisis?) Would you say your ability is:
☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor
☐ Don't know or declined

2. In general, how would you rate your ability to handle the day-to-day demands in your life? (for example, handling work, family and volunteer responsibilities?) Would you say you ability is:
☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

3. People have different ways of dealing with stress. Thinking about the ways you deal with stress, please tell me how often you do each of the following.

a) How often do you try to solve the problem?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never
☐ Don't know or declined (Move on to next section 'Medication Use')

b) To deal with stress, how often do you talk to others?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

c) When dealing with stress, how often do you avoid being with people?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

d) How often do you sleep more than usual to deal with stress?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

e) When dealing with stress, how often do you try to feel better by eating more, or less, than usual?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

f) When dealing with stress, how often do you try to feel better by smoking more cigarettes than usual?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

g) When dealing with stress, how often do you try to feel better by drinking alcohol?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

h) When dealing with stress, how often do you try to feel better by using drugs or medication?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

i) How often do you jog or exercise to deal with stress?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

j) How often do you pray or seek spiritual help to deal with stress?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

k) To deal with stress, how often do you try to relax by doing something enjoyable?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

l) To deal with stress, how often do you try to look on the bright side of things?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

m) How often do you blame yourself?
☐ Often ☐ Sometimes ☐ Rarely ☐ Never

n) To deal with stress, how often do you wish the situation would go away or somehow be finished? ☐ Often ☐ Sometimes ☐ Rarely ☐ Never

Medication Use

Now I'd like to ask a few questions about your use of medication, both prescription and over-the-counter, as well as other health products.

1. In the past month did you take:

a) Pain relievers such as Aspirin or Tylenol (including arthritis medication and anti-inflammatories)
☐ Yes ☐ No

b) Tranquilizers such as Valium or Ativan
☐ Yes ☐ No

c) Diet pills such as Ponderal, Dexatrim or Fastin
☐ Yes ☐ No

d) Anti-depressants such as Prozac, Paxil or Effexor
☐ Yes ☐ No

e) Codeine, Demerol or morphine
☐ Yes ☐ No

f) Allergy medicine such as Reactine or Allegra
☐ Yes ☐ No

g) Asthma medications such as inhalers or nebulizers
☐ Yes ☐ No

h) Cough and cold remedies
☐ Yes ☐ No

i) Penicillin or other antibiotics
☐ Yes ☐ No

j) Medicine for the heart
☐ Yes ☐ No

k) Medicine for blood pressure
☐ Yes ☐ No

l) Diuretics or water pills
☐ Yes ☐ No

m) Steroids
☐ Yes ☐ No

n) Insulin
☐ Yes ☐ No

o) Pills to control diabetes
☐ Yes ☐ No

p) Sleeping pills such as imovane, Nytol or Starnoc
☐ Yes ☐ No

q) Stomach remedies
☐ Yes ☐ No

r) Laxatives
☐ Yes ☐ No

s) IF FEMALE, birth control pills
☐ Yes ☐ No

t) IF FEMALE > AGE 30, hormones for menopause or aging symptoms
☐ Yes ☐ No

QUESTIONS U – V ARE FOR FEMALES TAKING HORMONES ONLY.

u) What type of hormones are you taking?
☐ Estrogen only ☐ Progesterone only
☐ Both ☐ Neither

v) When did you start this hormone therapy?
_____ (year)

w) Thyroid medication such as Synthroid or Levothyroxine
☐ Yes ☐ No

x) Any other medication
☐ Yes ☐ No

2. Now I am referring to the last 2 days, that is, yesterday and the day before yesterday. During those two days, how many different medications did you take?
☐ Don't know or Declined (If zero or declined, move on to question 3)

FILL OUT FOR EVERY MEDICATION THEY TOOK.
a) What is the exact name of the medication you took? (Look at bottle or tube)
_____

Was this a prescription from a medical doctor or dentist?
☐ Yes ☐ No

b) What is the exact name of the medication you took? (Look at bottle or tube)

_____
Was this a prescription from a medical doctor or dentist?
☐ Yes ☐ No

c) What is the exact name of the medication you took? (Look at bottle or tube)

_____
Was this a prescription from a medical doctor or dentist?
☐ Yes ☐ No

d) What is the exact name of the medication you took? (Look at bottle or tube)

_____
Was this a prescription from a medical doctor or dentist?
☐ Yes ☐ No

e) What is the exact name of the medication you took? (Look at bottle or tube)

_____
Was this a prescription from a medical doctor or dentist?
☐ Yes ☐ No

3. There are many other health products such as ointments, vitamins, herbs, minerals or protein drinks which people use to prevent illness or to improve or maintain their health.
Do you use any of these or other health products?
☐ Yes ☐ No ☐ Don't know or Declined
(If No, Don't know, or Declined move on to 'Smoking')

4. In the past two days, that is, yesterday and the day before yesterday, did you use any of these health products?
☐ Yes ☐ No ☐ Don't know or Declined
(If No, Don't know, or Declined move on to 'Smoking')

5. Thinking about the past two days, what is the exact name of a health product that you used?

_____

6. Did you use any other health product?
☐ Yes ☐ No ☐ Don't know or Declined
(If No, Don't know, or Declined move on to 'Smoking')

7. What is the exact name of this product?

_____
CAN ASK FOR UP TO 12 PRODUCTS AND RECORD ON SEPARATE SHEET.

Smoking

1. Does anyone in this household smoke regularly inside the house?
   ☐ Yes ☐ No

2. At the present time, do you smoke cigarettes daily, occasionally, or not at all?
   ☐ Daily
   ☐ Occasionally (Move on to question 6)
   ☐ Not at all (Move on to question 5)
   ☐ Don't know or declined (Move on to section 'Alcohol')

3. At what age did you begin to smoke cigarettes daily?
   _____ (age in years)

4. How many cigarettes do you smoke each day now?
   _____ (cigarettes)
   IF DAILY SMOKER, MOVE ON TO QUESTION 13

5. Have you ever smoked cigarettes at all?
   ☐ Yes
   ☐ No (Move on to section 'Alcohol')
   ☐ Don't know or declined (Move on to section 'Alcohol')

6. On the days that you do smoke, about how many cigarettes do you usually have?
   _____ (cigarettes)
   (Min. 1, Max. 99, Warning after 20)

7. In the past month, on how many days have you smoked 1 or more cigarettes?
   _____ (days)
   (Min. 1, Max. 30)

8. In your lifetime, have you smoked a total of 100 or more cigarettes (about 4 packs)?
   ☐ Yes ☐ No

9. Have you ever smoked cigarettes daily?
   ☐ Yes ☐ No
   ☐ Don't know or declined (Move on to section 'Alcohol')

10. At what age did you begin to smoke cigarettes daily?
    _____ (age in years)

11. How many cigarettes did you usually smoke each day?
    _____ (cigarettes)

12. At what age did you stop smoking cigarettes daily?
    _____ (age in years) **(NPHS Page 15 of 28)**

IF DAILY SMOKER, COMPLETE QUESTIONS 13-23

13. What brand of cigarettes do you usually smoke?
_____ or
☐ Don't know or declined

14. How soon after you wake up do you smoke your first cigarette?
☐ Within 5 minutes
☐ 6 to 30 minutes after waking
☐ 31 to 60 minutes after waking
☐ More than 60 minutes after waking

15. Do you find it difficult to refrain from smoking in places where it is forbidden?
☐ Yes ☐ No

16. Which cigarette would you most hate to give up?
☐ The first one of the day ☐ Another one

17. Do you smoke more frequently during the first hours after waking, compared with the rest of the day?
☐ Yes ☐ No

18. Do you smoke even when you are so ill that you are in bed most of the day?
☐ Yes ☐ No

19. Have you tried quitting in the past 6 months?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined move to question 23)

20. How many times have you tried quitting in the past 6 months?
_____ (times)

21. Are you seriously considering quitting within the next 30 days?
☐ Yes (Move on to question 23)
☐ No

22. Are you seriously considering quitting within the next 6 months?
☐ Yes ☐ No

23. At your place of work what are the restrictions on smoking?
☐ Restricted completely
☐ Allowed in designated areas
☐ Restricted only in certain places
☐ Not restricted at all
☐ N/A or not working

Alcohol

Now, some questions about your alcohol consumption. When we use the word drink it means:
-One bottle or can of beer or a glass of draft
-One glass of wine or a wine cooler
-One drink or cocktail with 1 and ½ ounces of liquor

1. During the past 12 months have you had a drink of wine, liquor or any other alcoholic beverage?

☐ Yes ☐ No
☐ Don't know or Declined (Move on to section 'Mental Health')

IF **YES**, COMPLETE QUESTIONS 2-5.

2. During the past 12 months, how often did you drink alcoholic beverages?
☐ Less than once a month
☐ Once a month
☐ 2 to 3 times a month
☐ Once a week
☐ 2 to 3 times a week
☐ 4 to 6 times a week
☐ Everyday

3. How often in the past 12 months have you had 5 or more drinks on one occasion?
☐ Never
☐ Less than once a month
☐ Once a month
☐ 2 to 3 times a month
☐ Once a week
☐ More than once a week

4. Thinking back over the past week, did you have a drink of beer, wine, liquor or any other alcoholic beverage?
☐ Yes ☐ No ☐ Don't know or Declined
(If Don't know or Declined, move on to section 'Mental Health')

IF **YES**, COMPLETE QUESTION 5

5. Starting with yesterday, how many drinks did you have:
On Sunday: _____ (If Declined on first day, move on to section 'Mental Health')
On Monday: _____
On Tuesday: _____
On Wednesday: _____
On Thursday: _____
On Friday: _____
On Saturday: _____

IF **NO**, COMPLETE QUESTIONS 6-8

6. Have you ever had a drink?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined, move on to section 'Mental Health')

7. Did you ever regularly drink more than 12 drinks a week?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined, move on to section 'Mental Health')

8. Why did you reduce or quit drinking altogether? (Mark all that apply).
☐ Dieting
☐ Athletic training
☐ Pregnancy
☐ Getting older
☐ Drinking too much/drinking problem
☐ Affected – work, studies, employment opportunities
☐ Interfered with family or home life
☐ Affected – physical health
☐ Affected – friendships or social relationships
☐ Affected – financial position
☐ Affected – outlook on life, happiness
☐ Influence of family or friends
☐ Other – specify: _____

Mental Health

Now some questions about mental and emotional well-being.

1. During the past month, about how often did you feel:

a) So sad that nothing could cheer you up?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

b) Nervous?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

c) Restless or fidgety?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

d) Hopeless?

☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

e) Worthless?

☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

f) That everything was an effort?

☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time
☐ Don't know or declined

2. We have just been talking about feelings and experiences that occurred to different degrees during the past month. Taking them all together, did these feelings occur more often in the past month than is usual for you, less often than usual or about the same as usual?

☐ More often
☐ Less often
☐ About the same
☐ Never had any (Move on to question 3)
☐ Don't know or declined (Move on to question 3)

a) IF **MORE OFTEN,** is it a lot more, somewhat more or only a little bit more often than usual?

☐ A lot ☐ A little
☐ Somewhat ☐ Don't know or declined (Move on to question 3)

b) IF **LESS OFTEN**, is it a lot less, somewhat less or only a little less often than usual?

☐ A lot ☐ A little
☐ Somewhat ☐ Don't know or declined (Move on to question 3)

c) How much do these experiences usually interfere with your life or activities?

☐ A lot ☐ A little
☐ Some ☐ Not at all

3. In the past 12 months, have you seen or talked on the telephone with a health professional about your emotional or mental health?

☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined move on to question 4)

a) How many times in the past 12 months?

_____ (times)
(Min. 1, Max. 365, warning after 25) **(NPHS Page 19 of 28)**

b) Whom did you see or talk to? (Mark all that apply)

- ☐ Family doctor or general practitioner
- ☐ Psychiatrist
- ☐ Psychologist
- ☐ Nurse
- ☐ Social worker or counselor
- ☐ Other – specify: _____

4. During the past 12 months, was there ever a time when you felt sad, blue, or depressed for 2 weeks or more in a row?

☐ Yes ☐ No (Move on to question 16)
☐ Don't know or declined (Move on to section 'Personal/Family History of depression')

IF YES, COMPLETE QUESTIONS 5-16.

5. For the next few questions, please think of the 2-week period during the past 12 months when these feelings were the worst. During that time, how long did the feelings usually last?

- ☐ All day long
- ☐ Most of the day
- ☐ About half of the day (Move on to question 14)
- ☐ Less than half of the day (Move on to question 14)
- ☐ Don't know or Declined (Move on to section 'Personal/Family history of depression')

6. How often did you feel this way during those 2 weeks?

- ☐ Every day
- ☐ Almost every day
- ☐ Less often (Move on to question 14)
- ☐ Don't know or declined (Move on to section 'Personal/Family history of depression')

7. During those 2 weeks did you lose interest in most things?

☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

8. Did you feel tired out or low on energy all of the time?

☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

9. Did you gain weight, lose weight, or stay about the same?

- ☐ Gained weight
- ☐ Lost weight
- ☐ Stayed about the same (Move on to question 10)
- ☐ Was on a diet (Move on to question 10)
- ☐ Don't know or declined (Move on to next section)

a) About how much did you gain/lose?
_____ (☐ Pounds or ☐ Kilograms)

10. Did you have more trouble falling asleep than you usually do?
☐ Yes ☐ No (Move on to question 11)
☐ Don't know or declined (Move on to next section)

a) How often did that happen?
☐ Every night
☐ Nearly every night
☐ Less often
☐ Don't know or declined (Move on to next section)

11. Did you have a lot more trouble concentrating than usual?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

12. At these times, people sometimes feel down on themselves, no good or worthless. Did you feel this way?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

13. Did you think a lot about death, either your own, someone else's or death in general?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

Reviewing what you just told me, you had 2 weeks in a row during the past 12 months when you were sad, blue, depressed and also had some other things like _____.

14. About how many weeks altogether did you feel this way during the past 12 months?
_____ (weeks)

15. Think about the last time you felt this way for 2 weeks or more in a row. In what month was that?

☐ January	☐ July
☐ February	☐ August
☐ March	☐ September
☐ April	☐ October
☐ May	☐ November
☐ June	☐ December

16. During the past 12 months, was there ever a time lasting 2 weeks or more when you lost interest in most things like hobbies, work or activities that usually give you pleasure?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or declined move on to next section)

For the next few questions, please think of the 2-week period during the past 12 months when you had the most complete loss of interest in things.

17. During the 2-week period, how long did the loss of interest usually last?
- ☐ All day long
- ☐ Most of the day
- ☐ About half of the day (Move on to the next section)
- ☐ Less than half of the day (Move on to the next section)
- ☐ Don't know or declined (Move on to the next section)

18. How often did you feel this way during those 2 weeks?
- ☐ Every day
- ☐ Almost every day
- ☐ Less often (Move on to the next section)
- ☐ Don't know or declined (Move on to the next section)

19. During those 2 weeks did you feel tired out or low on energy all the time?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

20. Did you gain weight, lose weight, or stay about the same?
- ☐ Gained weight
- ☐ Lost weight
- ☐ Stayed about the same (Move on to question 21)
- ☐ Was on a diet (Move on to question 21)
- ☐ Don't know or declined (Move on to next section)

a) About how much did you gain/lose?
_____ (☐ Pounds or ☐ Kilograms)

21. Did you have more trouble falling asleep than you usually do?
☐ Yes ☐ No (Move on to question 22)
☐ Don't know or declined (Move on to next section)

a) How often did this happen?
- ☐ Every night
- ☐ Nearly every night
- ☐ Less often
- ☐ Don't know or declined (Move on to next section)

22. Did you have a lot more trouble concentrating than usual?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

23. At these times, people sometimes feel down on themselves, no good, or worthless. Did you feel this way?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

24. Did you think a lot about death, either your own, someone else's, or death in general?
☐ Yes ☐ No ☐ Don't know or declined (Move on to next section)

Reviewing what you just told me, you had 2 weeks in a row during the past 12 months when you lost interest in most things and also had some other things like _____.

25. About how many weeks did you feel this way during the past 12 months?
_____ (weeks) or ☐ Don't know or declined (Move on to next section)

26. Think about the last time you had 2 weeks in a row when you felt this way. In what month was that?

☐ January	☐ July
☐ February	☐ August
☐ March	☐ September
☐ April	☐ October
☐ May	☐ November
☐ June	☐ December

Personal and Family History of Depression

The next set of questions asks about your personal and immediate family's medical history of depression. This is an important factor in assessing health risks.

1. Have you ever had one or several episodes of being sad, depressed, discouraged or uninterested most of the day, for several days, weeks and longer?
☐ Yes ☐ No
☐ Don't know or declined (Move on to section 'Social Support')

2. Have you ever been diagnosed with depression by a health professional?
☐ Yes ☐ No (Move on to question 3)
☐ Don't know or declined (Move on to next section)

a) How old were you when this was first diagnosed?
_____ (years)

3. Have any close relatives – including your biological parents, brothers and sisters – ever had one or several episodes of being sad, depressed, discouraged or uninterested most of the day, for several days, weeks and longer?
☐ Yes, one only
☐ Yes, more than one
☐ No
☐ Don't know or declined (Move on to next section)

4. Have any close relatives ever been diagnosed with depression by a health professional?
☐ Yes ☐ No ☐ Don't know or declined
(If No, Don't know or Declined move on to next section)

5. Was this: (Mark all that apply)

- ☐ Your birth mother
- ☐ Your birth father
- ☐ One of your biological brothers
- ☐ One of your biological sisters

Social Support

Next are some questions about social support that is available to you.

1. About how many close friends and close relatives do you have (that is, people you feel at ease with and can talk to about what is on your mind)?

_____ (close friends and relatives) or

☐ Don't know or declined (Move on to section 'Language')

People sometimes look to others for companionship, assistance, or other types of support.

2. How often is each of the following kinds of support available to you if you need it?

a) Someone to help you if you were confined to a bed?

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

☐ Don't know or declined (Move on to next section)

b) Someone you can count on to listen to you when you need to talk?

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

c) Someone to give you advice about a crisis?

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

d) Someone to take you to the doctor if you needed it?

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

e) Someone who shows you love and affection?

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

f) Someone to have a good time with?

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

g) Someone to give you information in order to help you understand a situation?

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

h) Someone to confide in or talk to about yourself or your problems?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

i) Someone who hugs you?
☐ None of The time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

j) Someone to get together with for relaxation?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

k) Someone to prepare your meals if you were unable to do it yourself?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

l) Someone whose advice you really want?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

m) Someone to do things with to help you get your mind off things?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

n) Someone to help with daily chores if you were sick?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

o) Someone to share your most private worries and fears with?
☐ None of The time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

p) Someone to turn to for suggestions about how to deal with a personal problem?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

q) Someone to do something enjoyable with?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

r) Someone who understands your problems?
☐ None of the time ☐ A little of the time ☐ Some of the time ☐ Most of the time ☐ All of the time

s) Someone to love you and make you feel wanted?

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

Language

1. In what languages can you conduct a conversation? (Mark all that apply)

- ☐ English
- ☐ French
- ☐ Arabic
- ☐ Mandarin
- ☐ Cree
- ☐ German
- ☐ Greek
- ☐ Hungarian
- ☐ Italian
- ☐ Korean
- ☐ Persian (Farsi)
- ☐ Polish
- ☐ Portuguese
- ☐ Punjabi
- ☐ Spanish
- ☐ Tagalog (Filipino)
- ☐ Ukrainian
- ☐ Vietnamese
- ☐ Other – specify: _____

Income

Thinking about the total income for all household members, from which of the following sources did your household receive any income in the past 12 months? (Mark all that apply)

- ☐ Wages and salaries
- ☐ Income from self-employment
- ☐ Dividends and interest (e.g. on bonds, savings)
- ☐ Employment insurance
- ☐ Worker's compensation
- ☐ Benefits from Canada or Quebec pension plan
- ☐ Retirement pensions, superannuation and annuities
- ☐ Old age security and Guaranteed Income Supplement
- ☐ Child Tax Benefit
- ☐ Provincial or municipal social assistance or welfare
- ☐ Child support
- ☐ Alimony
- ☐ Other (e.g. rental income, scholarships)
- ☐ None (Move on to question 3)
- ☐ Don't know or declined (Questionnaire complete)

IF MORE THAN ONE SOURCE SELECTED, COMPLETE QUESTION 2.

2. What was the main source of income?

- ☐ Wages and salaries
- ☐ Income from self-employment
- ☐ Dividends and interest (e.g. on bonds, salaries)
- ☐ Employment insurance
- ☐ Worker's compensation
- ☐ Benefits from Canada or Quebec pension plan
- ☐ Retirement pensions, superannuation and annuities
- ☐ Old Age Security and Guaranteed Income Supplement
- ☐ Child Tax Benefit
- ☐ Provincial or municipal social assistance or welfare
- ☐ Child support
- ☐ Alimony
- ☐ Other (e.g. rental income, scholarships)

3. What is your best estimate of the total income, before taxes and deductions, of all household members from all sources in the past 12 months?

_____ (income) (Move on to question 5)

- ☐ $0.00 (Questionnaire complete)
- ☐ Don't know or declined (Complete question 4)

4. Can you estimate in which of the following groups your household income falls?

- ☐ No income (Questionnaire complete)
- ☐ Less than $5,000
- ☐ Between $5,000 and $10,000
- ☐ Between $10,000 and $15,000
- ☐ Between $15,000 and $20,000
- ☐ Between $20,000 and $30,000
- ☐ Between $30,000 and $40,000
- ☐ Between $40,000 and $50,000
- ☐ Between $50,000 and $60,000
- ☐ Between $60,000 and $70,000
- ☐ Between $70,000 and $80,000
- ☐ Between $80,000 and $90,000
- ☐ Between $90,000 and $100,000
- ☐ $100,000 or more
- ☐ Don't know or declined (Questionnaire complete)

5. What is your best estimate of your total personal income, before taxes and deductions, from all sources in the past 12 months?

_____ (income)

6. 4. Can you estimate in which of the following groups your personal income falls?

- ☐ No income
- ☐ Less than $5,000
- ☐ Between $5,000 and $10,000
- ☐ Between $10,000 and $15,000
- ☐ Between $15,000 and $20,000
- ☐ Between $20,000 and $30,000
- ☐ Between $30,000 and $40,000
- ☐ Between $40,000 and $50,000
- ☐ Between $50,000 and $60,000
- ☐ Between $60,000 and $70,000
- ☐ Between $70,000 and $80,000
- ☐ Between $80,000 and $90,000
- ☐ Between $90,000 and $100,000
- ☐ $100,000 or more
- ☐ Don't know or declined

Thank-you for completing this questionnaire.

Appendix C
Migration Instrument

Period Prevalence Count (migration/transience) Date: _____, 20 _____
South CURA version Code: _____

City Interview is taking place: _____

Definitions of homelessness and migration/transience
Absolute homeless: A homeless person does not have a place that he/she considers to be home or a place where he/she sleeps regularly.
Longer definition:
You are homeless if:
- You have no place to call home OR
- Your home is neither a room, an apartment, nor a house, OR
- Your room, apartment or house is not your own OR
- You either stay there **four times** a week or less OR
- You have no arrangement to sleep there regularly.

At-risk for homelessness: Due to particular circumstances, a person is at an elevated risk for homelessness (i.e. pending eviction, extremely low income, familial abuse, inability to pay rent, existing medical condition with no benefits etc.).

Migration/transience A homeless person has moved or travelled to [City Interview is Taking Place] from another location or another community.

1. Gender: 1.....Female 2.....Male 3.....Transgender

2a. What are the reason(s) that you are at-risk of homelessness ***AND/OR*** absolutely homeless?

_____Not Applicable (Go to question 3)

Please check (✓) all that apply:		**REASONS FOR BEING AT-RISK FOR HOMELESSNESS:**	***Please check (✓) all that apply:***		**REASONS FOR BEING ABSOLUTELY HOMELESS**
1		Unemployment	1		Unemployment
2		Seeking work	2		Seeking work
3		Low wages	3		Low wages
4		Unable to pay rent or mortgage	4		Unable to pay rent or mortgage
5		Evicted	5		Evicted
6		Mental illness	6		Mental illness
7		Physical illness or disability	7		Physical illness or disability
8		Welfare cheque late	8		Welfare cheque late
9		Welfare payment is inadequate/low	9		Welfare payment is inadequate/low
10		Welfare cut-off	10		Welfare cut-off
11		Doesn't qualify for welfare benefits	11		Doesn't qualify for welfare benefits
12		Family events or problems	12		Family events or problems
13		Divorce	13		Divorce
14		Out of jail/incarceration	14		Out of jail/incarceration
15		Substance abuse	15		Substance abuse
16		Transient or migrant	16		Transient or migrant
17		Other (please specify):	17		Other (please specify):

2b. Do you meet the definition of ***absolute*** *homeless*? 1.....Yes 2.....No (see definition above)

Period Prevalence Count (migration/transience) Date: _____, 20 _____
South CURA version Code: _____

2c. Do you meet the definition of being ***at-risk for*** *homeless*? 1.....Yes 2.....No (see definition above)

3. Income Status:
1.....Have no income
2.....Welfare (Ontario Works)
3.....ODSP (Ontario Disability Support Program)
4.....CPP (Canada Pension Plan)
5.....EI (Employment Insurance)
6.....OAS (Old Age Security)
7.....WSIB (Workers Compensation)
8.....War Veterans Allowance
9.....Private pension
10...Employment
11...Other (Specify): _____

4. Ethnic/racial/cultural Group:
1.....European origins (Caucasian)
2.....Aboriginal (Please Specify):_____
3.....Visible minority (Please Specify):_____
4.....Other (specify):_____

5. What language was first learned as a child and is still spoken?
1.....English
2.....French
3.....Cree or other First Nation language (specify):_____
4.....Other (specify):_____

6. Marital/ Family Status :
1.....Married/ Common Law
2.....Single
3.....Divorced/Separated
4.....Widowed
5.....Other (specify):_____

7. Number of children or other dependents: _____

8. Do you have any children who:
are accompanying you? 1...Yes 2...No
are in your custody? 1...Yes 2...No

9a. Please provide the information about the gender and age of each of your children:

	Gender			**Age in Years**
Child #1	1.....Female	2.....Male	3.....Transgender	_____
Child #2	1.....Female	2.....Male	3.....Transgender	_____
Child #3	1.....Female	2.....Male	3.....Transgender	_____
Child #4	1.....Female	2.....Male	3.....Transgender	_____
Child #5	1.....Female	2.....Male	3.....Transgender	_____

Period Prevalence Count (migration/transience) Date: _____, 20 _____
South CURA version Code: _____

10. In the last year, have you had any ***mental health*** problems? 1...Yes 2... No

Please describe _____

11. In the last year, have you had any ***physical health*** problems? 1...Yes 2... No

Please describe _____

12. Have you:
been ***absolutely*** homeless in your lifetime? 1...yes 2.. .no
been ***absolutely*** homeless in the last year? 1...yes 2.. .no
in the last year, slept outdoors/on the streets because you had nowhere to go? 1...yes 2... no

Transience and migration

13) Were you born in [City Interview is Taking Place]? 1.....Yes 2.....No

14) Is [City Interview is Taking Place] your home community? 1.....Yes 2.....No

15a) **IF [City Interview is Taking Place] IS NOT YOUR HOME COMMUNITY,** please specify your home community:
(circle the letter and then write the name of the community)

a.....in the [Interview City] area → → →
b.....other South-West Ontario area → → →
c.....in Central Ontario → → →
d.....in Toronto Ontario area → → →
e.....in East Ontario → → →
f…. in North-East Ontario → → →
g…. in North-West Ontario → → →
h.... in another province or territory → → →
i.....in another country → → →

For all areas (a to g) specify the community / country

_____

15b) **IF [City Interview is Taking Place] IS THE HOME COMMUNITY,** have you recently returned to [City Interview is Taking Place] after living somewhere else? Where?

a.....in the [Interview City] area → → →
b.....other South-West Ontario area → → →
c.....in Central Ontario → → →
d.....in Toronto Ontario area → → →
e.....in East Ontario → → →
f…. in North-East Ontario → → →
g…. in North-West Ontario → → →
h.... in another province or territory → → →
i.....in another country → → →

For all areas (a to g) specify the community / country

_____

16) How long have you been in [City Interview is Taking Place]? # days _____
months _____
years _____

17) How many times have you moved to a different community in the last year? _____

Period Prevalence Count (migration/transience) Date: _____, 20 _____
South CURA version Code: _____

18) How many times have you moved to a different community in the last 5 years? _____

19) Why did you leave another community to come to [City Interview is Taking Place]? Please give the reason(s) for leaving, using the categories below:

Reasons for leaving another community to come to [City Interview is Taking Place]:

Please check (✓) all that apply:

1		Unemployment	11		Unable to obtain welfare/didn't qualify
2		Seeking work in [City Interview is Taking Place]	12		Welfare cheque was late
3		Low wages	13		Welfare payments inadequate/too low
4		Unable to pay rent or mortgage	14		Welfare was cut-off
5		Evicted	15		Family events or problems
6		Mental illness	16		Divorce
7		Physical illness or disability	17		Family violence
8		To access health or social services	18		Out of jail/prison
9		To access education	19		Substance use (alcohol or drugs)
10		Encouraged/helped to come to North Bay	20		Wanted a change
	↪ Who helped? (please circle):		21		Other (please specify):
	a	family			
	b	friends/ acquaintances			
	c	services			

20) Did you come to [City Interview is Taking Place] with someone else? 1.....Yes 2.....No
20b) IF YES, who? _____

21) Did circumstances improve when you came to [City Interview is Taking Place]? 1.....Yes 2.....No

22) Where are you currently staying in [City Interview is Taking Place]?
1.....own place 2.....family 3.....friends 4.....a shelter 5.....streets

23) Has anyone in [City Interview is Taking Place] helped you with challenges or difficulties? 1.....Yes 2....No
23a) IF YES, who (e.g. family, friends, services etc.) _____

24) Are you planning to stay in [City Interview is Taking Place]? 1.....Yes 2.....No

25) IF NO, LEAVING [City Interview is Taking Place], where will you go? _____

26) What do you need right now? _____

Appendix D
Descriptive Statistics

CURA2 Intersectionality: Demographics

	Intersectionality sample (N=293)		**Omitted group (lost to follow up in year 2) (N=87)**		
Age a. multiple modes exist. The smallest value is shown.	Mean	41.90	Mean	36.45	
	Median	45.00	Median	35	
	Mode	49	Mode	21[a]	
	Std Deviation	13.865	Std Deviation	13.713	
	Minimum	18	Minimum	18	
	Maximum	72	Maximum	71	
	Missing	0	Missing	0	
	Skewness	-.199	Skewness	.520	
	Std Error of Skewness	.142	Std Error of Skewness	.258	
	Kurtosis	-1.050	Kurtosis	-.723	
	Std Error of Kurtosis	.284	Std Error of Kurtosis	.511	
Sex/Gender *consistent across demographic and migration instrument	Female 148 (50.5%) Male 145 (49.5%) Transgender 0 (0%)				
Ethnicity	European origins 230 (78.5%) Aboriginal* 46 (15.7%) Visible Minority** 11 (3.8%) Other 6 (2.0%) * Chippewa, Inuit, Iroqouis, Lake Babin Nation, Oneida, Metis, Mohawk, Ojibwa ** African, Asian, Hispanic				
Language first learned and still speak	English 256 (87.4%) French 8 (2.7%) First Nation Language* 6 (2.0%) Other** 23 (7.8%) *Carrier, Oneida, Inuit **African, Dutch, German, Greek, Hawaiian, Hungarian, Italian, Japanese, Polish, Romanian, Serbian, Spanish, Ukrainian, Vietnamese, Yugoslavian				
Highest Level of Education	Grade School 137 (46.8%) High School 86 (29.4%) College/University 68 (23.2%) Other 1 (0.3%) Missing 1 (0.3%)		Grade School 43 (49.4%) High School 27 (31.0%) College/University 15 (17.2%) Missing 2 (2.3%)		
Marital Status	Single Never Married	172 (58.7%)	Single Never Married	62 (71.3%)	
	Married-Common Law	43 (14.7%)	Married-Common Law	6 (6.9%)	

	Separated/ divorced	67 (22.9%)	Separated / Divorced	15 (17.2%)	
	Widowed	10 (3.4%)	Widowed	2 (2.3%)	*other: dating, in a relationship
	Other	1 (0.3%)	Other	2 (2.3%)	
Any Children?	Yes 139 (47.4%) No 154 (52.6%) **Children Under 18:** 1 child 38 2 children 21 3 or more children 21 **Children Over 18:** 1 child 34 2 children 23 3 or more children 21 **Current Custody:** Yes 31 (22.3%) No 56 (40.3%) Joint/Other 50 (36.0%) Missing* 2 (1.4%)		Yes 46 (52.9%) No 40 (46.0%) Missing* 1 (1.1%)		* (no response)
Contact with Family	Yes 249 (85.0%) No 38 (13.0%) Missing 6 (2.0%)				
Employment Status	Yes 80 (27.3%) No 210 (71.7%) Missing 3 (1.0%)		Yes 13 (14.9%) No 74 (85.1%)		

Mental Health/Addiction: Details of Diagnosis and Treatment

	Intersectionality sample (N=293)		**Omitted group (lost to follow up in year 2) (N=87)**
Mental Health Diagnosis:			
Developmental Handicap	9 (3.1%)		0
Disorder of Childhood/Adolescence	48 (16.4%)		35 (28.7%)
Substance Disorder	75 (25.6%)		35 (40.2%)
Schizophrenia	74 (25.3%)		14 (16.1%)
Mood Disorder	194 (66.2%)		53 (60.9%)
Anxiety Disorder	104 (35.5%)		40 (46.0%)
Organic Disorder	1 (0.3%)		1 (1.1%)
Personality Disorder	16 (5.5%)		7 (8.0%)
Other Psychiatric Disorder: ADHD, Anger issues, Claustrophobia, Disorganized thoughts, Eating disorder, Fetal Alcohol Syndrome, Psychosis, SchizoAffective, Stress disorder	26 (8.9%)		9 (10.3%)
Unknown	3 (1.0%)		2 (2.3%)
Current Addiction:	219 (74.7%)		75 (86.2%)
	Alcohol	58 (19.8%)	* Hydromorphone, methadone, morphine, 'opiates', ritalin, oxycodone, oxycontin, percocet,
	Tobacco	189 (64.5%)	
	Caffeine	88 (30.0%)	
	Marijuana	83 (28.3%)	

	Cocaine/Crack	28 (9.6%)	pristiq, sleeping pills, anxiolytics
	Hallucinogens	9 (3.1%)	
	Heron	5 (1.7%)	**'behavior', crystal meth, speed, sugar (cocaine), ecstasy, food, gambling, methadone, needles, opiates
	Prescription drugs*	38 (13.0%)	
	Other**	15 (5.1%)	
Treatment:			
Currently taking medications for treatment of a Mental Health issue	Yes	196 (66.9%)	Yes 51 (58.6%)
	No	97(33.1%)	No 36 (41.4%)
Previously taken medications for treatment of a mental health issue	Yes	256 (87.4%)	
	No	36 (12.3%)	
Age of First Contact with the Mental Health System	Mean	21.67	
	Median	19.0	
	Mode	18.0	
	Std Deviation	10.88	
	Minimum	1.0	
	Maximum	55.0	
	Missing	14	
Any history of Psychiatric Hospitalizations	Yes	179 (61.1%)	Yes 48 (55.2%)
	No	114 (38.9%)	No 39 (44.8%)
	Age of First Psychiatric Hospital admission* (N=179)		*among those who reported a history of psychiatric hospitalizations
	Mean	23.72	
	Median	21.0	
	Mode	18.0	
	Std Deviation	10.59	
	Minimum	0	
	Maximum	54.0	
	Missing	1	
	Total Number of Psychiatric Hospital admissions* (within the last year) (N=179)		
	0	139 (77.7%)	
	1	23 (12.8%)	
	2	6 (3.4%)	
	3	3 (1.7%)	
	4	2 (1.1%)	
	5 or more	2 (1.1%)	
	Missing	4(2.2%)	
	Duration of most recent hospitalizations* (days) (N=179)		
	Mean	114.98	
	Median	25.0	
	Mode	14.0	
	Std Deviation	259.68	
	Minimum	0	
	Maximum	1825	
	Missing	6	

Physical Health: Details of Diagnosis and Treatment

	Intersectionality sample (N=293)		**Omitted group (lost to follow up in year 2) (N=87)**	
Smoking Status	Yes	210 (71.7%)	Yes	76 (87.3%)
	No	80 (27.3%)	No	11 (12.6%)
	Missing	3 (1.0%)		
Body Mass Index (BMI)	Underweight (BMI <18.5)	13 (4.4%)		
	Normal weight (BMI 18.5-24.9)	95 (32.4%)		
	Overweight (BMI 25-29.9)	68 (23.2%)		
	Obese (BMI>30)	86 (29.4%)		
	Missing	31 (10.6%)		
Any chronic physical illnesses?	Yes	187 (63.8%)	Yes	49 (56.3%)
	No	106 (36.2%)	No	38 (45.7%)
	Illness:			
	Diabetes	42 (14.3%)		
	Heart Condition	23 (7.8%)		
	Arthritis	51 (17.4%)		
	Hypertension	37 (12.6%)		
	Cancer	9 (3.1%)		
	Respiratory Illness	44 (15.0%)		
	Kidney/Urinary disease	10 (3.4%)		
	Hepatitis/Liver disease	29 (9.9%)		
	Epilepsy	8 (2.7%)		
	Autoimmune disease	9 (3.1%)		
	HIV/AIDS	2 (0.7%)		
	Osteoporosis	15 (5.1%)		
	Neurologic/brain disease	10 (3.4%)		
	Other illness*	99 (33.8%)		
	*Acid reflux, anemia, back pain/injury, bells palsy, BPH, blood clot, bunion, carpal tunnel, cerebral palsy, chronic fatigue, chronic pain, dermatological condition(s), dyslipidemia, eating disorder, irritable bowel, thyroid disease, migraine headaches, musculoskeletal pain/injury, sinus problems, sleep disorder, syncope, vertigo			
Do you have any long-term disabilities or handicaps?	Yes	155 (52.9%)	Yes	43 (49.4%)
	No	134 (45.7%)	No	44 (50.6%)
	Missing	4 (1.4%)		
	What is the main condition or health problem causing you to be limited in your activities?			
	Physical Health	83		
	Mental Health	64		
	Mental and Physical Health	7		
	Unknown	1		
	Which one of the following is the best description of the cause of this condition?			
	Injury - at home	9		
	Injury – sports or recreation	2		
	Injury – motor vehicle	12		
	Injury – work related	9		
	Existed at birth	28		
	Work environment	2		
	Disease or illness	43		
	Natural aging process	8		
	*Substance related, psychosocial,			

	Psychological or physical abuse	11	sexual abuse/trauma, uncertain/unknown
	Other*	47	
Any history of head injury?	Yes	145 (49.5%)	Yes 40 (46.0%)
	No	148 (50.5%)	No 47 (54.0%)
	Total number of head injuries* (N=145):		*among those who reported a history of head injury
	1	64 (44.1%)	
	2	26 (17.9%)	
	3	10 (6.9%)	
	4	7 (4.8%)	
	5 or more	33 (22.8%)	
	Missing	5 (3.4%)	
Access to regular medical doctor?	Yes	224 (76.5%)	Yes 54 (62.1%)
	No	68 (23.2%)	No 33 (37.9%)
	Missing	1 (0.3%)	
Unmet Health Need: During the past 12 months, was there ever a time when you felt that you needed health care but you didn't receive it?	Yes	112 (38.2%)	Yes 37 (42.5%)
	No	179 (61.1)	No 50 (57.5%)
	Missing	2 (0.7%)	
	Thinking of the most recent time, why didn't you get care (check all that apply)?		*Other: - health concern not taken seriously/doctor or hospital refused to provide care &/or referral (15) (*doctor didn't want to help me, didn't know cause of problem' doctor was busy, said nothing was wrong);* -issue related to medication availability and/or perception of drug seeking behavior (8) (*doctor refuses care of addiction, doesn't prescribe narcotics', wouldn't treat me 'because of needle marks'*) - owes money to doctors office for missed appointment - mismatch in type of care received versus desired
	Not available in the area	5	
	Not available at the time (eg.doctor on holidays, inconvenient hours)	10	
	Waiting time too long	14	
	Felt would be inadequate	7	
	Cost	8	
	Too busy	9	
	Didn't get around to it or didn't bother	25	
	Didn't know where to go	3	
	Transportation problems	1	
	Dislikes/afraid of doctors	10	
	Decided not to seek care	11	
	Other*	34	
	Again, thinking of the most recent time what was the type of care that was needed (check all that apply)?		*Other: - social/emotional - medication refill - suicide attempt, overdose
	Treatment of a physical health problem	67	
	Treatment of an emotional or mental health problem	48	
	A regular check up	5	
	Care of an injury	13	
	Other*	4	

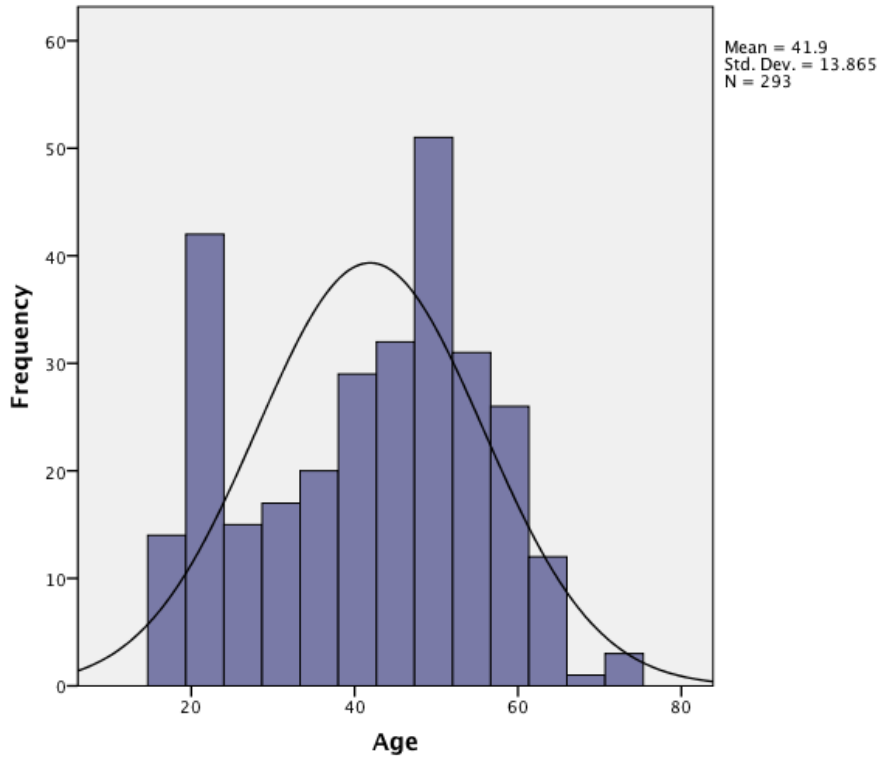
Housing

	Intersectionality sample (N=293)		**Omitted group (lost to follow up in year 2) (N=87)**	
Current Living Arrangements	Lives alone	63 (21.5%)	Lives alone	13 (14.9%)
	Lives with family	66 (22.5%)	Lives with family	13 (14.9%)
	Lives with unrelated person	155 (52.9%)	Lives with unrelated person	61 (70.1%)
*other: cough surfing, streets, living outside	Other *	9 (3.1%)	Other	0
Ever been homeless?	Yes 187 (63.8%) No 106 (36.2%)		Yes 67 (77.0%) No 20 (23.0%)	
	How many episodes of homelessness (N=187):			
	1	59 (31.6%)		
	2	33 (17.6%)		
	3	19 (10.2%)		
	4	9 (4.8%)		
	5	18 (9.6%)		
	6	10 (5.3%)		
	7	5 (2.7%)		
	8	1 (0.5%)		
	9	1 (0.5%)		
	10 or more	24 (12.8%)		
	Missing	8 (4.3%)		
	Age that first episode of homelessness occurred			
	Mean	25.58	Mean	21.15
	Median	20.0	Median	24.0
	Mode	16.0	Mode	16.0[a]
	Std Deviation	11.85	Std Deviation	13.22
a. multiple modes exist. The smallest value is shown.	Minimum	6.0	Minimum	8.0
	Maximum	55.0	Maximum	63.0
	Missing	0	Missing	0

Appendix E:
Variables of Interest: Frequency Data and Bar Charts
1. Control Variables: Age, Smoking Status, BMI

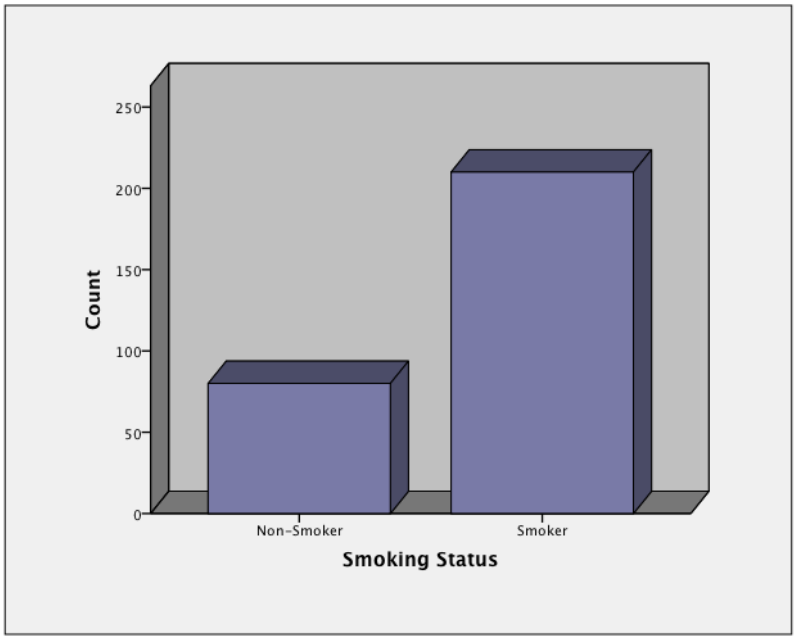
1.1 Age distribution

N	Valid	293
	Missing	0
Mean		41.90
Median		45.00
Mode		49
Std. Deviation		13.865
Minimum		18
Maximum		72
Skewness		-.199
Std.Error of Skewness		.142
Kurtosis		-1.050
Std.Error of Kurtosis		.284



1.2 Smoking Status

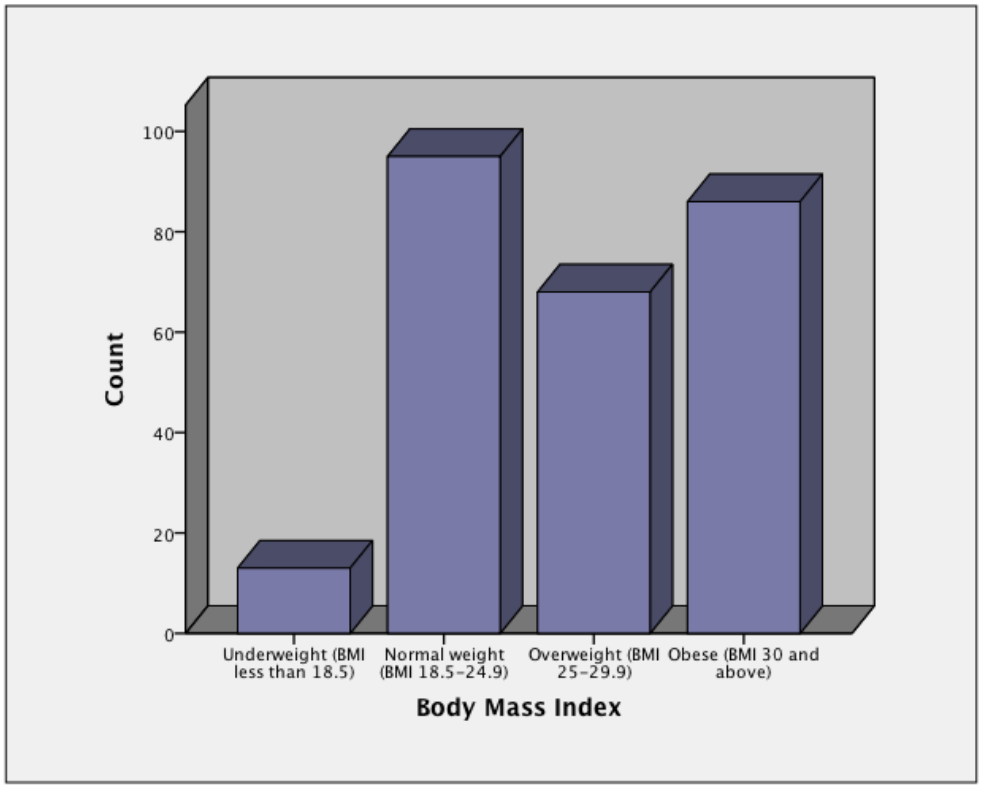
		Frequency	Percent	Valid Percent
Valid	Non-Smoker	80	27.3	27.6
	Smoker	210	71.7	72.4
	Total	290	99.0	100.0
Missing	System	3	1.0	
Total		293	100.0	



1.3 Body Mass Index

Body Mass Index (BMI)

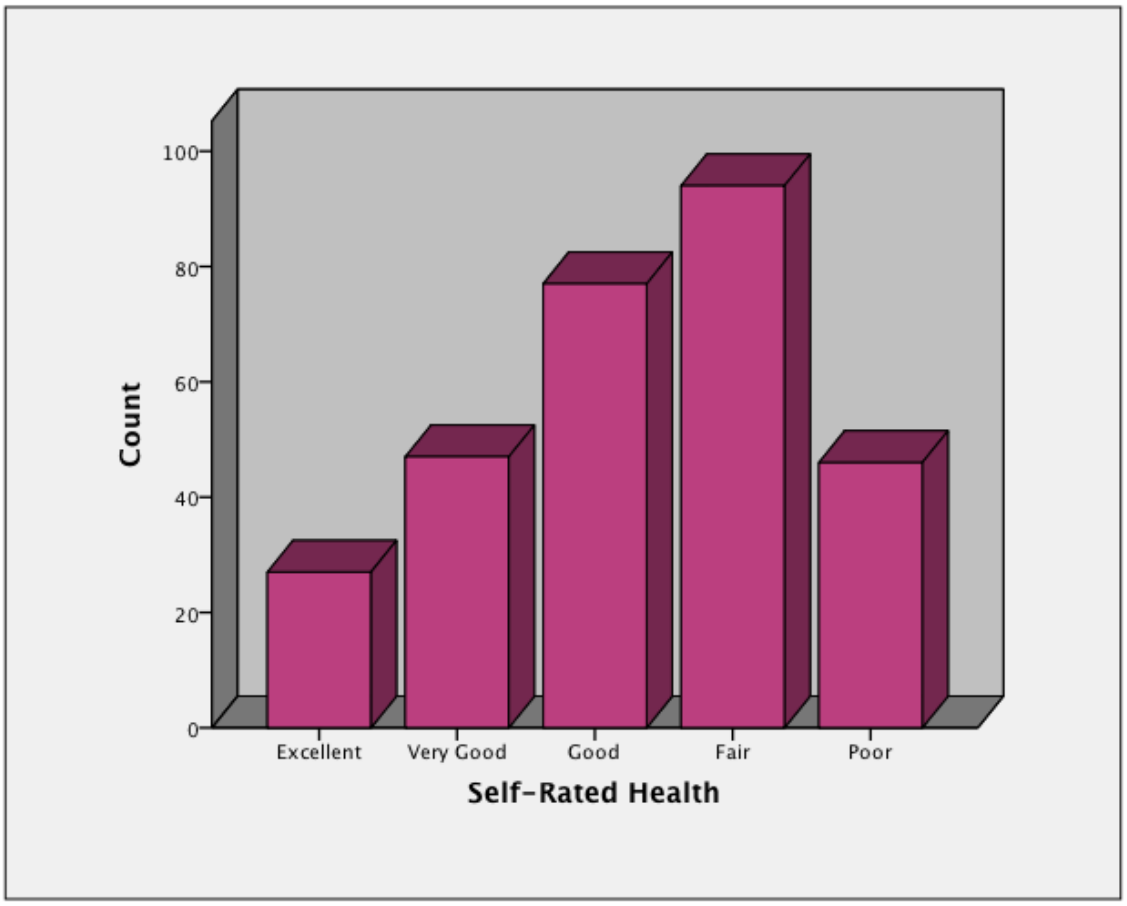
		Frequency	Percent	Valid Percent
Valid	Underweight (BMI less than 18.5)	13	4.4	5.0
	Normal weight (BMI 18.5-24.9)	95	32.4	36.3
	Overweight (BMI 25-29.9)	68	23.2	26.0
	Obese (BMI 30 and above)	86	29.4	32.8
	Total	262	89.4	100.0
Missing	System	31	10.6	
Total		293	100.0	



2. Dependent Variable: Self-Rated (General) Health

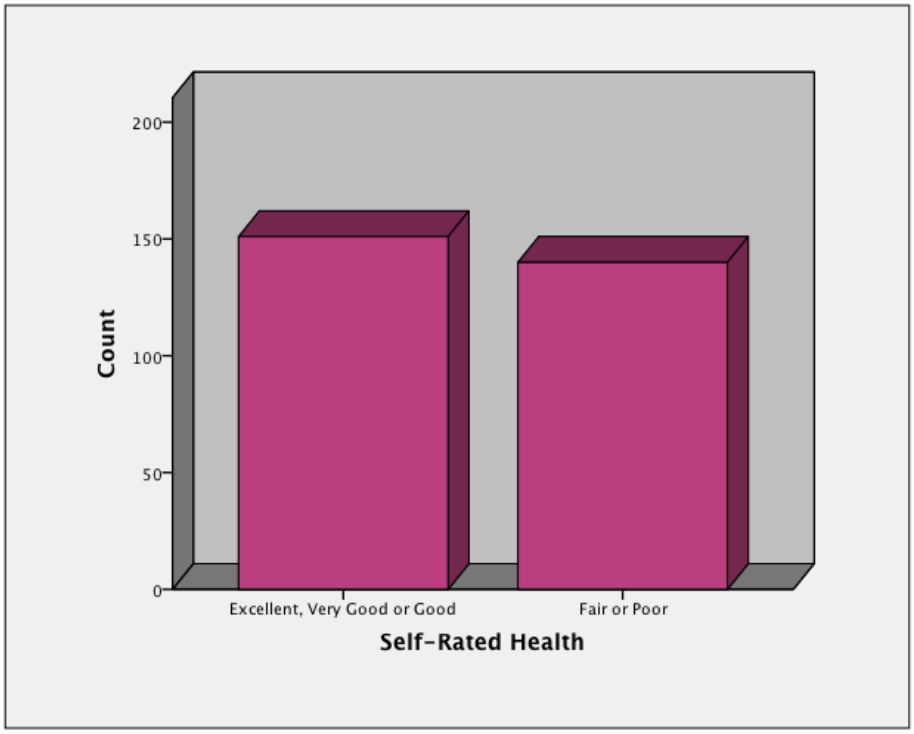
Self-Rated Health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	27	9.2	9.3	9.3
	Very Good	47	16.0	16.2	25.4
	Good	77	26.3	26.5	51.9
	Fair	94	32.1	32.3	84.2
	Poor	46	15.7	15.8	100.0
	Total	291	99.3	100.0	
Missing	System	2	.7		
Total		293	100.0		



Self-Rated (General) Health: Dichotomized variable

		Frequency	Percent	Valid Percent
Valid	Excellent, Very Good or Good	151	51.5	51.9
	Fair or Poor	140	47.8	48.1
	Total	291	99.3	100.0
Missing	System	2	.7	
Total		293	100.0	



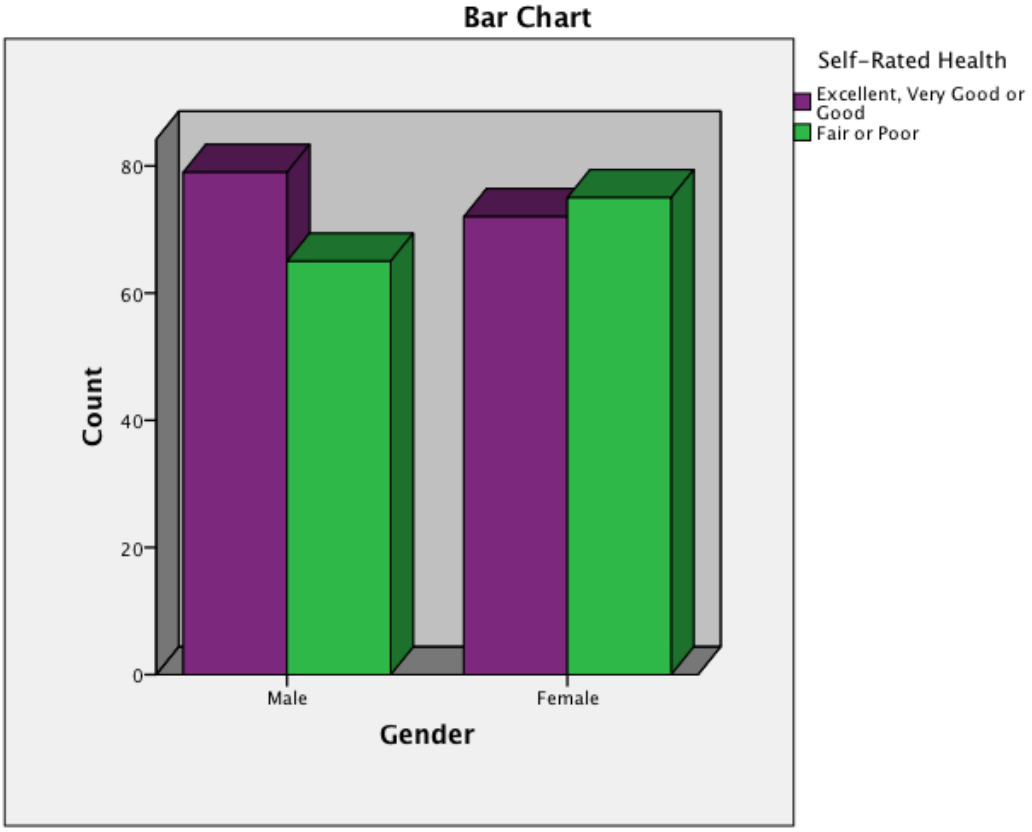
3. Independent Variables: Gender, Ethnicity, Education, Homelessness, Employment Status, Disability

3.1 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	148	50.5	50.5	50.5
	Male	145	49.5	49.5	100.0
	Total	293	100.0	100.0	

Gender * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Gender	Male	Count	79	65	144
		% within Gender	54.9%	45.1%	100.0%
	Female	Count	72	75	147
		% within Gender	49.0%	51.0%	100.0%
Total		Count	151	140	291
		% within Gender	51.9%	48.1%	100.0%

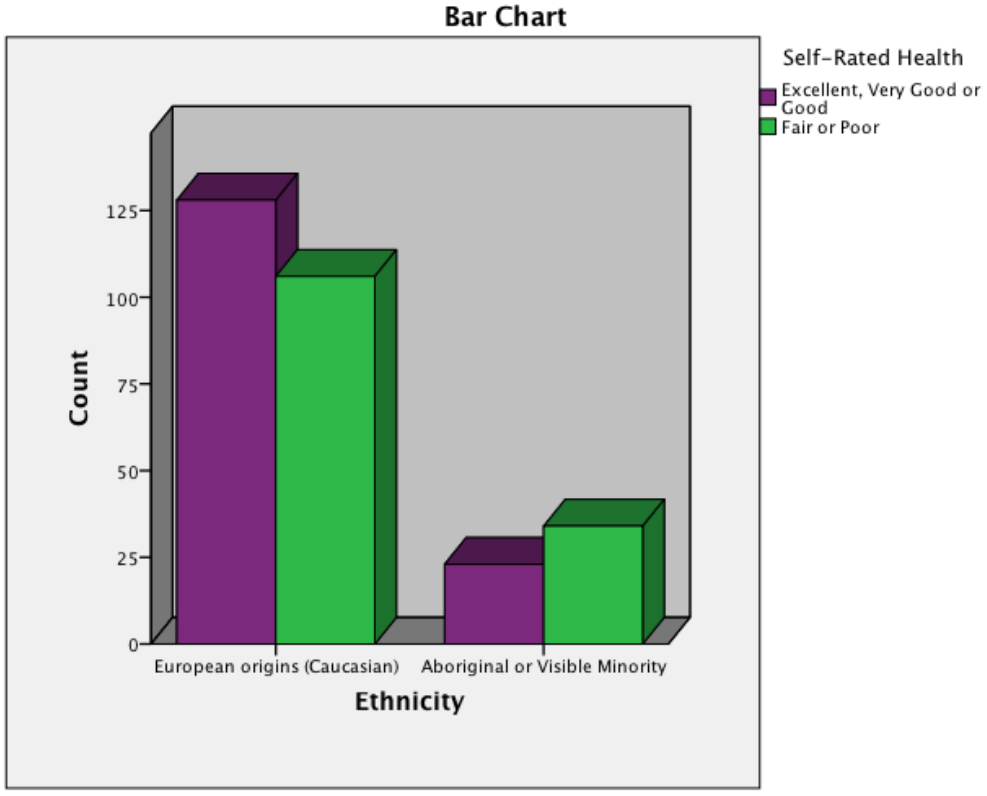


3.2 Ethnicity

		Frequency	Percent	Valid Percent
Valid	European origins	230	78.5	78.5
	Aboriginal	46	15.7	15.7
	Visible minority	11	3.8	3.8
	Other	6	2.0	2.0
	Total	293	100.0	100.0

Ethnicity * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Ethnicity	European origins (Caucasian)	Count	128	106	234
		% within Ethnicity	54.7%	45.3%	100.0%
	Aboriginal or Visible Minority	Count	23	34	57
		% within Ethnicity	40.4%	59.6%	100.0%
Total		Count	151	140	291
		% within Ethnicity	51.9%	48.1%	100.0%

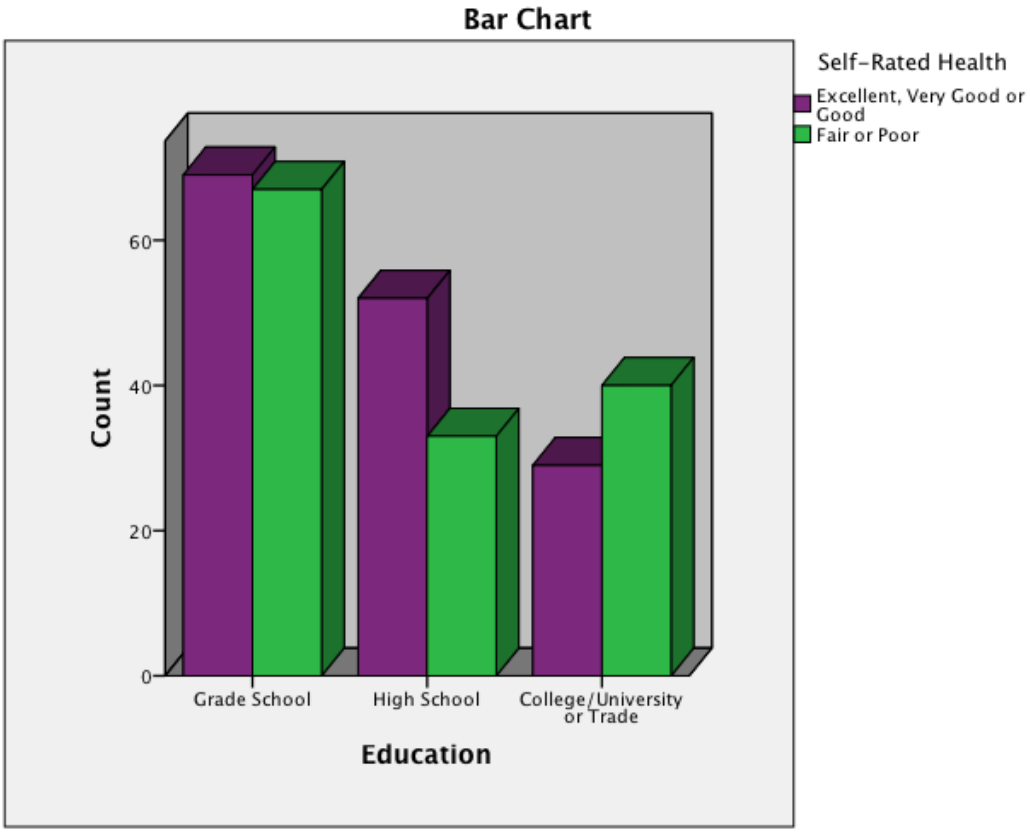


3.3 Education (Highest Level Achieved)

		Frequency	Percent	Valid Percent
Valid	Grade School	137	46.8	46.9
	High School	86	29.4	29.5
	Community College/University	68	23.2	23.3
	Other (Academic/Trade)	1	.3	.3
	Total	292	99.7	100.0
Missing	System	1	.3	
Total		293	100.0	

Education * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Education	Grade School	Count	69	67	136
		% within Education	50.7%	49.3%	100.0%
	High School	Count	52	33	85
		% within Education	61.2%	38.8%	100.0%
	College/University or Trade	Count	29	40	69
		% within Education	42.0%	58.0%	100.0%
Total		Count	150	140	290
		% within Education	51.7%	48.3%	100.0%

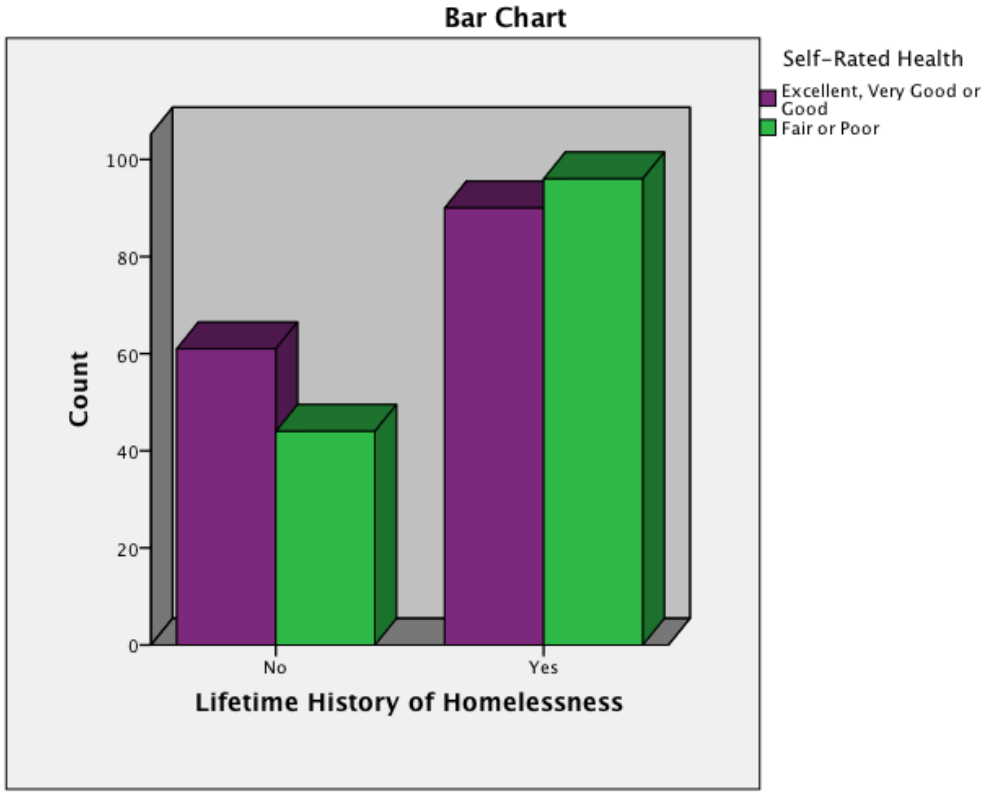


3.4 Lifetime History of Homelessness

		Frequency	Percent	Valid Percent
Valid	No	106	36.2	36.2
	Yes	187	63.8	63.8
	Total	293	100.0	100.0

Homelessness * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Homelessness	No	Count	61	44	105
		% within Homelessness	58.1%	41.9%	100.0%
	Yes	Count	90	96	186
		% within Homelessness	48.4%	51.6%	100.0%
Total		Count	151	140	291
		% within Homelessness	51.9%	48.1%	100.0%

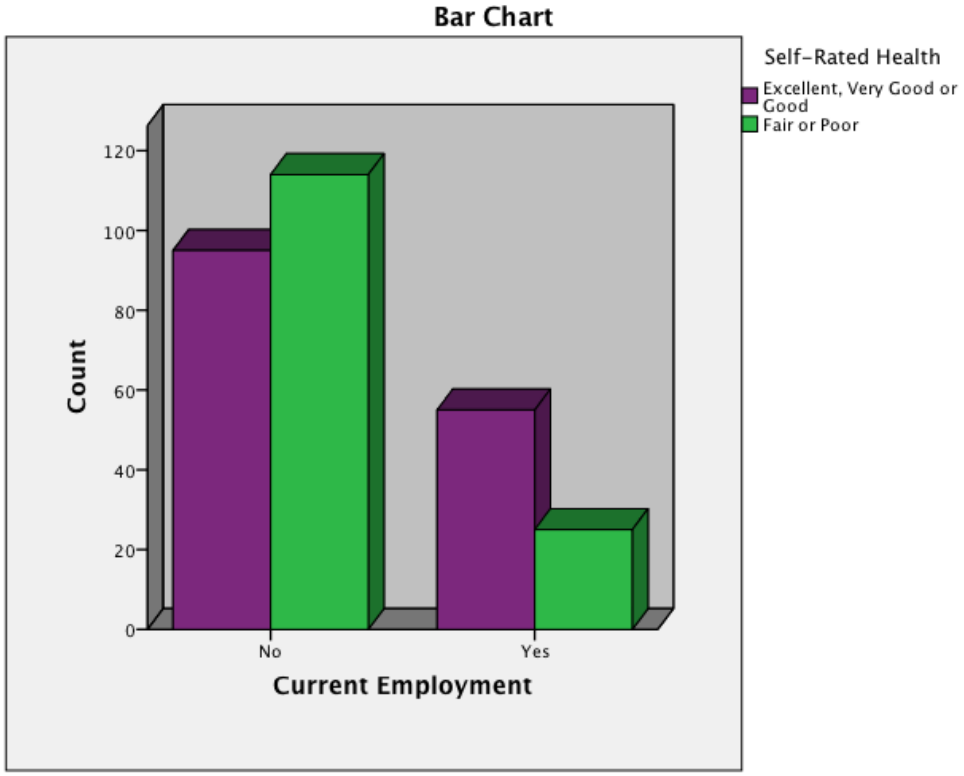


3.5 Employment Status: Currently Working

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	210	71.7	72.4	72.4
	Yes	80	27.3	27.6	100.0
	Total	290	99.0	100.0	
Missing		3	1.0		
Total		293	100.0		

CurrentEmployment * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
CurrentEmployment	No	Count	95	114	209
		% within Current Employment	45.5%	54.5%	100.0%
	Yes	Count	55	25	80
		% within Current Employment	68.8%	31.3%	100.0%
Total		Count	150	139	289
		% within Current Employment	51.9%	48.1%	100.0%

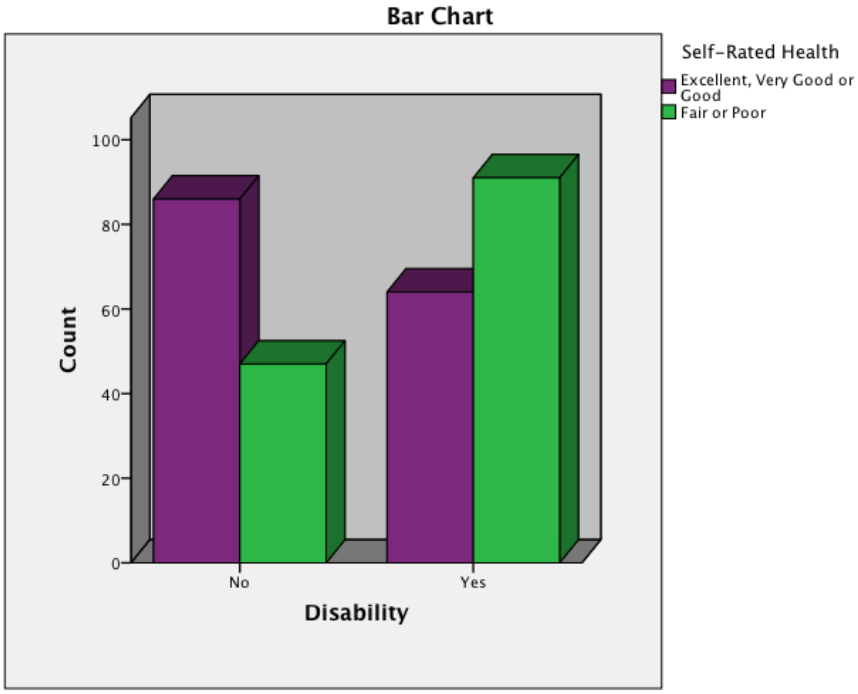


3.6 Presence of Long-term Disability

		Frequency	Percent	Valid Percent
Valid	Declined to answer	2	.7	.7
	No	134	45.7	45.7
	Yes	155	52.9	52.9
	Missing	2	.7	.7
	Total	293	100.0	100.0

Disability * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Disability	No	Count	86	47	133
		% within Disability	64.7%	35.3%	100.0%
	Yes	Count	64	91	155
		% within Disability	41.3%	58.7%	100.0%
Total		Count	150	138	288
		% within Disability	52.1%	47.9%	100.0%



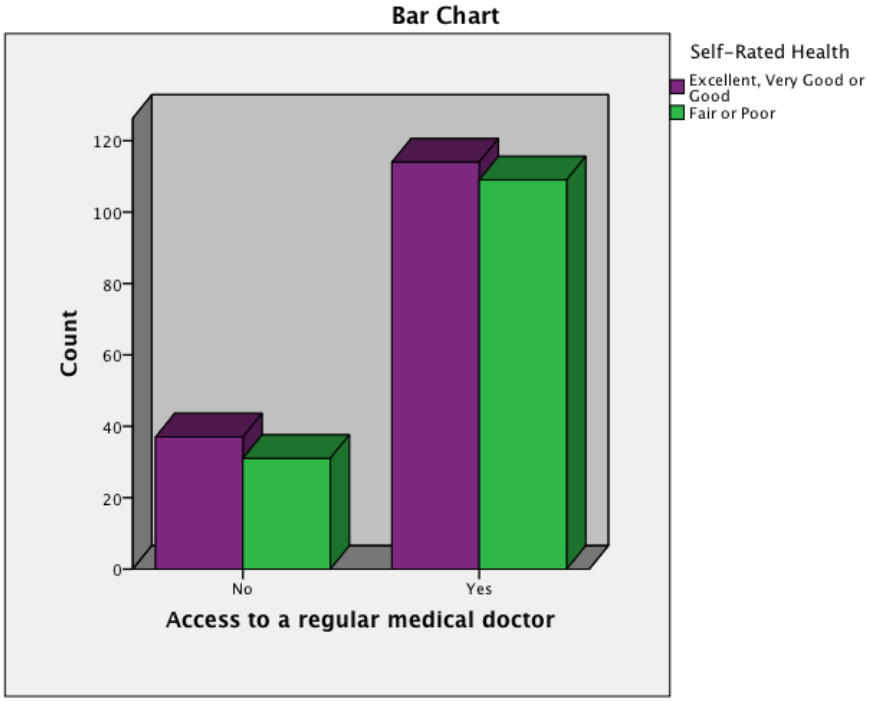
4. Mediating/Moderating Variables: Access to Regular Medical Doctor, Unmet Health Need

4.1 Access to Regular Medical Doctor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	68	23.2	23.3	23.3
	Yes	224	76.5	76.7	100.0
	Total	292	99.7	100.0	
Missing		1	.3		
Total		293	100.0		

RegularMedicalDr * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
RegularMedicalDr	No	Count	37	31	68
		% within Regular MedicalDr	54.4%	45.6%	100.0%
	Yes	Count	114	109	223
		% within Regular MedicalDr	51.1%	48.9%	100.0%
Total		Count	151	140	291
		% within Regular MedicalDr	51.9%	48.1%	100.0%

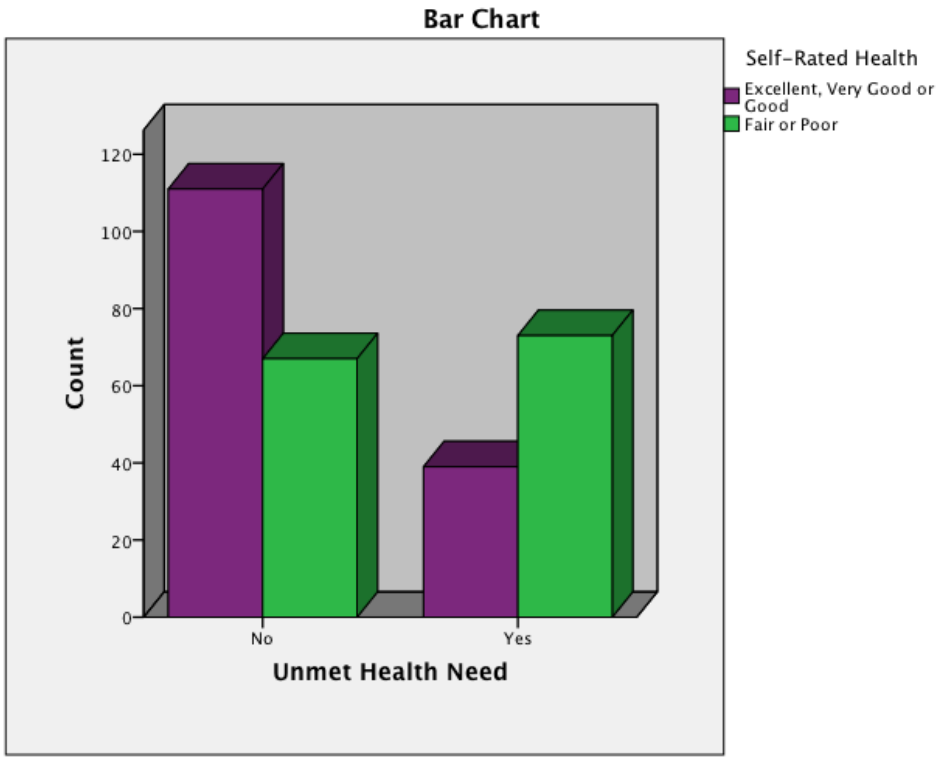


4.2 Unmet Health Need: Did Not Receive Health Care when it was Needed

UnmetHealthNeed * Self-Rated (General) Health Crosstabulation

			Self-Rated (General) Health		
			Excellent, Very Good or Good	Fair or Poor	Total
UnmetHealthNeed	No	Count	111	67	178
		% within Unmet HealthNeed	62.4%	37.6%	100.0%
	Yes	Count	39	73	112
		% within Unmet HealthNeed	34.8%	65.2%	100.0%
Total		Count	150	140	290
		% within Unmet HealthNeed	51.7%	48.3%	100.0%

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	179	61.1	61.5	61.5
	Yes	112	38.2	38.5	100.0
	Total	291	99.3	100.0	
Missing		2	.7		
Total		293	100.0		


Bar Chart
Self-Rated Health
Excellent, Very Good or Good
Fair or Poor
Count
120
100
80
60
40
20
0
No
Yes
Unmet Health Need

Appendix F
Chi Square SPSS data output summaries
Examining the Relationship between Self-Rated Health (Dichotomized) and Independent/Control Variables

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Self-Rated Health	291	99.3%	2	0.7%	293	100.0%

Gender * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Gender	Male	Count	79	65	144
		% within Gender	54.9%	45.1%	100.0%
		% within Self-Rated Health	52.3%	46.4%	49.5%
		% of Total	27.1%	22.3%	49.5%
	Female	Count	72	75	147
		% within Gender	49.0%	51.0%	100.0%
		% within Self-Rated Health	47.7%	53.6%	50.5%
		% of Total	24.7%	25.8%	50.5%
Total		Count	151	140	291
		% within Gender	51.9%	48.1%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.9%	48.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.008[a]	1	.315		
Continuity Correction[b]	.786	1	.375		
Likelihood Ratio	1.009	1	.315		

Fisher's Exact Test				.349	.188
Linear-by-Linear Association	1.005	1	.316		
N of Valid Cases	291				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 69.28.

b. Computed only for a 2x2 table

Ethnicity * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Ethnicity	European origins (Caucasian)	Count	128	106	234
		% within Ethnicity	54.7%	45.3%	100.0%
		% within Self-Rated Health	84.8%	75.7%	80.4%
		% of Total	44.0%	36.4%	80.4%
	Aboriginal or Visible Minority	Count	23	34	57
		% within Ethnicity	40.4%	59.6%	100.0%
		% within Self-Rated Health	15.2%	24.3%	19.6%
		% of Total	7.9%	11.7%	19.6%
Total		Count	151	140	291
		% within Ethnicity	51.9%	48.1%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.9%	48.1%	100.0%

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Ethnicity * Self-Rated Health	291	99.3%	2	0.7%	293	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.781[a]	1	.052		
Continuity Correction[b]	3.228	1	.072		
Likelihood Ratio	3.792	1	.052		
Fisher's Exact Test				.056	.036
Linear-by-Linear Association	3.768	1	.052		
N of Valid Cases	291				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 27.42.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.114	.052
	Cramer's V	.114	.052
N of Valid Cases		291	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Education * Self-Rated Health	290	99.0%	3	1.0%	293	100.0%

Education * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Education	Grade School	Count	69	67	136
		% within Education	50.7%	49.3%	100.0%

		% within Self-Rated Health	46.0%	47.9%	46.9%
		% of Total	23.8%	23.1%	46.9%
	High School	Count	52	33	85
		% within Education	61.2%	38.8%	100.0%
		% within Self-Rated Health	34.7%	23.6%	29.3%
		% of Total	17.9%	11.4%	29.3%
	College/University or Trade	Count	29	40	69
		% within Education	42.0%	58.0%	100.0%
		% within Self-Rated Health	19.3%	28.6%	23.8%
		% of Total	10.0%	13.8%	23.8%
Total		Count	150	140	290
		% within Education	51.7%	48.3%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.7%	48.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.692[a]	2	.058
Likelihood Ratio	5.729	2	.057
Linear-by-Linear Association	.602	1	.438
N of Valid Cases	290		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 33.31.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.140	.058
	Cramer's V	.140	.058
N of Valid Cases		290	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Lifetime History of Homelessness * Self-Rated Health	291	99.3%	2	0.7%	293	100.0%

Lifetime History of Homelessness * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Lifetime History of Homelessness	No	Count	61	44	105
		% within Lifetime History of Homelessness	58.1%	41.9%	100.0%
		% within Self-Rated Health	40.4%	31.4%	36.1%
		% of Total	21.0%	15.1%	36.1%
	Yes	Count	90	96	186
		% within Lifetime History of Homelessness	48.4%	51.6%	100.0%
		% within Self-Rated Health	59.6%	68.6%	63.9%
		% of Total	30.9%	33.0%	63.9%
Total		Count	151	140	291
		% within Lifetime History of Homelessness	51.9%	48.1%	100.0%

	% within Self-Rated Health	100.0%	100.0%	100.0%
	% of Total	51.9%	48.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.534[a]	1	.111		
Continuity Correction[b]	2.160	1	.142		
Likelihood Ratio	2.542	1	.111		
Fisher's Exact Test				.115	.071
Linear-by-Linear Association	2.525	1	.112		
N of Valid Cases	291				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 50.52.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.093	.111
	Cramer's V	.093	.111
N of Valid Cases		291	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Current Employment * Self-Rated Health	289	98.6%	4	1.4%	293	100.0%

Current Employment * Self-Rated Health Crosstabulation

		Self-Rated Health		
		Excellent, Very Good or Good	Fair or Poor	Total
Current Employment No	Count	95	114	209

		% within Current Employment	45.5%	54.5%	100.0%
		% within Self-Rated Health	63.3%	82.0%	72.3%
		% of Total	32.9%	39.4%	72.3%
	Yes	Count	55	25	80
		% within Current Employment	68.8%	31.3%	100.0%
		% within Self-Rated Health	36.7%	18.0%	27.7%
		% of Total	19.0%	8.7%	27.7%
Total		Count	150	139	289
		% within Current Employment	51.9%	48.1%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.9%	48.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12.577[a]	1	.000		
Continuity Correction[b]	11.661	1	.001		
Likelihood Ratio	12.841	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	12.533	1	.000		
N of Valid Cases	289				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.48.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	-.209	.000
	Cramer's V	.209	.000

N of Valid Cases	289	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Disability * Self-Rated Health	288	98.3%	5	1.7%	293	100.0%

Disability * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Disability	No	Count	86	47	133
		% within Disability	64.7%	35.3%	100.0%
		% within Self-Rated Health	57.3%	34.1%	46.2%
		% of Total	29.9%	16.3%	46.2%
	Yes	Count	64	91	155
		% within Disability	41.3%	58.7%	100.0%
		% within Self-Rated Health	42.7%	65.9%	53.8%
		% of Total	22.2%	31.6%	53.8%
Total		Count	150	138	288
		% within Disability	52.1%	47.9%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	52.1%	47.9%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15.667[a]	1	.000		
Continuity Correction[b]	14.744	1	.000		
Likelihood Ratio	15.833	1	.000		

Fisher's Exact Test				.000	.000
Linear-by-Linear Association	15.612	1	.000		
N of Valid Cases	288				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 63.73.

b. Computed only for a 2x2 table

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Access to a regular medical doctor * Self-Rated Health	291	99.3%	2	0.7%	293	100.0%

Access to a regular medical doctor * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Access to a regular medical doctor	No	Count	37	31	68
		% within Access to a regular medical doctor	54.4%	45.6%	100.0%
		% within Self-Rated Health	24.5%	22.1%	23.4%
		% of Total	12.7%	10.7%	23.4%
	Yes	Count	114	109	223
		% within Access to a regular medical doctor	51.1%	48.9%	100.0%
		% within Self-Rated Health	75.5%	77.9%	76.6%
		% of Total	39.2%	37.5%	76.6%
Total		Count	151	140	291

	% within Access to a regular medical doctor	51.9%	48.1%	100.0%
	% within Self-Rated Health	100.0%	100.0%	100.0%
	% of Total	51.9%	48.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.226[a]	1	.634		
Continuity Correction[b]	.113	1	.736		
Likelihood Ratio	.226	1	.634		
Fisher's Exact Test				.679	.369
Linear-by-Linear Association	.225	1	.635		
N of Valid Cases	291				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.71.

b. Computed only for a 2x2 table

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Unmet Health Need * Self-Rated Health	290	99.0%	3	1.0%	293	100.0%

Unmet Health Need * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
Unmet Health Need	No	Count	111	67	178
		% within Unmet Health Need	62.4%	37.6%	100.0%

		% within Self-Rated Health	74.0%	47.9%	61.4%
		% of Total	38.3%	23.1%	61.4%
	Yes	Count	39	73	112
		% within Unmet Health Need	34.8%	65.2%	100.0%
		% within Self-Rated Health	26.0%	52.1%	38.6%
		% of Total	13.4%	25.2%	38.6%
Total		Count	150	140	290
		% within Unmet Health Need	51.7%	48.3%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.7%	48.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	20.878[a]	1	.000		
Continuity Correction[b]	19.790	1	.000		
Likelihood Ratio	21.131	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	20.806	1	.000		
N of Valid Cases	290				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 54.07.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.268	.000
	Cramer's V	.268	.000
N of Valid Cases		290	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
BMI * Self-Rated Health	261	89.1%	32	10.9%	293	100.0%

BMI * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
BMI	Underweight (BMI less than 18.5)	Count	8	5	13
		% within BMI	61.5%	38.5%	100.0%
		% within Self-Rated Health	6.0%	3.9%	5.0%
		% of Total	3.1%	1.9%	5.0%
	Normal weight (BMI 18.5-24.9)	Count	53	41	94
		% within BMI	56.4%	43.6%	100.0%
		% within Self-Rated Health	39.6%	32.3%	36.0%
		% of Total	20.3%	15.7%	36.0%
	Overweight (BMI 25-29.9)	Count	35	33	68
		% within BMI	51.5%	48.5%	100.0%
		% within Self-Rated Health	26.1%	26.0%	26.1%
		% of Total	13.4%	12.6%	26.1%
	Obese (BMI 30 and above)	Count	38	48	86
		% within BMI	44.2%	55.8%	100.0%
		% within Self-Rated Health	28.4%	37.8%	33.0%
		% of Total	14.6%	18.4%	33.0%
Total		Count	134	127	261
		% within BMI	51.3%	48.7%	100.0%
		% within Self-Rated Health	100.0%	100.0%	100.0%
		% of Total	51.3%	48.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.260[a]	3	.353
Likelihood Ratio	3.271	3	.352
Linear-by-Linear Association	3.214	1	.073
N of Valid Cases	261		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.33.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.112	.353
	Cramer's V	.112	.353
N of Valid Cases		261	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
SmokingStatus * Self-Rated Health	289	98.6%	4	1.4%	293	100.0%

SmokingStatus * Self-Rated Health Crosstabulation

			Self-Rated Health		
			Excellent, Very Good or Good	Fair or Poor	Total
SmokingStatus	Non-Smoker	Count	43	37	80
		% within SmokingStatus	53.8%	46.3%	100.0%
		% within Self-Rated Health	28.7%	26.6%	27.7%
		% of Total	14.9%	12.8%	27.7%
	Smoker	Count	107	102	209

	% within SmokingStatus	51.2%	48.8%	100.0%
	% within Self-Rated Health	71.3%	73.4%	72.3%
	% of Total	37.0%	35.3%	72.3%
Total	Count	150	139	289
	% within SmokingStatus	51.9%	48.1%	100.0%
	% within Self-Rated Health	100.0%	100.0%	100.0%
	% of Total	51.9%	48.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.151[a]	1	.697		
Continuity Correction[b]	.066	1	.797		
Likelihood Ratio	.151	1	.697		
Fisher's Exact Test				.793	.399
Linear-by-Linear Association	.151	1	.698		
N of Valid Cases	289				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 38.48.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.023	.697
	Cramer's V	.023	.697
N of Valid Cases		289	

Appendix G
Collinearity Diagnostics and Kendall's Tau (Correlation)

Collinearity Diagnostics: Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Gender	.914	1.095
	Ethnicity	.912	1.096
	Education	.840	1.190
	Lifetime History of Homelessness	.741	1.349
	Current Employment	.839	1.192
	Disability	.910	1.099
	Access to a regular medical doctor	.802	1.247
	Unmet Health Need	.847	1.181
	BMI	.879	1.138
	SmokingStatus	.807	1.239
	Age	.793	1.261

a. Dependent Variable: Self-Rated Health

Correlations (Self-Rated Health as a Dichotomous variable)

			Gender	Ethnicity	Education	Lifetime History of Homelessness	Current Employment
Kendall's tau_b	Gender	Correlation Coefficient	1.000	.107	.031	-.092	-.031
		Sig. (2-tailed)	.	.067	.579	.117	.600
		N	293	293	292	293	290
	Ethnicity	Correlation Coefficient	.107	1.000	-.169**	.209**	-.150*
		Sig. (2-tailed)	.067	.	.002	.000	.011
		N	293	293	292	293	290
	Education	Correlation Coefficient	.031	-.169**	1.000	-.236**	.261**
		Sig. (2-tailed)	.579	.002	.	.000	.000
		N	292	292	292	292	289
	Lifetime History of Homelessness	Correlation Coefficient	-.092	.209**	-.236**	1.000	-.262**
		Sig. (2-tailed)	.117	.000	.000	.	.000
		N	293	293	292	293	290
	Current Employment	Correlation Coefficient	-.031	-.150*	.261**	-.262**	1.000
		Sig. (2-tailed)	.600	.011	.000	.000	.
		N	290	290	289	290	290
	Disability	Correlation Coefficient	-.032	-.027	-.006	.127*	.019
		Sig. (2-tailed)	.587	.642	.915	.031	.748
		N	289	289	288	289	288
	Access to a regular medical doctor	Correlation Coefficient	.117*	-.097	.129*	-.261**	.105
		Sig. (2-tailed)	.046	.099	.020	.000	.075
		N	292	292	291	292	290
	Unmet Health Need	Correlation Coefficient	.110	.054	-.089	.212**	-.095
		Sig. (2-tailed)	.060	.353	.110	.000	.106

		N	291	291	290	291	289
	SmokingStatus	Correlation Coefficient	.000	.131*	-.244**	.311**	-.310**
		Sig. (2-tailed)	1.000	.026	.000	.000	.000
		N	290	290	289	290	290
	Self-Rated Health	Correlation Coefficient	.059	.114	.031	.093	-.209**
		Sig. (2-tailed)	.316	.052	.579	.112	.000
		N	291	291	290	291	289

Correlations

			Disability	Access to a regular medical doctor	Unmet Health Need	SmokingStatus
Kendall's tau_b	Gender	Correlation Coefficient	-.032	.117*	.110	.000
		Sig. (2-tailed)	.587	.046	.060	1.000
		N	289	292	291	290
	Ethnicity	Correlation Coefficient	-.027	-.097	.054	.131*
		Sig. (2-tailed)	.642	.099	.353	.026
		N	289	292	291	290
	Education	Correlation Coefficient	-.006	.129*	-.089	-.244**
		Sig. (2-tailed)	.915	.020	.110	.000
		N	288	291	290	289
	Lifetime History of Homelessness	Correlation Coefficient	.127*	-.261**	.212**	.311**
		Sig. (2-tailed)	.031	.000	.000	.000
		N	289	292	291	290
	Current Employment	Correlation Coefficient	.019	.105	-.095	-.310**
		Sig. (2-tailed)	.748	.075	.106	.000
		N	288	290	289	290
	Disability	Correlation Coefficient	1.000	.081	.203**	-.035

	Sig. (2-tailed)	.	.169	.001	.558
	N	289	289	288	288
Access to a regular medical doctor	Correlation Coefficient	.081	1.000	-.181**	-.123*
	Sig. (2-tailed)	.169	.	.002	.036
	N	289	292	291	290
Unmet Health Need	Correlation Coefficient	.203**	-.181**	1.000	.032
	Sig. (2-tailed)	.001	.002	.	.589
	N	288	291	291	289
SmokingStatus	Correlation Coefficient	-.035	-.123*	.032	1.000
	Sig. (2-tailed)	.558	.036	.589	.
	N	288	290	289	290
Self-Rated Health	Correlation Coefficient	.233**	.028	.268**	.023
	Sig. (2-tailed)	.000	.635	.000	.698
	N	288	291	290	289

Correlations

			Self-Rated Health
Kendall's tau_b	Gender	Correlation Coefficient	.059
		Sig. (2-tailed)	.316
		N	291
	Ethnicity	Correlation Coefficient	.114
		Sig. (2-tailed)	.052
		N	291
	Education	Correlation Coefficient	.031
		Sig. (2-tailed)	.579
		N	290
	Lifetime History of Homelessness	Correlation Coefficient	.093
		Sig. (2-tailed)	.112
		N	291
	Current Employment	Correlation Coefficient	-.209**
		Sig. (2-tailed)	.000
		N	289

Disability	Correlation Coefficient	.233**
	Sig. (2-tailed)	.000
	N	288
Access to a regular medical doctor	Correlation Coefficient	.028
	Sig. (2-tailed)	.635
	N	291
Unmet Health Need	Correlation Coefficient	.268**
	Sig. (2-tailed)	.000
	N	290
SmokingStatus	Correlation Coefficient	.023
	Sig. (2-tailed)	.698
	N	289
Self-Rated Health	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	291

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations (Self-Rated Health as Ordinal)

			Self-Rated Health	Gender	Ethnicity	Education	Lifetime History of Homelessness
Kendall's tau_b	Self-Rated Health	Correlation Coefficient	1.000	.079	.103	.030	.123*
		Sig. (2-tailed)	.	.154	.063	.574	.027
		N	291	291	291	290	291
	Gender	Correlation Coefficient	.079	1.000	.107	.031	-.092
		Sig. (2-tailed)	.154	.	.067	.579	.117
		N	291	293	293	292	293
	Ethnicity	Correlation Coefficient	.103	.107	1.000	-.169**	.209**
		Sig. (2-tailed)	.063	.067	.	.002	.000
		N	291	293	293	292	293
	Education	Correlation Coefficient	.030	.031	-.169**	1.000	-.236**
		Sig. (2-tailed)	.574	.579	.002	.	.000
		N	290	292	292	292	292
	Lifetime History of Homelessness	Correlation Coefficient	.123*	-.092	.209**	-.236**	1.000
		Sig. (2-tailed)	.027	.117	.000	.000	.
		N	291	293	293	292	293
	Current Employment	Correlation Coefficient	-.215**	-.031	-.150*	.261**	-.262**
		Sig. (2-tailed)	.000	.600	.011	.000	.000
		N	289	290	290	289	290
	Disability	Correlation Coefficient	.221**	-.032	-.027	-.006	.127*
		Sig. (2-tailed)	.000	.587	.642	.915	.031
		N	288	289	289	288	289

	Access to a regular medical doctor	Correlation Coefficient	.024	.117*	-.097	.129*	-.261**
		Sig. (2-tailed)	.670	.046	.099	.020	.000
		N	291	292	292	291	292
	Unmet Health Need	Correlation Coefficient	.258**	.110	.054	-.089	.212**
		Sig. (2-tailed)	.000	.060	.353	.110	.000
		N	290	291	291	290	291
	SmokingStatus	Correlation Coefficient	.021	.000	.131*	-.244**	.311**
		Sig. (2-tailed)	.709	1.000	.026	.000	.000
		N	289	290	290	289	290

Correlations

			Current Employment	Disability	Access to a regular medical doctor	Unmet Health Need
Kendall's tau_b	Self-Rated Health	Correlation Coefficient	-.215**	.221**	.024	.258**
		Sig. (2-tailed)	.000	.000	.670	.000
		N	289	288	291	290
	Gender	Correlation Coefficient	-.031	-.032	.117*	.110
		Sig. (2-tailed)	.600	.587	.046	.060
		N	290	289	292	291
	Ethnicity	Correlation Coefficient	-.150*	-.027	-.097	.054
		Sig. (2-tailed)	.011	.642	.099	.353
		N	290	289	292	291
	Education	Correlation Coefficient	.261**	-.006	.129*	-.089
		Sig. (2-tailed)	.000	.915	.020	.110

	N	289	288	291	290
Lifetime History of Homelessness	Correlation Coefficient	-.262**	.127*	-.261**	.212**
	Sig. (2-tailed)	.000	.031	.000	.000
	N	290	289	292	291
Current Employment	Correlation Coefficient	1.000	.019	.105	-.095
	Sig. (2-tailed)	.	.748	.075	.106
	N	290	288	290	289
Disability	Correlation Coefficient	.019	1.000	.081	.203**
	Sig. (2-tailed)	.748	.	.169	.001
	N	288	289	289	288
Access to a regular medical doctor	Correlation Coefficient	.105	.081	1.000	-.181**
	Sig. (2-tailed)	.075	.169	.	.002
	N	290	289	292	291
Unmet Health Need	Correlation Coefficient	-.095	.203**	-.181**	1.000
	Sig. (2-tailed)	.106	.001	.002	.
	N	289	288	291	291
SmokingStatus	Correlation Coefficient	-.310**	-.035	-.123*	.032
	Sig. (2-tailed)	.000	.558	.036	.589
	N	290	288	290	289

			Status
Kendall's tau_b	Self-Rated Health	Correlation Coefficient	.021
		Sig. (2-tailed)	.709
		N	289
	Gender	Correlation Coefficient	.000
		Sig. (2-tailed)	1.000
		N	290
	Ethnicity	Correlation Coefficient	.131*
		Sig. (2-tailed)	.026
		N	290
	Education	Correlation Coefficient	-.244**
		Sig. (2-tailed)	.000
		N	289
	Lifetime History of Homelessness	Correlation Coefficient	.311**
		Sig. (2-tailed)	.000
		N	290
	Current Employment	Correlation Coefficient	-.310**
		Sig. (2-tailed)	.000
		N	290
	Disability	Correlation Coefficient	-.035
		Sig. (2-tailed)	.558
		N	288
	Access to a regular medical doctor	Correlation Coefficient	-.123*
		Sig. (2-tailed)	.036
		N	290
	Unmet Health Need	Correlation Coefficient	.032
		Sig. (2-tailed)	.589
		N	289
	SmokingStatus	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	290

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix H
Predicting Self-Rated Health:
Comparing base model using Binary versus Ordinal Logistic Regression

1. Binary Logistic Regression Model (Base Model without Access variables):

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	286	97.6
	Missing Cases	7	2.4
	Total	293	100.0
Unselected Cases		0	.0
Total		293	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Excellent, Very Good or Good	0
Fair or Poor	1

Categorical Variables Codings

			Parameter coding	
		Frequency	(1)	(2)
Education	Grade School	133	1.000	.000
	High School	84	.000	1.000
	College/University or Trade	69	.000	.000
Gender	Male	142	.000	
	Female	144	1.000	
Ethnicity	European origins (Caucasian)	229	.000	
	Aboriginal or Visible Minority	57	1.000	
Disability	No	133	.000	
	Yes	153	1.000	
Homelessness	No	103	.000	
	Yes	183	1.000	
CurrentEmployment	No	206	.000	

	Yes	80	1.000	
SmokingStatus	Non-Smoker	79	.000	
	Smoker	207	1.000	

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted		
			Self-Rated Health (Dichot)		
			Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 0	Self-Rated Health (Dichot)	Excellent, Very Good or Good	149	0	100.0
		Fair or Poor	137	0	.0
	Overall Percentage				52.1

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.084	.118	.503	1	.478	.919

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	.285	1	.594
		SmokingStatus(1)	.050	1	.823
	Overall Statistics		.374	2	.829

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	.374	2	.829
	Block	.374	2	.829
	Model	.374	2	.829

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square

1	395.602[a]	.001	.002

a. Estimation terminated at iteration number 2 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.913	8	.767

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot)= Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	15	15.995	14	13.005	29
	2	14	15.702	15	13.298	29
	3	17	16.084	13	13.916	30
	4	16	15.320	13	13.680	29
	5	20	16.155	11	14.845	31
	6	14	14.984	15	14.016	29
	7	17	14.792	12	14.208	29
	8	11	14.163	17	13.837	28
	9	15	15.502	16	15.498	31
	10	10	10.303	11	10.697	21

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	133	16	89.3
		Fair or Poor	116	21	15.3
	Overall Percentage				53.8

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.005	.009	.324	1	.569	1.005	.988	1.022
	SmokingStatus(1)	.080	.268	.089	1	.765	1.083	.641	1.830
	Constant	-.349	.452	.598	1	.439	.705		

a. Variable(s) entered on step 1: Age, SmokingStatus.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	46.130	7	.000
	Block	46.130	7	.000
	Model	46.504	9	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	349.472[a]	.150	.200

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2.713	8	.951

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot)= Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		Total
		Observed	Expected	Observed	Expected	
Step 1	1	26	24.484	3	4.516	29
	2	21	21.239	8	7.761	29
	3	19	19.930	10	9.070	29
	4	17	18.539	12	10.461	29

5	14	14.918	15	14.082	29
6	14	13.283	15	15.717	29
7	15	12.095	14	16.905	29
8	10	10.895	19	18.105	29
9	8	8.777	21	20.223	29
10	5	4.839	20	20.161	25

Classification Table[a]

Observed			Predicted		
			Self-Rated Health (Dichot)		
			Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	GenHealthDichot	Excellent, Very Good or Good	89	60	59.7
		Fair or Poor	43	94	68.6
	Overall Percentage				64.0

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.002	.010	.063	1	.803	1.002	.983	1.022
	SmokingStatus(1)	-.276	.319	.748	1	.387	.759	.406	1.419
	Gender(1)	.185	.262	.499	1	.480	1.203	.720	2.011
	Ethnicity(1)	.648	.338	3.687	1	.055	1.912	.987	3.706
	Education			10.926	2	.004			
	Education(1)	-.879	.356	6.091	1	.014	.415	.207	.834
	Education(2)	-1.213	.373	10.610	1	.001	.297	.143	.617
	Homelessness(1)	.059	.306	.037	1	.847	1.061	.582	1.933
	CurrentEmployment(1)	-1.227	.335	13.430	1	.000	.293	.152	.565
	Disability(1)	1.173	.272	18.636	1	.000	3.232	1.897	5.504

Constant	.208	.634	.108	1	.743	1.232		

a. Variable(s) entered on step 1: Gender, Ethnicity, Education, Homelessness, CurrentEmployment, Disability.

Casewise List[b]

Case	Selected Status[a]	Observed Self-Rated Health (Dichot)	Predicted	Predicted Group	Temporary Variable Resid	Temporary Variable ZResid
161	S	F**	.084	E	.916	3.312

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

Binary Logistic Regression Model (Base Model with Access variables):

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	285	97.3
	Missing Cases	8	2.7
	Total	293	100.0
Unselected Cases		0	.0
Total		293	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Excellent, Very Good or Good	0
Fair or Poor	1

Categorical Variables Codings

		Frequency	Parameter coding (1)	Parameter coding (2)
Education	Grade School	132	1.000	.000
	High School	84	.000	1.000
	College/University or Trade	69	.000	.000

UnmetHealthNeed	No	175	.000	
	Yes	110	1.000	
Gender	Male	142	.000	
	Female	143	1.000	
Ethnicity	European origins (Caucasian)	228	.000	
	Aboriginal or Visible Minority	57	1.000	
Homelessness	No	103	.000	
	Yes	182	1.000	
CurrentEmployment	No	205	.000	
	Yes	80	1.000	
RegularMedicalDr	No	67	.000	
	Yes	218	1.000	
Disability	No	133	.000	
	Yes	152	1.000	
SmokingStatus	Non-Smoker	79	.000	
	Smoker	206	1.000	

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted		
			Self-Rated Health (Dichot)		
			Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 0	Self-Rated Health (Dichot)	Excellent, Very Good or Good	148	0	100.0
		Fair or Poor	137	0	.0
	Overall Percentage				51.9

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.077	.119	.424	1	.515	.926

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	.362	1	.548
		SmokingStatus(1)	.067	1	.796
	Overall Statistics		.481	2	.786

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	.482	2	.786
	Block	.482	2	.786
	Model	.482	2	.786

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	394.188[a]	.002	.002

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.008	8	.757

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	15	16.068	14	12.932	29
	2	14	15.727	15	13.273	29
	3	17	16.091	13	13.909	30
	4	16	15.302	13	13.698	29
	5	20	16.101	11	14.899	31
	6	14	14.917	15	14.083	29
	7	17	14.696	12	14.304	29
	8	11	14.054	17	13.946	28

9	15	15.356	16	15.644	31
10	9	9.687	11	10.313	20

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	124	24	83.8
		Fair or Poor	109	28	20.4
	Overall Percentage				53.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.006	.009	.414	1	.520	1.006	.989	1.023
	SmokingStatus(1)	.093	.268	.120	1	.729	1.097	.649	1.855
	Constant	-.379	.453	.701	1	.402	.684		

a. Variable(s) entered on step 1: Age, SmokingStatus.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	59.143	9	.000
	Block	59.143	9	.000
	Model	59.625	11	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	335.045[a]	.189	.252

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.161	8	.842

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	26	25.087	3	3.913	29
	2	22	22.297	7	6.703	29
	3	20	20.290	9	8.710	29
	4	19	18.137	10	10.863	29
	5	16	16.099	13	12.901	29
	6	14	14.810	16	15.190	30
	7	8	11.694	21	17.306	29
	8	12	8.864	17	20.136	29
	9	7	7.303	22	21.697	29
	10	4	3.420	19	19.580	23

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	109	39	73.6
		Fair or Poor	49	88	64.2
	Overall Percentage				69.1

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.010	.011	.943	1	.331	1.011	.989	1.032
	SmokingStatus(1)	-.170	.326	.270	1	.603	.844	.445	1.600
	Gender(1)	.046	.274	.028	1	.866	1.047	.612	1.792
	Ethnicity(1)	.677	.349	3.764	1	.052	1.968	.993	3.901
	Education			9.656	2	.008			
	Education(1)	-.896	.368	5.917	1	.015	.408	.198	.840
	Education(2)	-1.161	.384	9.172	1	.002	.313	.148	.664
	Homelessness(1)	-.017	.319	.003	1	.958	.983	.526	1.838
	CurrentEmployment(1)	-1.223	.342	12.806	1	.000	.294	.151	.575
	Disability(1)	.987	.282	12.240	1	.000	2.682	1.543	4.662
	RegularMedicalDr(1)	.300	.342	.768	1	.381	1.349	.690	2.637
	UnmetHealthNeed(1)	1.018	.298	11.649	1	.001	2.767	1.542	4.965
	Constant	-.610	.694	.771	1	.380	.544		

a. Variable(s) entered on step 1: Gender, Ethnicity, Education, Homelessness, CurrentEmployment, Disability, RegularMedicalDr, UnmetHealthNeed.

Casewise List[b]

Case	Selected Status[a]	Observed	Predicted	Predicted Group	Temporary Variable	
		Self-Rated Health (Dichot)			Resid	ZResid
161	S	F**	.066	E	.934	3.763
171	S	E**	.862	F	-.862	-2.495

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

2. Ordinal Logistic Regression Model (without Access variables):

Warnings

There are 531 (65.1%) cells (i.e., dependent variable levels by observed combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
Self-Rated Health (Ordinal)	Excellent or Very Good	72	25.2%
	Good	77	26.9%
	Fair or Poor	137	47.9%
Gender	Male	142	49.7%
	Female	144	50.3%
Ethnicity	European origins (Caucasian)	229	80.1%
	Aboriginal or Visible Minority	57	19.9%
Education	Grade School	133	46.5%
	High School	84	29.4%
	College/University or Trade	69	24.1%
Lifetime History of Homelessness	No	103	36.0%
	Yes	183	64.0%
Current Employment	No	206	72.0%
	Yes	80	28.0%
Disability	No	133	46.5%
	Yes	153	53.5%
SmokingStatus	Non-Smoker	79	27.6%
	Smoker	207	72.4%
Valid		286	100.0%
Missing		7	
Total		293	

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	584.345			
Final	534.282	50.062	9	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	522.833	533	.615
Deviance	516.260	533	.691

Link function: Logit.

Pseudo R-Square

Cox and Snell	.161
Nagelkerke	.183
McFadden	.083

Link function: Logit.

Parameter Estimates

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[Self-Rated Health (Ordinal) = 1]	-2.417	.596	16.426	1	.000	-3.586	-1.248
	[Self-Rated Health (Ordinal) = 2]	-1.065	.582	3.351	1	.067	-2.205	.075
Location	Age	-.006	.009	.543	1	.461	-.024	.011
	[Gender=0]	-.365	.236	2.387	1	.122	-.829	.098
	[Gender=1]	0[a]	.	.	0	.	.	.
	[Ethnicity=0]	-.494	.312	2.511	1	.113	-1.105	.117
	[Ethnicity=1]	0[a]	.	.	0	.	.	.
	[Education=1]	-.819	.323	6.422	1	.011	-1.453	-.186
	[Education=2]	-.971	.333	8.528	1	.003	-1.623	-.319
	[Education=3]	0[a]	.	.	0	.	.	.
	[Homelessness=0]	-.189	.272	.482	1	.488	-.722	.344

[Homelessness=1]	0[a]	.	.	0	.	.	.
[CurrentEmployment=0]	1.143	.285	16.139	1	.000	.586	1.701
[CurrentEmployment=1]	0[a]	.	.	0	.	.	.
[Disability=0]	-1.081	.243	19.787	1	.000	-1.557	-.604
[Disability=1]	0[a]	.	.	0	.	.	.
[SmokingStatus=0]	.344	.287	1.443	1	.230	-.217	.906
[SmokingStatus=1]	0[a]	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Ordinal Logistic Regression Model (with Access variables):

Warnings

There are 547 (65.8%) cells (i.e., dependent variable levels by observed combinations of predictor variable values) with zero frequencies.

Case Processing Summary

		N	Marginal Percentage
Self-Rated Health (Ordinal)	Excellent or Very Good	71	24.9%
	Good	77	27.0%
	Fair or Poor	137	48.1%
Gender	Male	142	49.8%
	Female	143	50.2%
Ethnicity	European origins (Caucasian)	228	80.0%
	Aboriginal or Visible Minority	57	20.0%
Education	Grade School	132	46.3%
	High School	84	29.5%
	College/University or Trade	69	24.2%

Lifetime History of Homelessness	No	103	36.1%
	Yes	182	63.9%
Current Employment	No	205	71.9%
	Yes	80	28.1%
Disability	No	133	46.7%
	Yes	152	53.3%
SmokingStatus	Non-Smoker	79	27.7%
	Smoker	206	72.3%
Access to a regular medical doctor	No	67	23.5%
	Yes	218	76.5%
Unmet Health Need	No	175	61.4%
	Yes	110	38.6%
Valid		285	100.0%
Missing		8	
Total		293	

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	589.893			
Final	528.528	61.366	11	.000

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	542.315	541	.476
Deviance	518.824	541	.746

Link function: Logit.

Pseudo R-Square

Cox and Snell	.194
Nagelkerke	.221
McFadden	.102

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Self-Rated Health (Ordinal) = 1]	-2.723	.636	18.354	1	.000	-3.969	-1.477
	[Self-Rated Health (Ordinal) = 2]	-1.317	.619	4.526	1	.033	-2.530	-.104
Location	Age	-.001	.009	.004	1	.949	-.019	.018
	[Gender=0]	-.275	.243	1.272	1	.259	-.752	.203
	[Gender=1]	0[a]	.	.	0	.	.	.
	[Ethnicity=0]	-.483	.317	2.324	1	.127	-1.104	.138
	[Ethnicity=1]	0[a]	.	.	0	.	.	.
	[Education=1]	-.838	.329	6.496	1	.011	-1.483	-.194
	[Education=2]	-.932	.337	7.622	1	.006	-1.593	-.270
	[Education=3]	0[a]	.	.	0	.	.	.
	[Homelessness=0]	-.173	.280	.382	1	.537	-.723	.376
	[Homelessness=1]	0[a]	.	.	0	.	.	.
	[CurrentEmployment=0]	1.119	.287	15.255	1	.000	.558	1.681
	[CurrentEmployment=1]	0[a]	.	.	0	.	.	.
	[Disability=0]	-.922	.250	13.567	1	.000	-1.413	-.431
	[Disability=1]	0[a]	.	.	0	.	.	.
	[SmokingStatus=0]	.272	.289	.884	1	.347	-.295	.839
	[SmokingStatus=1]	0[a]	.	.	0	.	.	.
	[RegularMedicalDr=0]	-.324	.305	1.132	1	.287	-.922	.273
	[RegularMedicalDr=1]	0[a]	.	.	0	.	.	.
	[UnmetHealthNeed=0]	-.824	.271	9.240	1	.002	-1.355	-.293

[UnmetHealthNeed=1]	0[a]	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Appendix I
Predicting Likelihood of rating health as 'fair or poor' using Binary Logistic Regression

Model 1 (see Appendix H)

Model 2

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	286	97.6
	Missing Cases	7	2.4
	Total	293	100.0
Unselected Cases		0	.0
Total		293	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Excellent, Very Good or Good	0
Fair or Poor	1

Categorical Variables Codings

			Parameter coding	
		Frequency	(1)	(2)
Education	Grade School	133	1.000	.000
	High School	84	.000	1.000
	College/University or Trade	69	.000	.000
Gender	Male	142	.000	
	Female	144	1.000	
Ethnicity	European origins (Caucasian)	229	.000	
	Aboriginal or Visible Minority	57	1.000	
Disability	No	133	.000	
	Yes	153	1.000	

Homelessness	No	103	.000	
	Yes	183	1.000	
CurrentEmployment	No	206	.000	
	Yes	80	1.000	
SmokingStatus	Non-Smoker	79	.000	
	Smoker	207	1.000	

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 0	Self-Rated Health (Dichot)	Excellent, Very Good or Good	149	0	100.0
		Fair or Poor	137	0	.0
	Overall Percentage				52.1

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.084	.118	.503	1	.478	.919

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	.285	1	.594
		SmokingStatus(1)	.050	1	.823
	Overall Statistics		.374	2	.829

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	.374	2	.829
	Block	.374	2	.829
	Model	.374	2	.829

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	395.602[a]	.001	.002

a. Estimation terminated at iteration number 2 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.913	8	.767

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	15	15.995	14	13.005	29
	2	14	15.702	15	13.298	29
	3	17	16.084	13	13.916	30
	4	16	15.320	13	13.680	29
	5	20	16.155	11	14.845	31
	6	14	14.984	15	14.016	29
	7	17	14.792	12	14.208	29
	8	11	14.163	17	13.837	28
	9	15	15.502	16	15.498	31
	10	10	10.303	11	10.697	21

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	133	16	89.3

	Fair or Poor	116	21	15.3
Overall Percentage				53.8

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.005	.009	.324	1	.569	1.005	.988	1.022
	SmokingStatus(1)	.080	.268	.089	1	.765	1.083	.641	1.830
	Constant	-.349	.452	.598	1	.439	.705		

a. Variable(s) entered on step 1: Age, SmokingStatus.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	57.447	15	.000
	Block	57.447	15	.000
	Model	57.822	17	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	338.155[a]	.183	.244

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8.682	8	.370

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	28	25.645	1	3.355	29
	2	21	22.918	8	6.082	29
	3	19	20.036	10	8.964	29
	4	13	16.380	16	12.620	29
	5	14	14.958	15	14.042	29
	6	18	13.745	11	15.255	29
	7	13	12.152	16	16.848	29
	8	13	10.682	16	18.318	29
	9	7	9.060	22	19.940	29
	10	3	3.424	22	21.576	25

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	96	53	64.4
		Fair or Poor	51	86	62.8
	Overall Percentage				63.6

a. The cut value is .500

Variables in the Equation

								95% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Age	-.002	.010	.029	1	.864	.998	.978	1.019
	SmokingStatus(1)	-.246	.335	.540	1	.463	.782	.406	1.507
	Gender(1)	.210	.270	.604	1	.437	1.233	.727	2.093
	Ethnicity(1)	.949	1.235	.591	1	.442	2.584	.230	29.052
	Education			4.979	2	.083			

	Education(1)	.015	.534	.001	1	.978	1.015	.356	2.891
	Education(2)	-1.300	.687	3.582	1	.058	.273	.071	1.047
	Homelessness(1)	-.097	.319	.092	1	.762	.908	.486	1.696
	CurrentEmployment(1)	-1.148	.590	3.789	1	.052	.317	.100	1.008
	Disability(1)	1.701	.594	8.206	1	.004	5.479	1.711	17.546
	Education * Ethnicity			3.834	2	.147			
	Education(1) by Ethnicity(1)	-1.309	1.312	.995	1	.318	.270	.021	3.536
	Education(2) by Ethnicity(1)	.353	1.445	.060	1	.807	1.424	.084	24.169
	CurrentEmployment(1) by Ethnicity(1)	.976	1.212	.649	1	.420	2.654	.247	28.526
	Disability(1) by Ethnicity(1)	.629	.710	.784	1	.376	1.875	.466	7.538
	CurrentEmployment * Education			.932	2	.627			
	CurrentEmployment(1) by Education(1)	-.857	.894	.919	1	.338	.424	.074	2.447
	CurrentEmployment(1) by Education(2)	-.298	.849	.124	1	.725	.742	.141	3.916
	Disability * Education			3.137	2	.208			
	Disability(1) by Education(1)	-1.105	.721	2.353	1	.125	.331	.081	1.359
	Disability(1) by Education(2)	-.163	.837	.038	1	.845	.849	.165	4.377

Constant	.128	.705	.033	1	.856	1.136		

a. Variable(s) entered on step 1: Gender, Ethnicity, Education, Homelessness, CurrentEmployment, Disability, Education * Ethnicity , CurrentEmployment * Ethnicity , Disability * Ethnicity , CurrentEmployment * Education , Disability * Education .

Casewise List[b]

Case	Selected Status[a]	Observed Self-Rated Health (Dichot)	Predicted	Predicted Group	Temporary Variable Resid	Temporary Variable ZResid
73	S	E**	.836	F	-.836	-2.257
161	S	F**	.047	E	.953	4.481

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

Model 3

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	285	97.3
	Missing Cases	8	2.7
	Total	293	100.0
Unselected Cases		0	.0
Total		293	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Excellent, Very Good or Good	0
Fair or Poor	1

Categorical Variables Codings

		Frequency	Parameter coding (1)	Parameter coding (2)
Education	Grade School	132	1.000	.000

	High School	84	.000	1.000
	College/University or Trade	69	.000	.000
UnmetHealthNeed	No	175	.000	
	Yes	110	1.000	
Gender	Male	142	.000	
	Female	143	1.000	
Ethnicity	European origins (Caucasian)	228	.000	
	Aboriginal or Visible Minority	57	1.000	
Homelessness	No	103	.000	
	Yes	182	1.000	
CurrentEmployment	No	205	.000	
	Yes	80	1.000	
RegularMedicalDr	No	67	.000	
	Yes	218	1.000	
Disability	No	133	.000	
	Yes	152	1.000	
SmokingStatus	Non-Smoker	79	.000	
	Smoker	206	1.000	

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 0	Self-Rated Health (Dichot)	Excellent, Very Good or Good	148	0	100.0
		Fair or Poor	137	0	.0
	Overall Percentage				51.9

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.077	.119	.424	1	.515	.926

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	.362	1	.548
		SmokingStatus(1)	.067	1	.796
	Overall Statistics		.481	2	.786

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	.482	2	.786
	Block	.482	2	.786
	Model	.482	2	.786

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	394.188[a]	.002	.002

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.008	8	.757

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	15	16.068	14	12.932	29
	2	14	15.727	15	13.273	29
	3	17	16.091	13	13.909	30
	4	16	15.302	13	13.698	29

	5	20	16.101	11	14.899	31
	6	14	14.917	15	14.083	29
	7	17	14.696	12	14.304	29
	8	11	14.054	17	13.946	28
	9	15	15.356	16	15.644	31
	10	9	9.687	11	10.313	20

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	124	24	83.8
		Fair or Poor	109	28	20.4
	Overall Percentage				53.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.006	.009	.414	1	.520	1.006	.989	1.023
	SmokingStatus(1)	.093	.268	.120	1	.729	1.097	.649	1.855
	Constant	-.379	.453	.701	1	.402	.684		

a. Variable(s) entered on step 1: Age, SmokingStatus.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	59.143	9	.000
	Block	59.143	9	.000
	Model	59.625	11	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	335.045[a]	.189	.252

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	4.161	8	.842

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	26	25.087	3	3.913	29
	2	22	22.297	7	6.703	29
	3	20	20.290	9	8.710	29
	4	19	18.137	10	10.863	29
	5	16	16.099	13	12.901	29
	6	14	14.810	16	15.190	30
	7	8	11.694	21	17.306	29
	8	12	8.864	17	20.136	29
	9	7	7.303	22	21.697	29
	10	4	3.420	19	19.580	23

Classification Table[a]

Observed			Predicted		
			Self-Rated Health (Dichot)		
			Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	109	39	73.6
		Fair or Poor	49	88	64.2

Overall Percentage			69.1

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.010	.011	.943	1	.331	1.011	.989	1.032
	SmokingStatus(1)	-.170	.326	.270	1	.603	.844	.445	1.600
	Gender(1)	.046	.274	.028	1	.866	1.047	.612	1.792
	Ethnicity(1)	.677	.349	3.764	1	.052	1.968	.993	3.901
	Education			9.656	2	.008			
	Education(1)	-.896	.368	5.917	1	.015	.408	.198	.840
	Education(2)	-1.161	.384	9.172	1	.002	.313	.148	.664
	Homelessness(1)	-.017	.319	.003	1	.958	.983	.526	1.838
	CurrentEmployment(1)	-1.223	.342	12.806	1	.000	.294	.151	.575
	Disability(1)	.987	.282	12.240	1	.000	2.682	1.543	4.662
	RegularMedicalDr(1)	.300	.342	.768	1	.381	1.349	.690	2.637
	UnmetHealthNeed(1)	1.018	.298	11.649	1	.001	2.767	1.542	4.965
	Constant	-.610	.694	.771	1	.380	.544		

a. Variable(s) entered on step 1: Gender, Ethnicity, Education, Homelessness, CurrentEmployment, Disability, RegularMedicalDr, UnmetHealthNeed.

Casewise List[b]

Case	Selected Status[a]	Observed	Predicted	Predicted Group	Temporary Variable	
		Self-Rated Health (Dichot)			Resid	ZResid
161	S	F**	.066	E	.934	3.763
171	S	E**	.862	F	-.862	-2.495

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

Model 4

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	285	97.3
	Missing Cases	8	2.7
	Total	293	100.0
Unselected Cases		0	.0
Total		293	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Excellent, Very Good or Good	0
Fair or Poor	1

Categorical Variables Codings

		Frequency	Parameter coding (1)	Parameter coding (2)
Education	Grade School	132	1.000	.000
	High School	84	.000	1.000
	College/University or Trade	69	.000	.000
UnmetHealthNeed	No	175	.000	
	Yes	110	1.000	
Gender	Male	142	.000	
	Female	143	1.000	
Ethnicity	European origins (Caucasian)	228	.000	
	Aboriginal or Visible Minority	57	1.000	
Homelessness	No	103	.000	

	Yes	182	1.000	
CurrentEmployment	No	205	.000	
	Yes	80	1.000	
RegularMedicalDr	No	67	.000	
	Yes	218	1.000	
Disability	No	133	.000	
	Yes	152	1.000	
SmokingStatus	Non-Smoker	79	.000	
	Smoker	206	1.000	

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 0	Self-Rated Health (Dichot)	Excellent, Very Good or Good	148	0	100.0
		Fair or Poor	137	0	.0
	Overall Percentage				51.9

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.077	.119	.424	1	.515	.926

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	.362	1	.548
		SmokingStatus(1)	.067	1	.796
	Overall Statistics		.481	2	.786

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.

Step 1	Step	.482	2	.786
	Block	.482	2	.786
	Model	.482	2	.786

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	394.188[a]	.002	.002

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5.008	8	.757

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	15	16.068	14	12.932	29
	2	14	15.727	15	13.273	29
	3	17	16.091	13	13.909	30
	4	16	15.302	13	13.698	29
	5	20	16.101	11	14.899	31
	6	14	14.917	15	14.083	29
	7	17	14.696	12	14.304	29
	8	11	14.054	17	13.946	28
	9	15	15.356	16	15.644	31
	10	9	9.687	11	10.313	20

Classification Table[a]

Observed	Predicted		
	Self-Rated Health (Dichot)		
	Excellent, Very Good or Good	Fair or Poor	Percentage Correct

Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	124	24	83.8
		Fair or Poor	109	28	20.4
	Overall Percentage				53.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	Age	.006	.009	.414	1	.520	1.006	.989	1.023
	SmokingStatus(1)	.093	.268	.120	1	.729	1.097	.649	1.855
	Constant	-.379	.453	.701	1	.402	.684		

a. Variable(s) entered on step 1: Age, SmokingStatus.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	62.923	14	.000
	Block	62.923	14	.000
	Model	63.405	16	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	331.265[a]	.199	.266

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	3.887	8	.867

Contingency Table for Hosmer and Lemeshow Test

		Self-Rated Health (Dichot) = Excellent, Very Good or Good		Self-Rated Health (Dichot) = Fair or Poor		
		Observed	Expected	Observed	Expected	Total
Step 1	1	25	25.333	4	3.667	29
	2	25	22.502	4	6.498	29
	3	19	19.916	10	9.084	29
	4	17	18.222	12	10.778	29
	5	17	16.611	12	12.389	29
	6	15	14.077	14	14.923	29
	7	8	11.470	21	17.530	29
	8	11	9.560	18	19.440	29
	9	8	7.563	21	21.437	29
	10	3	2.746	21	21.254	24

Classification Table[a]

			Predicted		
			Self-Rated Health (Dichot)		
	Observed		Excellent, Very Good or Good	Fair or Poor	Percentage Correct
Step 1	Self-Rated Health (Dichot)	Excellent, Very Good or Good	109	39	73.6
		Fair or Poor	48	89	65.0
	Overall Percentage				69.5

a. The cut value is .500

Variables in the Equation

								95% C.I.for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1[a]	Age	.009	.011	.646	1	.421	1.009	.987	1.031
	SmokingStatus(1)	-.135	.333	.165	1	.685	.874	.455	1.677
	Gender(1)	.024	.280	.007	1	.931	1.024	.592	1.773
	Ethnicity(1)	.525	.451	1.358	1	.244	1.691	.699	4.093

	Education			3.364	2	.186			
	Education(1)	-.463	.452	1.051	1	.305	.629	.260	1.525
	Education(2)	-.859	.469	3.352	1	.067	.424	.169	1.062
	Homelessness(1)	-.037	.323	.013	1	.908	.963	.512	1.813
	CurrentEmployment(1)	-1.376	.427	10.404	1	.001	.253	.110	.583
	Disability(1)	1.028	.350	8.626	1	.003	2.795	1.408	5.550
	RegularMedicalDr(1)	.233	.346	.455	1	.500	1.262	.641	2.485
	UnmetHealthNeed(1)	1.851	.801	5.348	1	.021	6.368	1.326	30.579
	Ethnicity(1) by UnmetHealthNeed(1)	.247	.714	.119	1	.730	1.280	.316	5.192
	Education * UnmetHealthNeed			2.485	2	.289			
	Education(1) by UnmetHealthNeed(1)	-1.333	.846	2.482	1	.115	.264	.050	1.385
	Education(2) by UnmetHealthNeed(1)	-1.034	.891	1.346	1	.246	.355	.062	2.040
	CurrentEmployment(1) by UnmetHealthNeed(1)	.294	.713	.171	1	.680	1.342	.332	5.427
	Disability(1) by UnmetHealthNeed(1)	.007	.590	.000	1	.990	1.007	.317	3.203
	Constant	-.716	.712	1.012	1	.314	.489		

a. Variable(s) entered on step 1: Gender, Ethnicity, Education, Homelessness, CurrentEmployment, Disability, RegularMedicalDr, UnmetHealthNeed, Ethnicity * UnmetHealthNeed , Education * UnmetHealthNeed , CurrentEmployment * UnmetHealthNeed , Disability * UnmetHealthNeed .

Casewise List[b]

Case	Selected Status[a]	Observed Self-Rated Health (Dichot)	Predicted	Predicted Group	Temporary Variable Resid	Temporary Variable ZResid
144	S	E**	.853	F	-.853	-2.408
161	S	F**	.063	E	.937	3.851
165	S	E**	.862	F	-.862	-2.496
192	S	F**	.123	E	.877	2.676

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.

b. Cases with studentized residuals greater than 2.000 are listed.

Curriculum Vitae

Heather Atyeo

Post-Secondary Education and Degrees:	University of Western Ontario London, Ontario 1998-2002 BScN
	University of Western Ontario London, Ontario 2006-2008 PHCNP certificate
Honors and Awards:	Jean Winnifred Forrest Scholarship 2001
Related Work Experience	Nurse Practitioner Thames Valley Family Health Team 2015-present
	Nurse Practitioner Barrie and Community Family Health Team 2009-2011, 2013-2015
	Research Assistant Lawson Health Research Institute 2001-2015
	Nurse Case Manager Centralized Emergency Psychiatric Services 2005-2009, 2011-2012
	Registered Nurse London Mental Health Crisis Service 2002-2009

Publications:

Atyeo, H. & Forchuk, C. (2013). Psychiatric/Psychosocial Rehabilitation (PSR) in Relation to Residential Environments: Housing and Homelessness. Current Psychiatry Reviews, 9(3).

Forchuk, C., Csiernik, R., Jensen, E., & Atyeo, H. (2011). Methodologies employed. In C.Forchuk, R.Csiernik, & E.Jenson (Eds.). *Homelessness, housing amd mental health: Finding truths – creating change.* (pp.13-30). Toronto, ON: Canadian Scholars Press Inc.

Forchuk, C., Jensen, E., Martin, M.L., Csiernik, R., & Atyeo, H. (2010). Psychiatric crisis services in three communities. *Canadian Journal of Community Mental Health, 29*, 73-86.