NEIGHBOURHOOD IMPACTS ON STRESS: PERSPECTIVES OF ADOLESCENT GIRLS

by

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Abstract

The physical and social environments of a neighbourhood can cause and/or reduce stress for residents. However, we know relatively little about the neighbourhood-level stressors and stress-relievers experienced by adolescents, and in particular adolescent girls.

This study explores how adolescent girls (15-17 years) living in one neighbourhood in Halifax, Nova Scotia perceive key characteristics of their neighbourhood's environments as affecting and/or reducing their stress. Using a qualitative methodology, data were collected from eight participants using face-to-face semi-structured interviews. Photo elicitation technique was also used for data collection.

A key finding of this research was that participants experience a strong 'sense of community' within their neighbourhood that makes a significant contribution to their stress relief. At the same time, participants reported a number of neighbourhood-level forces that are threatening this sense of community including violence, conflicts, and stigma. This study demonstrates the complexity of the relationship between neighbourhood-level characteristics and residents' stress.

Chapter 1: Introduction

The Issue

Studies show that the physical and social environments of neighbourhoods significantly influence the health of residents (Bernard et al., 2007; Braverman & Egerter, 2008; Chen, Martin, & Matthews, 2006; Cicognani, Albanesi, & Zani, 2008; Kawachi & Berkman, 2003; Matheson, Dunn, Creatore, Gozdyra, & Glazier, 2006; Nova Scotia Department of Health Promotion and Protection, 2009; Pickett & Pearl, 2001; Piko & Fitzpatrick, 2001; Public Health Agency of Canada, 2001; Ross, Tremblay, & Graham, 2004; Warr, 2005; Warr, Feldman, Tacticos, & Kelaher, 2009; Warr, Tacticos, Kelaher, & Klein, 2007; Wilson et al., 2004; Winkleby & Cubbin, 2003), including stress (Baum, Garofalo, & Yali, 1999; Matheson et al., 2006; Warr et al., 2007; Warr et al., 2009; Wilson et al., 2004). That is, in some cases, the physical and/or social environment within a neighbourhood may be the cause of stress for some residents and/or may relieve stress.

Elements of the physical environment that may contribute to stress include graffiti, damage to buildings, unmaintained sidewalks, parks, or street lights, and the absence of infrastructure (Braverman & Egerter, 2008; Cohen et al., 2003; Warr et al., 2009). Aspects of the physical environment within a neighbourhood that may relieve stress are often considered to be well-maintained buildings, streets, sidewalks, secure parks, and street lighting. However, not all residents will necessarily consider these characteristics as stressors and stress-relievers. For example, some individuals may find graffiti stressful because they may perceive it as damage to property and a threat to peace, whereas others may perceive graffiti as street art and thus, may find it to be stress-relieving.

The social environment has also been found to play a role in creating and relieving stress. Social cohesion and social capital are two key concepts found within the literature that are often

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used to describe the social environment of a neighbourhood (Canadian Institute for Health Information, 2006; Cicognani et al., 2008; Forrest & Keans, 2001; MacDonald, Shildrick, Webster, & Simpson, 2005; Putnam, 1993; Stafford & McCarthy, 2006; Warr et al., 2007; Wilson et al., 2004). Generally, social cohesion refers to the closeness and connectedness between residents in neighbourhoods and social capital represents the resources that emerge from various forms and degrees of social interaction among residents (Canadian Institute for Health Information, 2006; Forrest & Kearns, 2001; Sampson, Morenoff, & Gannon-Roley, 2002). The strong presence of social cohesion and social capital in a neighbourhood can help relieve stress for residents because their presence often leads to a neighbourhood characterized by positive social relationships, respect, trust, care for the neighbourhood, sense of belonging, and shared norms of conduct within the neighbourhood. Conversely, a neighbourhood where there is a lack of social cohesion and/or social capital may cause residents to experience stress. Few positive relationships between neighbours, lack of respect and trust, general disregard for the neighbourhood, as well as an absence of shared norms of conduct among neighbours may make some residents feel unsafe and uncertain of their neighbours, which could lead to stress. Nevertheless, many neighbourhoods are comprised of some characteristics of the social environment that both create and relieve stress. For instance, an individual may have positive friendships with certain neighbours and feel safe around them, but they may feel unsafe or stressed when the neighbours that they encounter are strangers.

The role of stress in influencing the health of individuals and populations has become of increasing interest among health researchers including health promotion researchers (Bendelow, 2009; Donatelle, 2009; Goodman, McEwan, Dolan, Scafer-Kalkhoff, & Adler, 2005; Matheson et al., 2006; Thoits, 2010). This may be because expressing the feeling of being 'stressed out' has become common language and stress seems to have an important presence in individuals'

lives (Bendelow, 2009). Also, constant exposure to stressors may translate into continuous feelings of stress, which can then develop into chronic stress (Matheson et al., 2006; Warr et al., 2007). Research indicates that having some stress is not typically a health concern, but chronic stress can play an important role in such health problems as rapid aging, heart disease, diabetes, cancer, fatigue, and headaches (Bendelow, 2009; Braverman & Egerter, 2008; Donatelle, 2009; Matheson et al., 2006) as well as psychological issues including depression, anxiety, the consumption of alcohol and other potentially harmful substances, domestic violence, homicide, and suicide (Matheson et al., 2006; Rudolph, 2002; Stockdale et al., 2007).

Most of the existing literature on neighbourhoods and stress focuses on the experience of stress for adults (Barnes, 2003; Forrest & Kearns, 2001; Kearns & Parkinson, 2001; Matheson et al., 2006; Warr et al., 2009) with relatively little attention given, to date, to youth. However, youth may experience and perceive their neighbourhood and its role on their stress differently from other age groups (Morrow, 2000). Youth have been found to spend a great deal of time in their neighbourhood (Morrow, 2000), and this may cause a great deal of exposure to neighbourhood stressors. Constant exposure to these stressors may translate into chronic stress for youth, which may increase the risk of physical, emotional, cognitive and behavioural difficulties (Frydenberg, 2008).

Youth may also engage with certain aspects of the physical and/or social environments in their neighbourhoods that could be considered stress-relievers. For instance, the presence of friends and extended family members, access to playgrounds, and community organizations targeted to youth are aspects of the physical and social environments within a neighbourhood that could, for some, relieve and/or prevent stress for youth (Cicognani et al., 2008; Morrow, 2000, 2001).

Not only is there relatively little research on how neighbourhoods affect youth stress, but there is also little research on how neighbourhoods specifically affect adolescent girls' stress. Generally speaking, adolescent girls seem to be reporting more stress and tend to be more sensitive to stressors than boys (Coleman, 2007; Frydenberg, 2008). In addition, adolescent girls have reported experiencing different neighbourhood-level stressors than their male counterparts (Morrow, 2000; Watt & Stenson, 1998). For example, adolescent girls tend to report neighbourhood-level stressors that relate to rape, sexual assault, and other types of violence targeting females (Cicognani et al., 2008; Morrow, 2000, 2001). Furthermore, girls have a tendency to attribute a greater importance to neighbourhood friendships, which can be a stress-reliever (i.e. social support) and at other times a stressor (i.e. conflicts or peer pressure) (Morrow 2000).

Most research on neighbourhoods and stress quantify the impacts of neighbourhood environments on the health and stress of residents. Although this research is important in helping health professionals understand how neighbourhood characteristics have an objective impact on the health and stress of residents, it does not consider the meanings, experiences, and perceptions that residents may have with their neighbourhood environments. A certain neighbourhood characteristic may be considered a stressor by researchers, but may not be experienced the same way by residents. Furthermore, some researchers have found that perceptions of neighbourhood environments seem to have a stronger impact on health than the actual environment (Warr et al., 2007; Wen, Browning, Cagney, 2003; Wilson et al., 2004). This finding underlines the importance of conducting research exploring residents' perceptions, meanings, and experiences of how their neighbourhood environments impact their health and more specifically, their stress.

Purpose of the Research

The purpose of this study was to develop an understanding of how adolescent girls between the ages of 15 to 18 perceive their neighbourhood as affecting their stress, both positively and negatively. This research specifically explored the physical and social characteristics of the girls' neighbourhood environments that they perceived to create stress and/or to relieve their stress. This study also explored what adolescent girls perceived to be neighbourhood-level improvements that could help prevent or relieve their stress.

Research Questions

1. What do adolescent girls identify to be key characteristics of their neighbourhood's physical and social environments (if any) that cause them to feel stress?

2. What do adolescent girls identify to be key characteristics of their neighbourhood's physical and social environments (if any) that help relieve their stress?

3. What are adolescent girls' perceptions of the characteristics of the physical and social environments in their neighbourhood that need to be changed (if any) to help them relieve their stress?

Rationale for the Study

This study is important for various reasons. Firstly, there is a need to fill the gap within the literature relating to adolescent girls' perception of how their neighbourhood affects their stress in both a positive and negative way. Secondly, it is important to hear the voices of adolescent girls because often their specific issues are not attended to and are often disregarded by researchers and neighbourhood stakeholders. Lastly, understanding these issue from the perspective of adolescent girls may inform neighbourhood-level programs and policies targeting this population on how to better tailor their interventions to this population's needs. Addressing these issues during adolescence can prevent them from carrying on into adulthood.

Researcher's Interest in the Topic

It is through my undergraduate degree in social work and through my work as a counsellor with women who were victims of violence that I discovered my interest in studying women's health. I found that women's voices were often not heard or not considered and therefore, their specific health issues were often disregarded by research as well as by many social service and health professionals. I also worked with adolescent girls who had been victims of violence and/or who had issues with their emotional health. I soon realized that their interests and concerns were even more muffled because, in addition to being females, they were also young and people often disregard the voice of youth. When reading about neighbourhoods and health in one of my graduate courses, I became more conscious of the importance of place and context in shaping individuals' health. Since youth tend to spend much of their time in their neighbourhood (Morrow, 2000), they may have greater exposure to neighbourhood stressors than others who do not spend as much time in the neighbourhood. Thus, I hope my study gives a voice to adolescent girls in regards to their interests and concerns relating to the effects of their neighbourhood environments on their stress in both a positive and negative way.

Chapter 2: Literature Review

This chapter presents a review of the relevant literature related to neighbourhood impacts on adolescent girls' stress. It begins by defining neighbourhoods and by situating them within the determinants of health framework. This is followed by a discussion of the role of neighbourhoods in influencing the health and stress of residents. This chapter also outlines the key neighbourhood-level stressors and stress-relievers for adolescents, focusing specifically on adolescent girls.

Defining Neighbourhood

Definitions of neighbourhoods vary greatly (Barnes, 2003; Stafford & McCarthy, 2006). For example, census data and other statistical databases define neighbourhoods by specific geographical borders (Community Counts, 2010; Sampson et al., 2002; Stafford & McCarthy, 2006; Wilson et al., 2004; Winkleby & Cobbin, 2003), whereas researchers often define neighbourhoods by a certain characteristic such as residents' socio-economic status (SES), residents' ethnicity, available resources, or type of housing (Bernard et al., 2007; Ross, Tremblay, & Graham, 2004; Sampson et al., 2002; Stafford & McCarthy, 2006; Wilson et al., 2004). For those who are not involved in research, a definition of neighbourhood is often constructed by daily experiences of living in their neighbourhood, which may incorporate such factors as proximity to social networks, residents' ethnicity, and frequently utilized spaces (e.g. parks, school, library, hospital, and community garden) (Canadian Institute for Health Information, 2006). Youth have been found to have a slightly different definition of neighbourhoods than adults, tending to define their neighbourhoods in terms of their specific age-related activities such as attending school and playing with friends at their houses or in a local playground (Morrow, 2000).

Some research suggests that female adolescents may define neighbourhoods differently from male adolescents (Morrow, 2000; 2001). This may be due to gendered differences in the way adolescents utilize their neighbourhood. For example, Morrow (2000) found that adolescent boys often defined their neighbourhood as mainly characterized by spaces where they could play sports since these spaces are important neighbourhood elements for them. On the other hand, adolescent girls often defined their neighbourhood by the places where they socialized with their friends such as friends' houses or playgrounds.

In much of the neighbourhood literature, the term 'community' is often used interchangeably with the term neighbourhood. However, the term community is defined many different ways other than by a geographical space. For instance, a 'social community', which may exist within the geographical community, is a type of community defined by interactions between community members, a sense of belonging and acceptance to the group, a sense of responsibility and contribution to the functioning of the group, and it may also have unique characteristics that form a specific culture for this group (Ife and Tesoriero, 2006). A community can hold significant meaning for its members, as members who feel they belong to the community may self-identify with the community (Cohen, 1985; Ife and Tesoriero, 2006). "People construct community symbolically, making it a resource and repository of meaning, and a referent of their identity" (Cohen, 1985: p.118).

Neighbourhood environments. Two key crucial components of most neighbourhoods are the physical and social environments. The physical environment is often conceptually described as having two sub-environments: the built and natural environments. The built environment refers to the human made aspects of a neighbourhood including sidewalks, roads, parks and playgrounds, buildings, and other elements of the neighbourhood design (Bernard et al., 2007; Braverman & Egerter, 2008; Canadian Institute on Health Information, 2006; Centre

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for Disease Control and Prevention, 2010; Stafford & McCarthy, 2006). The natural environment is defined by aspects of the physical environment that are not produced by humans, but that may be altered by human activity including air, soil, water quality, as well as plants and animals (Bernard et al., 2007). Green spaces are important elements of the natural environment and they are defined as "open, undeveloped land with natural vegetation" (Centre for Disease Control and Prevention, 2010) such as parks, forests, and river corridors (Mitchell & Popham, 2008).

There are many definitions of what constitutes a social environment in a neighbourhood (Bernard et al., 2007; Canadian Institute for Health Information, 2006; Cicognani et al., 2008; Forrest & Kearns, 2001; Morrow, 2000; Putnam, 1993, Sampson et al., 2002; Warr, 2005), but social cohesion and social capital are two key concepts that are often conceptualized as comprising a neighbourhood's social environment (Canadian Institute for Health Information, 2006; Cicognani et al., 2008; Forrest & Keans, 2001; MacDonald et al., 2005; Putnam, 1993; Stafford & McCarthy, 2006; Warr et al., 2007; Wilson et al., 2004). Social cohesion refers to the bonds that bring residents of a neighbourhood together or, in other words, the degree of connectedness and closeness among residents (Canadian Institute for Health Information, 2006; Forrest & Kearns, 2001). Factors contributing to the social cohesion in a neighbourhood include shared values among neighbours, strong and positive informal relationships among residents (e.g. relationships among family members and friends who also reside in the neighbourhood) as well as formal relationships (e.g. relationships among residents and community organization workers or other types of health professionals), civic engagement, and participation (e.g. residents' involvement in neighbourhood matters and activities) (Forrest & Kearns, 2001; Stafford & McCarthy, 2006; Warr, 2005). A neighbourhood characterized by strong social cohesion is often referred to as possessing a strong sense of community, which is comprised of, among other

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things, shared norms of conduct, shared values, mutual respect between neighbours, and a sense

of belonging to the neighbourhood (Forrest & Kearns, 2001).

Debates in the literature exist around the definition of social capital (Forrest & Kearns,

2001; Putnam, 1993; Sampson et al., 2002). One common definition describes it as the resources

that emerge from various elements of the social environment within a neighbourhood such as

social networks, social interactions, civic engagement, and participation (Forrest & Kearns, 2001;

Sampson et al., 2002). Resources that transpire from these various social environment elements

include reciprocity, support (e.g. mutual aid), trust, and safety (Forrest & Kearns, 2001; Sampson

et al., 2002). These resources may also contribute to social cohesion by increasing the bonds

between residents.

Neighbourhoods as a Determinant of Health

Increasingly, health research is uncovering the multiple social, economic, and political

factors that influence one's health, sometimes referred to collectively as the 'social determinants

of health' (Braverman & Egerter, 2008; Morrow, 2001; Nova Scotia Department of Health

Promotion and Protection, 2009; Public Health Agency of Canada, 2001). The Public Health

Agency of Canada (PHAC, 2001) has elaborated a list of "Determinants of Health", which

include income, social status, social support and networks, employment, education, gender,

physical environment, and social environment. Although neighbourhoods are not on PHAC's list

of determinants of health, a growing body of health research identifies a relationship between

neighbourhoods and health (Bernard et al., 2007; Canadian Institute for Health Information,

2006; Chen et al., 2006; Cicognani et al., 2008; Jackson, 2003; Kawachi & Berkman, 2003;

Matheson et al., 2006; Pickett & Pearl, 2001; Piko & Fitzpatrick, 2001; Warr, 2005; Warr et al.,

2007; Warr et al., 2009; Wilson et al., 2004), and more specifically a neighbourhood's physical

and social environments (Warr et al., 2007; Wilson et al., 2004). Current research suggests that

within any particular neighbourhood certain elements of the physical and social environments may promote optimal health, while other elements of these same environments may impair the achievement and maintenance of optimal health (Bernard et al., 2007; Braverman & Egerter, 2008).

Many studies focus on the health effects of low socio-economic status (SES) neighbourhoods, or what are sometimes described as disadvantaged, poor, low-income, or impoverished neighbourhoods (Baum et al., 1999; Braverman & Egerter, 2008; Cohen et al., 2003; Warr, 2005; Wen et al., 2003). A neighbourhood's SES is often determined by the average SES of residents and of the quality of certain neighbourhood characteristics such as access to goods and services (e.g. education and employment opportunities as well as price, availability, selection, and quality of goods and services), norms and values, and the state of the physical environment (Baum et al., 1999; Winkleby & Cubbin, 2003). Much of the research on neighbourhoods and health suggests that most neighbourhoods labelled impoverished are mainly comprised of elements of the physical and social environments that may be health impairing (Baum et al., 1999; Braverman & Egerter, 2008; Cohen et al., 2003; Warr, 2005). In fact, Winkleby and Cubbin (2003) have found an association between living in a low-SES neighbourhood and higher risk of mortality, regardless of individuals' personal SES. Likewise, some researchers have found that neighbourhoods considered high-SES are comprised of many elements of the physical and social environments that have positive health effects, in some cases over and above personal SES and health-related background (Baum et al., 1999; Wen et al., 2003).

Although a number of studies have found an association between the SES of a neighbourhood and individuals' health (Baum et al., 1999; Braverman & Egerter, 2008; Cohen et al., 2003;Warr, 2005; Wen et al., 2003), many of these studies fail to explore the complexity of

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the physical and social environments within neighbourhoods and that neighbourhoods may often

be characterized by a mix of both health promoting qualities as well as health impairing

characteristics. For example, a neighbourhood may lack maintained sidewalks, which can be

health impairing because of the risk of injury, yet it may also contain a maintained park where

residents engage in community activities that are supportive and therefore health promoting.

Neighbourhood Effects on Stress

Stress. The concept of stress is often raised as an important issue in relation to

neighbourhoods and health (Baum et al., 1999; Braverman & Egerter, 2008; Matheson et al.,

2006; Warr et al., 2007; Warr et al., 2009; Wilson et al., 2004). People often use the expression

'stressed out' to refer to the feeling of being overwhelmed or to the feeling of loss of control

(Bendelow, 2009). Stress is defined as a physiological response and adaptation to stressors,

which are perceived challenges or threats to one's well-being (Donatelle, 2009; Maio-Esteves,

1990; Matheson et al., 2006). The stress response greatly depends on the individual's perception

of the stressors, which is influenced by such factors as an individual's past, gender, age, and

ethnicity (Donatelle, 2009; Maio-Esteves, 1990). The stress response may also be influenced by

the characteristics of the stressor such as its predictability and frequency (Donatelle, 2009; Maio-

Esteves, 1990).

Chronic stress. Chronic stress refers to the constant exposure to stressors or to stressful

events that occur repeatedly (Baum et al., 1999). Even the perception of a stressor, regardless of

its actual existence, can become a chronic stressor. In fact, chronic stress has been called the

"disease of prolonged arousal" (Donatelle, 2009, p.65). Much research has found that chronic

stress has negative effects on physical and mental health (Baum et al., 1999; Bendelow, 2009;

Donatelle, 2009; Matheson et al., 2006) because when experiencing chronic stress, the body is in

constant fight or flight mode. Therefore, it produces an excess of certain hormones (e.g.

adrenaline and cortisol), which can lead to the deterioration of the immune system and vital organs. Consequently, chronic stress is known to contribute to the development of many physical problems such as chronic illnesses (e.g. heart disease, diabetes, and cancer), exhaustion, unhealthy eating and sleeping habits, rapid aging, hyperventilation, indigestion, muscle tension, and headaches (Baum et al., 1999; Bendelow, 2009; Chen et al., 2006; Donatelle, 2009; Goodman, Huang, Schafer-Kalkhoff, & Adler, 2007; Pickett & Pearl, 2001). Chronic stress can also contribute to psychological problems such as depression and anxiety, as well as the consumption of alcohol and other potentially harmful substances, domestic violence, homicide and suicide (Matheson et al., 2006; Rudolph, 2002; Stockdale et al., 2007).

Neighbourhood environments can be the source of chronic stress if they contain stressors to which residents are frequently exposed (Baum et al., 1999; Matheson et al., 2006). When chronic stress is the result of the environments in which people live, it is difficult for individuals to control and avoid these stressors (Matheson et al., 2006). However, a neighbourhood's physical and social environments can also contain stress-relieving characteristics that help residents mediate the stress they experience (Stockdale et al., 2007). Most of the literature on neighbourhoods and stress tends to focus on the impact of neighbourhood stressors and few studies give much attention to neighbourhood stress-relievers (Stockdale et al., 2007). Although studying neighbourhood-level stressors is important because it identifies what characteristics need to be improved, understanding what neighbourhood-level characteristics are stress-relieving and why they are so is equally important because it may inform health professionals, policy makers, community leaders, and other neighbourhood stakeholders about how to maintain the stress-relieving nature of these characteristics.

Neighbourhood physical environment effects on stress. There are a variety of characteristics of the physical environment (i.e. built and natural environments) in a

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neighbourhood that may be stressors and others that may be stress-relievers (Braverman &
Egerter, 2008; Cohen et al., 2003; Matheson et al., 2006; Warr et al., 2007; Warr et al., 2009;
Wilson et al., 2004). Studies have indicated that within the physical environment of a
neighbourhood, damage to buildings, graffiti, as well as unmaintained or absence of parks,
sidewalks, and street lights are often considered stressors (Bernard et al., 2007; Braverman &
Egerter, 2008; Cohen et al., 2003; Warr et al., 2009). This research does not clearly state why
these characteristics may be considered stressors, but one could assume that some residents may
perceive them as a threat to their safety. For example, lack of sidewalks may leave pedestrians to
walk on the road with traffic or on gravel, which could lead to an accident. On the other hand,
stress-relieving characteristics of the physical environment may include maintained buildings,
streets, sidewalks, secure parks, and street lighting. These characteristics may be stress-relieving
as they may be considered to be less of a threat to their safety.

It may be suggested that, in many neighbourhoods, there is a mix of both stressful and
stress-relieving elements within the physical environment. For example, there may be well-
maintained sidewalks, roads decorated with trees, but also a lack of proper lighting. During the
day, residents may enjoy the sidewalks, crosswalks, roads and trees, but in the evening a
pedestrian may feel unsafe from a lack of lighting, which could create stress. Crowded housing
may also be considered a stressor because of the lack of privacy and personal space, yet, this type
of housing may, at the same time, create less isolation for residents and thus provide many
opportunities for social networking. This could contribute to a feeling of community and
belonging that may offset some of the stress felt from high-density housing. In contrast, in a
neighbourhood where residents have abundant personal space (e.g. personal yard), which may
promote health and relieve stress, there may be an increased risk of isolation since people may
keep to themselves and there may be fewer opportunities for social networking.

The commercial infrastructure that exists within the neighbourhood may also be a stressor. The simple presence of certain businesses within a neighbourhood can lead to stereotyping, which in return, can contribute to residents' stress. For instance, a neighbourhood with many laundromats may be perceived by others as a 'disadvantaged' neighbourhood, thus stereotyping the neighbourhood (Bernard et al., 2007). Living in a stigmatized neighbourhood may be stressful for some individuals. However, lack of access to laundromats within a neighbourhood can also be a stressor for those who need the service. Laundromats may provide a space for certain residents to socialize and develop social networks, which can provide social support and camaraderie needed to relieve stress.

Yet, the literature does not consider that individuals' experiences of stress and stress relief towards a neighbourhood characteristic may vary depending on their perception of it. For example, for some, graffiti is a sign of criminal activity and this may cause stress for them, while for others, graffiti is considered street art and may help relieve stress. Therefore, when studying neighbourhoods and stress, it is important to understand the perceptions, meanings, and experiences that residents have with their neighbourhood environments.

Neighbourhood social environment and stress. Just as the physical environment within a neighbourhood is composed of stressors and stress-relievers, the social environment may also encompass stressful and stress-relieving characteristics. A lack of social cohesion within a neighbourhood is often considered a stressor because of a lack of shared norms of conduct, mistrust between neighbours, lack of affective bonds between residents, absence of a sense of belonging to the neighbourhood, and disregard for neighbours (Forrest & Kearns, 2001; Matheson et al., 2006; Sampson et al., 2002). If residents do not trust one another, they may feel unsafe, which may lead them to isolate themselves from the neighbourhood and may possibly further generate stress. In addition, by isolating themselves, residents may not receive stress-

relieving resources, such as social support, that they would receive from close and trusting neighbourhood relationships.

Exposure to violence and criminal activity can also be considered stressors of a neighbourhood's social environment for some residents (Braverman & Egerter, 2008; Cohen et al., 2003; Ewart & Suchday, 2002; Robert Wood Johnson Clinical Scholars Program at University of Pennsylvania School of Medicine, 2007). The stress from this exposure has been found to lead to distrust between neighbours and isolation, which can create stress for residents (Robert Wood Johnson Clinical Scholars Program at University of Pennsylvania School of Medicine, 2007; Stockdale et al., 2007). Furthermore, when residents distrust one another and isolate themselves, they are not developing affective attachments with each other, nor are they spending time in their neighbourhood, which all affects the social cohesion of the neighbourhood, an important stress-reliever (Stockdale et al., 2007; Wen et al., 2003).

A neighbourhood that displays strong social cohesion and social capital will typically have positive social interactions among neighbours, and residents may possess a greater sense of belonging as well as many informal and formal networks. In general, informal relationships are important because they can provide social support (Bowlby, Lloyd-Evans, & Mohammad, 1998; Forrest & Kearns, 2001; MacDonald et al., 2005; Stack, 1975). Shumaker and Brownwell (1984) define social support as an exchange of resources, both practical and emotional, between at least two individuals that is intended to enhance the well-being of the recipient. Practical resources may include, for example, exchange of information, loans, transportation, and babysitting, whereas emotional resources tend to take the form of advice, active listening, and empathy. It is sometimes the case that individuals rely on informal networks for certain resources (e.g. food, advice, employment, and shelter) rather than accessing formal organizations (MacDonald et al., 2005). Residents, particularly women, often rely on informal supports from extended family

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members and friends who reside in the neighbourhood (Barnes, 2004; MacDonald et al., 2005; Matheson et al., 2006; Warr, 2005). Stack (1975), who studied the relationships within a poor African-American neighbourhood with strong social cohesion, found that residents considered community members who provided them with much practical and social support as their own kin. Stack clearly demonstrates that informal supports can play a significant role in the life of residents.

Formal relationships with workers from community organizations, churches, or other institutions (e.g. schools, hospitals, and libraries) often offer a different type of support that may also be helpful for stress relief (Stockdale et al., 2007). Helping residents connect with people outside of the neighbourhood, providing health and social services such as food, shelter, employment opportunities, counselling, and spiritual guidance are examples of the services that these formal relationships may offer. Furthermore, these organizations may contribute to the social cohesion and social capital in a neighbourhood since many of their services attempt to bring residents together through social activities and events such as cultural evenings or through a community garden (Bernard et al., 2007). In all, neighbourhoods with strong social networks may help residents have a positive perception of their neighbourhood (MacDonald et al., 2005). These strong social networks may also reinforce a sense of neighbourhood belonging because residents help each other and learn to trust one another, which may help to decrease stress (Kearns & Parkinson, 2001).

There are few studies that have explored how strong informal connections could also be stressful (Morrow, 2000; Warr, 2005). Strong social ties with extended family members and friends who live in the neighbourhood can lead to conflict for various reasons (Morrow, 2000; Warr, 2005) and such conflicts may be stressful for individuals and may create tension in the neighbourhood. Although formal social networks are aimed at supporting residents, which

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should prevent or decrease stress, they can also contribute to stress. For example, schools may be considered a safe and positive place for some youth, while for others they can represent a space for violence or bullying, which may create fear, hostility, and stress (Morrow, 2000). Also, some community workers may hold negative views of the neighbourhood they work in and these negative views may create tension within the neighbourhood, which could create stress for residents. As an example, some research has indicated that, in some cases, local police officers hold negative views of the neighbourhoods they work in, leading them to act more aggressively with residents (Henry, Tator, Mattis, & Rees, 1995; Terrill & Reisig, 2003; Weitzer & Tuch, 2004). This behaviour has been shown to be detrimental to their relationship with neighbourhood residents (Terrill & Reisig, 2003).

Another stressor that is found within the social environment is stigma. Stigmatization refers to negative labelling or stereotyping against people who are perceived as having lower social value or against those who are outside of social norms (Warr, 2005). Research by Warr (2005) and Warr et al. (2009) has found that it is mainly those who have no direct experience with a neighbourhood, who are stigmatizing that neighbourhood. Furthermore, MacDonald et al. (2005) found that stigma is often rooted in media outlets (e.g. local newspapers). Participants of their study perceived media reports to contain false and unrepresentative information of their neighbourhood and its residents.

Stigma seems to be a significant stressor as past research by Warr (2005) has found it to be persistently discussed by her participants. This may be because stigmatization of a neighbourhood has been found to not only impact the image of the neighbourhood but to also personally impact residents. Since many people spend a large amount of time in their home neighbourhood, it can come to represent who they are (Forrest & Kearns, 2001). Thus, Warr et al. (2009) argue that the simple identification of one's neighbourhood can result in instant

labelling, stigmatization, or discrimination of the resident. Therefore, in order to avoid such instant discrimination, many residents of a stigmatized neighbourhood will minimize their contact outside of the neighbourhood, which may lead to limited opportunities for individuals to participate in social networks outside of their neighbourhood (Warr, 2005).

The physical and social environments overlap. Although the physical and social environments within a neighbourhood are often spoken about separately for conceptual purposes, they are highly interconnected (Cohen et al., 2003). For instance, characteristics of the physical environment, such as buildings or parks, can be places for social interaction and building social networks (Bernard et al., 2007). Conversely, social networks or civic engagement may lead to the establishment of a park, housing complex, road maintenance, or other aspect of the physical environment (Bernard et al., 2007; Cohen et al., 2003). The physical environment may also discourage the development of strong social ties if the physical environment is not built for socialization opportunities. For instance, if there is a lack of spaces for socialization or if these spaces are not maintained (i.e. vandalised or unkept), there may be fewer opportunities for socializing, which can affect the social networks between residents. Additionally, Warr et al. (2009) found that although shared spaces, such as laundromats, passages, elevators, and stairways provide space to develop social networks, they may also lack privacy, which can increase exposure to and minimize protection against the negative actions and behaviours of certain residents. If residents feel unsafe in such spaces they may avoid the spaces thus reducing possible positive contacts with other residents.

Impacts of Neighbourhood Perceptions

Some researchers have found that perceptions of neighbourhood environments seem to have a stronger impact on health than the actual environment itself (Warr et al., 2007; Wen et al., 2003; Wilson et al., 2004). This finding demonstrates the importance of studying residents'

perceptions, meanings, and personal experience of neighbourhood environments on health and stress rather than simply the objective characteristics of these environments (e.g. amounts of green space or amount of pollution) on health and stress. Studies that only explore these objective characteristics may consider some neighbourhood elements to be stressful or stress-relieving, but residents of the neighbourhood may perceive or experience them differently, therefore potentially having a different effect on health.

Neighbourhood Effects on Adolescent Stress

The definition of adolescence and the ages at which it occurs varies across societies and cultures (Arnett, 2007). In most Western societies, adolescence is a transitional period when individuals leave their childhood and prepare for the responsibilities of adulthood (Arnett, 2007; Frydenberg, 2008). Debates in the literature exist around the ages that constitute adolescence. According to Arnett (2007), adolescence is defined as being between the ages of 10 and 18 years, which encompasses the beginning of puberty to the commencement of emerging adulthood. Other researchers have divided adolescence into two stages: early adolescence (ages 10-14) and late adolescence (15-18) (Arnett, 2007). It is important to note that not all authors agree that adulthood starts at age 18. Rather, some argue that there is another developmental period named emerging adulthood, which takes place between the ages of 18 and 25 years (Arnett, 2007).

Much of the literature concerning the effects of neighbourhoods on health addresses either adult health or the health of children (Braverman & Egerter, 2008; Forrest & Kearns, 2001; Kearns and Parkinson, 2001; Matheson et al., 2006; Pickett & Pearl, 2001; Ross et al., 2004; Wilson et al., 2004). It is important to distinguish adolescent health from adult or children's health because youth experience health issues particular to that period of development with regard to physical, psychological, and sexual development (Arnett, 2007; Breidablik et al., 2008; Goodman et al., 2005). With respect to stress, adolescents may experience stress related to

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finding their identities, understanding and accepting the physiological changes taking place, school and parental expectations, as well as peer and media pressure (Maio-Esteves, 1990; Piko & Fitzpatrick, 2001; Rudolph, 2002). Youth tend to spend a great deal of time outside of their homes and in their neighbourhood environment (Morrow, 2000), therefore neighbourhood characteristics may also be an important source of stress. Breitbart (1998) argues that youth are profoundly aware of the influences of their local environment. They see and feel the constraints of their neighbourhood environments and they appreciate the safe places and resources that these same environments provide. Therefore, constant exposure to neighbourhood-level stressors may contribute to chronic stress for youth and in return, may affect their risk of emotional, cognitive, and behavioural difficulties (Frydenberg, 2008) including engaging in dangerous behaviour (e.g. crime, violence, suicide, eating disorders, and drug/alcohol abuse) (Cicognani et al., 2008).

Although youth may be negatively impacted by certain neighbourhood characteristics, according to Cicognani et al., (2008), youth also tend to benefit from the social support they often receive from the social environments in their neighbourhood. This social support may contribute to relieving the stress they experience from other characteristics of their neighbourhood. Morrow (2000) draws our attention to neighbourhood friendships as crucial sources of social support for youth. In many cases, adolescents spend more time with friends than with their own family, and time spent with friends seems to increase with age (Morrow, 2001). However, since youth attribute such great importance to informal social relationships, conflicts or ruptures in these relationships can also cause much heartache and stress (Morrow, 2000).

Adolescents may further benefit from a sense of belonging to a community. A strong social environment within a neighbourhood may help steer adolescents away from unsafe behaviours through the establishment of social norms, community involvement, and sense of belonging (Bowlby et al., 1998; Cicognani et al., 2008). Nonetheless, Morrow (2000, 2001)

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argues that youth often feel excluded from neighbourhood civic engagement. They are often left out of any decision-making processes to improve the neighbourhood. This exclusion may reduce adolescents' sense of belonging to their neighbourhood as they may feel that their opinions are not valued. Morrow's research (2000) has found that youth have valuable ideas on how to improve their neighbourhood environments. These ideas and opinions should be heard considering that youth know their neighbourhood well since they tend to spend a great deal of their time in it (Morrow, 2000). It is possible that there may be more youth engagement in neighbourhoods that provide support to youth, as they may be encouraged to participate and voice their opinions. Therefore, the impact of neighbourhood organizations such as community youth services on youth's health, stress, and neighbourhood involvement should be further explored.

The impacts of neighbourhoods on the stress of adolescents may vary depending on the type of neighbourhood or the elements that characterize the neighbourhood. For instance, rural neighbourhoods may have a different impact on the stress of adolescents than urban or suburban neighbourhoods because of the different physical and social characteristics within rural places. In rural neighbourhoods, for example, there may be fewer community-based and health services than in urban neighbourhoods (Gamm, Castillo, & Williams, 2004). This means that if adolescents need stress-relieving support from these types of services they would have to leave the neighbourhood or even their town to access them. Also, it is important to consider that family situations, such as parental separation, may cause some adolescents to live in multiple neighbourhoods. This 'two neighbourhoods' experience may affect their stress particularly if there are multiple stressors and stress-relievers in both neighbourhoods.

Although the aim of this research was to study neighbourhood environmental impacts on adolescent girls' stress, it is important to note that there may be many other sources of stress in

girls' lives from other aspects of their environments and communities. Other environments, such as the school environment, may create stress and/or relieve stress. Klinger (2004) found that encouraging and supportive relationships with teachers and peers as well as a positive classroom atmosphere enhance youth's satisfaction with school, thus possibly reducing their experiences of stress. Similar findings were found with relationships between youth and parents in the home environment (Saab, 2004). Many youth have also been found to join communities of interest such as dancing, music, political, and volunteering groups (Morrow, 2000). It is likely that these communities of interest will have some impact on the stress of youth, either in a positive and/or negative way. As Morrow (2000) notes "young people's 'communities 'more often constitute a 'virtual' community of friends based around school, town centre and street, friends' and relatives' houses, and sometimes two homes, rather than a tightly-bound easily-identifiable geographical location" (p.150).

Impacts of neighbourhoods on adolescent girls' stress. Research suggests that there exist differences between males and females in relation to their experiences with and reactions to stress (Rudolph, 2002; Sigfusdottir & Silver, 2009). Typically, stressors identified by girls relate to matters of friendships, family and intimate relationships or in other words, communal stressors as it involves others (Morrow, 2000; Sigfusdottir & Silver, 2009). On the other hand, boys tend to feel stressed because of self-involved events such as accidents or illnesses (Sigfusdottir & Silver, 2009). Girls and boys also often react to their stressors differently. Girls tend to internalize their feelings and boys tend to externalize them through anger and violence. Internalizing stress leads to an increased risk of depression and anxiety, as well as risk behaviours such as eating disorders, drug and alcohol abuse, unsafe sexual practices, and suicide (Sigfusdottir & Silver, 2009).

The impacts of neighbourhoods on stress may be different for adolescent girls' health than adolescent boys' health mainly because there seem to be some neighbourhood-level stressors that are specific to females (Cicognani et al., 2008; Matheson et al., 2006; Morrow, 2000, 2001; Watt & Stenson, 1998). In some studies, adolescent girls and women raised issues relating to safety, fear of crime, and "fears of rapists" (Morrow, 2000: p.144) and of other types of violence targeting females (Cicognani et al., 2008, Morrow, 2001; Watt & Stenson, 1998). Watt and Stenson (1998) found that adolescent girls often accessed public spaces such as pizza joints or shopping centres because they felt that these spaces were more safe than the streets where there was risk of unwanted or threatening male attention.

Women also seem to be more integrated in their neighbourhood and rely more on social relationships for social support and stress relief than men (Frydenberg, 2008; Matheson et al., 2006). There is not much evidence regarding adolescent girls' level of neighbourhood integration and involvement, but the evidence for women may be applicable to girls. Also, Morrow (2000) found that adolescent girls gave greater importance to neighbourhood friendships and relied more on these friendships than did adolescent boys. They seem to receive an important source of social support from these friendships, however conflicts and ruptures within friendships seem to cause a lot of stress for girls. Furthermore, problems in the neighbourhood physical and social environments that can act as barriers to creating and maintaining social relationships (Matheson et al., 2006) may have a bigger impact for women and girls as their primary source of social support is from social relationships.

Summary

Existing research indicates that various characteristics of the physical and social environment within a neighbourhood can affect one's health and stress. Constant exposure to stressors within these neighbourhood environments may lead to the development of chronic stress

(Baum et al., 1999; Matheson et al., 2006), which can contribute to many serious physical and psychological health issues (Bendelow, 2009; Chen et al., 2006; Donatelle, 2009; Egerter et al., 2008; Goodman et al., 2007; Pickett & Pearl, 2001). Adolescents are said to spend a lot of their time in their neighbourhood (Morrow, 2000), and therefore may be greatly exposed to stressors within their neighbourhood environments. More specifically, girls tend to report more stress than boys (Bolognini et al., 1996; Freeman, 2004; Maio-Esteves, 1990; Rudolph, 2002) and there may be neighbourhood-level stressors that vary by gender (Cicognani et al., 2008; Matheson et al., 2006; Morrow, 2000, 2001; Watt & Stenson, 1998).

When studying neighbourhoods and health, studies mainly focus on the association between the objective characteristics of neighbourhood and health outcomes. Few studies explore residents' perceptions, meanings, and experiences of neighbourhood characteristics and how they impact their health and stress. What is identified to be health impairing or health promoting by an outsider of a neighbourhood may be different from how residents of that neighbourhood experience and perceive these characteristics. Therefore, understanding how adolescent girls perceive and experience neighbourhood characteristics to influence their stress could help health promoters and other health professionals improve neighbourhoods in a way that relates to these girls' experience with their neighbourhood.

Chapter 3: Methodology

Conceptual Framework

Constructivist paradigm. In research, a paradigm is defined as a set of views that determine the way researchers understand and interpret the world, which will guide their research approach (Guba & Lincoln, 1994). The constructivist paradigm was the paradigmatic approach utilized for this study. Constructivism acknowledges that each individual experiences and perceives the world they live in differently (Guba & Lincoln, 1994). These perspectives are constructed by individuals' historical, social, and cultural contexts (Guba & Lincoln, 1994). Constructivist researchers seek to understand the various perceptions of an issue being studied through the eyes of those who experience it (Guba & Lincoln, 1994).

Researchers using a constructivist approach do not try to remain objective throughout the research process nor do they separate themselves from the data. They understand that their own background will shape their interpretation of the data (Creswell, 2003, 2007). Thus, constructivist researchers realize the importance of acknowledging their biases, which stem from personal experiences and perspectives (Creswell, 2003). This personal awareness permits them to acknowledge the role of their biases in the interpretation of the data. This way, they may distinguish their biases and values from the participants' perspective (Creswell, 2003).

Strategy of inquiry: elements of grounded theory. A key tenet of grounded theory methodology is that a theoretical understanding or explanation of a phenomenon should be grounded in actual human experience rather than the thoughts or ideas of the researcher (Creswell, 2007; Glaser, 1978; Strauss & Corbin ,1998; Wuest, 2007). Grounded theorists argue that "theory derived from data is more likely to resemble the "reality" than is theory derived by putting together a series of concepts based on experience or solely through speculation" (Strauss & Corbin, 1998, p.12). Another key element of grounded theory is the concept of "theoretical

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sensitivities", which has been defined (Glaser 1978) as personal experiences as well as knowledge of theories and perspectives from various disciplines that researchers utilize to help them better understand and interpret the data. Researchers using grounded theory must be aware of their theoretical sensitivities as this helps them add depth to the data analysis.

Grounded theory methodology was originally conceptualized by Glaser and Strauss (1967), but over the years it has evolved through the hands of different researchers (Creswell, 2007). Strauss and Corbin (1990; 1998) have developed their own set of guidelines and techniques for grounded theory researchers to follow when analyzing their data, and in the present study, I utilized some of these guidelines and techniques. As Strauss and Corbin (1998) argue, researchers need to be flexible and creative when analyzing their data and use the techniques best suited to their study. I attempted to follow this process by using specific coding techniques to analyze my data but at the same time creatively analyzing the data.

Given the exploratory nature of the present study, the aim was to develop a thick description of the phenomenon and to begin developing a conceptual understanding of the findings. There was no intention to develop a theory *per se*. Rather, I sought to develop a conceptual understanding by identifying concepts and possible relationships between these concepts within the systematically gathered data (Richards & Morse, 2007; Strauss & Corbin, 1994, 1998).

Theoretical perspective: feminist research theory. Feminist theory encompasses many different feminist perspectives such as liberal, radical, and socialist. Despite these differences, many feminists agree that most traditional research represents the interests and concerns of the dominant social group and ignores or misrepresents women's particular issues. As a consequence, women's experiences have not been adequately illustrated and understood (Campbell & Wasco, 2000; Dankoski, 2000). Feminist researchers want to utilize their research

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as a means for women to speak of their realities and experiences as women in relation to the society in which they live (Campbell & Wasco, 2000). They also want to demonstrate how men and women experience life differently and that it is important to understand and value these differences (Hesse-Biber, 2007). They also understand that women live a multitude of experiences based on, among other things, their ethnicity, SES, sexual orientation, and age (Hesse-Biber, 2007).

Some feminists challenge research that values complete objectivity because they feel that objectivity creates hierarchical positions between the researcher and the participant, leaving the participant with a feeling of inferiority with respect to the researcher (Campbell & Wasco, 2000; Hesse-Biber, 2007). This hierarchy between researcher and participant does little to establish trust and to build an open relationship where participants feel comfortable to share their personal thoughts and experiences (Campbell & Wasco, 2000). Therefore, in order to avoid establishing hierarchical positions between researcher and participant, feminist researchers view participants as the 'experts' of their life experiences, with the researcher's role as one of learning about these experiences. Their orientation is one of respect towards the participant and her life experiences (Campbell & Wasco, 2000; Currie & Wiesenberg, 2003; Dankoski, 2000; Hesse-Biber, 2007).

Feminist researchers believe that it is crucial for research to be a catalyst for social change (Dankoski, 2000). For this to be done, the study process and findings must help women empower themselves by gaining knowledge, awareness, and self-confidence in order to advocate for their rights and respect. Therefore, an important value for feminist researchers is that their research be *for* women and not *about* women (Dankoski, 2000). This empowerment may help women improve their lives and therefore, politically mobilize them to work towards changing the oppressive social structures (Campbell & Wasco, 2000; Dankoski, 2000).

For this present study, feminist research was a good fit because it provided an opportunity for adolescent girls to speak about their perceptions of the key aspects of their neighbourhood environments that cause or relieve them stress. Feminist research also guided me in executing important research techniques to ensure equality and respect between the participants and myself (Campbell & Wasco, 2000). These techniques include reinforcing the concept that participants are the experts of their lives, that the researcher's role is to learn about their experiences, speaking a language that relates to their situation, and showing empathy (Campbell & Wasco, 2000). Demonstrating to the participants that their experiences and perceptions are valid sources of knowledge may have contributed to a sense of empowerment for these girls (Campbell & Wasco, 2000).

Methods

Population inclusion criteria.

Age grouping: 15 to 18 years. There are various ways of grouping and defining the ages of adolescence. This study followed the definition of Arnett (2007), where adolescence is divided into two stages: early (ages 11 to 14 years) and late (ages 15 to 18 years) adolescence. Most studies on adolescent health either examine youth from all stages of adolescence (i.e. from 11 to 18 years of age) (Arnett, 2007; Breidablik et al., 2008; Chen et al., 2006; Finkelstein, Kubzansky, & Capitman, 2007; Goodman et al., 2005) or they focus on the early stage of adolescence (i.e. ages 11 to 14 years of age) (Maio-Esteves, 1990; Morrow, 2000; Sigfusdottir & Silver, 2009). For the present study, I chose to study the 15 to 18 year age group because few studies have focused on this late adolescent stage. It is also a critical stage of development because youth are preparing to embark on young adulthood (often defined as ages 18-25) and need to acquire the proper skills to do so (Arnett, 2007). Also, overall stress is said to increase

with age for adolescents, meaning that older adolescents may experience more stress than younger adolescents (Rudolph, 2002).

   Study location: North End, Halifax Nova Scotia. This study took place in the North End of Halifax, Nova Scotia. The approximate geographical limits of this area are North St. (northern limit), Brunswick St. (eastern limit), Cogswell St. (southern limit), and North Park St. and Agricola St. (western limit) (see Appendix A). The North End was chosen because of its numerous and diverse physical and social environmental characteristics such as a variety of businesses, community organizations, churches, schools, people of different ethnicities, and of various SES levels. By studying such a diverse neighbourhood, I hoped to understand how adolescent girls living in this neighbourhood perceived these characteristics as well as if and how they affected their stress in both positive and negative ways. Also, during the preliminary stages of the research, I discussed my ideas for this study with the director and a public health nurse of the North End Community Health Centre. They confirmed that the North End would be a suitable neighbourhood for this research project. Lastly, the North End was also a more accessible neighbourhood for me as a student without a vehicle. I could easily walk to the neighbourhood during winter months or take the bus.

   Community Counts (2010), a website which provides various statistics from the 2006 Canadian Census concerning demographics, income, education, labour, health, and resources of Nova Scotian communities, provides some limited data on the North End of Halifax.

Table 1. Income Related Statistics for the North End of Halifax

Average Household Income	
North End: $49,806	Halifax Regional Municipality: $66,339
Percentage of Households Considered Low-Income	
North End: 26.5%	Halifax Regional Municipality: 14.3%

As illustrated in Table 1, the average household income for the North End is lower than the municipal average and there is a higher percentage of households living in low-income in the North End compared to the city as a whole. Moreover, Community Counts (2010) provides information on the various ethnicities that characterize this neighbourhood. According to the website, residents with British origins (e.g. English, Irish, Scottish, Welsh, and other) represent approximately 89.2% of the neighbourhood. Other ethnic groups include Canadian, European (i.e. Western, Southern, Eastern, and Northern Europe), French (i.e. Acadian and French), Aboriginal (i.e. Inuit, Métis, and North American Indian), African, Asian (East, South East, South, and West), American, and Caribbean (Community Counts, 2010). The population in this neighbourhood is also comprised of 12.1% of visible minorities, and the Black community represents 7.8% of this neighbourhood (Community Counts, 2010).

Sample size. The sample size for this study included eight participants. The purpose of this study was not to generalize from a sample to a population. Rather, it was to explore the research topic. Therefore, this sample size was small enough to allow me to explore in depth and with various tools (i.e. interviews and photo elicitation) the research topic at hand as well as to collect rich data. Future studies that would like to further explore this topic are suggested to expand on the sample size.

Recruitment. Participants were recruited using various purposeful sampling strategies. Purposeful sampling permits the researcher to select information-rich cases based on the issue being studied (Patton, 2002). Criterion sampling, a form of purposeful sampling, was employed for this study because it ensures that the participants have met the specific requirements (Patton, 2002), which are based on gender, age, and neighbourhood of residence. In addition, snowball sampling, another form of purposeful sampling, was utilized in this study. In snowball sampling,

I asked participants to recruit, from the people they know (e.g. friends, family members, co-workers, class mates, and neighbours), other potential participants for this study (Patton, 2002).

The recruitment process for this study took approximately fourteen weeks. I contacted various community organizations and commercial establishments and obtained verbal permission for placing poster advertisements (see Appendix B) in their establishments. In addition, I contacted organizations in the North End who facilitate groups for adolescent girls in order to obtain permission to give short presentations to these groups highlighting the essential points of the study (see Appendix C). Interested participants were given the option to contact me via telephone or email (provided on the recruitment poster) in order to set up a date, time, and place that we would mutually agree on for the first interview. However, all participants approached me right after my short presentation to set up a time and place for the interview. Recruiting from various community organizations was also done in order to obtain participants from the diverse ethno-racial communities that make-up this neighbourhood, as well as participants from different economic backgrounds.

Procedure for data collection.

Semi-structured interviews. Face-to-face, semi-structured interviews are a commonly used grounded theory data collection technique (Wuest, 2007). A semi-structured interview entails that the researcher will have predetermined open-ended questions and probes. However, the researcher must be flexible in following the participants' trains of thought and the researcher must be prepared to probe spontaneously depending on the direction of the interview (Wuest, 2007). For this study, it was planned that there would be two face-to-face semi-structured interviews to collect the data. However, only the first interviews took place. The interviews took place in a comfortable and accessible setting agreed by both the participant and myself: the

George Dixon Centre (a recreational centre within the neighbourhood). I was given permission to use their boardroom, which was quiet and private.

Prior to the first interview, I recruited and interviewed an adolescent girl from outside of the North End to pilot the first interview guide. Based on the feedback from this volunteer, little was done to change the interview guide. With each participant, the first interview collected the core of the data. The interview was characterized by open-ended questions relating to their perception of and experience with their neighbourhood, the neighbourhood impacts on their stress at the physical and social environmental levels, and socio-demographic questions (see Appendix D).

Once the first interview was completed, each participant received a disposable camera and I explained as well as provided the necessary guidelines for the photo elicitation component of the study (see Appendix E). Essentially, the participants were asked to take photos of key aspects of their neighbourhood that they considered to be stressors or stress-relievers. At the time of the first interview, participants and I decided upon a time and place to meet in order for me to pick up their camera. Participants were given a few days to a week to complete the photo elicitation component of the study. When I picked up the camera, we also set up the time and place for the second interview. If the participants had not contacted me after one week, I tried to contact them via the telephone number or email address that they had provided to me. When I had not heard from them after three weeks, I considered them to have withdrawn from the study and only used the data from their first interview. I also used the photos of the participants who brought back their camera and gave written consent for the researcher to utilize their photographs.

As mentioned earlier, no second interview occurred since the researcher could not contact participants. The purpose of this second interview was to examine the photos taken by the participants as well as to further discuss issues from the first interview. Questions for the second

interview were aimed at understanding the meaning of photos taken for participants (see Appendix F).

Photo elicitation technique. Photo elicitation is simply defined as using photographs during research interviews (Harper, 2002). This research technique is often used in social science research and it is said to be user friendly as well as not expensive (Epstein, Stevens, McKeever, & Baruchel, 2006). Using photos during interviews can provide another avenue for participants to express, document, and give concrete examples of their experiences that they shared during the previous interview (Epstein et al., 2006; Morrow, 2001). Furthermore, it may give participants the opportunity to further reflect on their realities, which they may not have done without photo elicitation (Morrow, 2001).

Other researchers have used photo elicitation technique to discover youth's and children's perceptions of and feelings towards their neighbourhood or other frequently used space and they have found photo elicitation to be an effective interviewing tool for youth (Epstein et al., 2006; Morrow, 2000). Morrow (2000) states that youth often need a variety of ways of expressing themselves and using photos can be a creative and fun way of doing so. Furthermore, it has been found that photo elicitation is an effective way for youth to reflect on the strengths and weaknesses of their neighbourhood from their point of view (Morrow, 2001). Also, youth are often excluded from neighbourhood planning decisions, even though they spend a great deal of time in their neighbourhood and thus know their surroundings well (Epstein et al., 2006; Morrow, 2001). Therefore, photos can provide a platform for youth to voice their concerns about their needs, interests, and concerns relating to their neighbourhood in a visual format (Epstein et al., 2006; Morrow, 2001). Moreover, Strack, Magill, and McDonagh (2004) found that 91% of the participants in their study enjoyed the experience of taking photos and talking about their photos.

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In all, photo elicitation may have been a useful strategy for this study as it may have helped adolescent girls further convey and reflect upon their experiences and perceptions of their neighbourhood environments' influence on their stress, in both a positive and negative way. Also, this technique was hopefully enjoyable for them. However, since many participants did not fully participate in this part of the study as only three cameras were returned, the impacts of this technique on the expression of adolescent girls' voices is not clear.

Analytic approach.

Data management. All first interviews were recorded and transcribed verbatim by myself. All possible identifying information was removed from the transcripts. Participants were assigned an ID code to accompany their transcripts, quotes, and photos. All data and participant information is kept in a locked cabinet for a minimum of five years at the School of Health and Human Performance at Dalhousie University and Dr. Lois Jackson (thesis supervisor) and I are the only people with access to this cabinet. The transcriptions were imported into Atlas-TI, a qualitative data organizing and analysis software program.

Data analysis techniques. The data analysis techniques for this study were based on Strauss and Corbin's (1994, 1998) grounded theory data analysis techniques. The data analysis was a continual process that occurred during data collection and after data collection was completed. Strauss and Corbin's grounded theory analysis technique follows three steps: open coding, axial coding and selective coding. Strauss and Corbin (1998) identify many ways of coding. I followed their recommended line-by-line coding as it helped me become familiar with the data. During open coding, the initial stage of coding, information was broken down, examined and compared, while I was also conceptualizing and categorizing the data. The data were broken into ideas, events, or acts, and then given a name that represented them. I then returned to the data to try and find new concepts and then compared these concepts with the ones

found earlier for differences and similarities. Similar concepts were grouped under categories that explained the main idea of these groups of concepts.

In axial coding, the next step in this analysis, I began identifying relationships between categories (Strauss & Corbin, 1994, 1998). For example, a relationship was found between the categories 'violence and crime' and 'stigma' as it seems that violence and crime in the neighbourhood are important reasons for which the neighbourhood is stigmatized. I also returned to the data (i.e. coded interviews) to verify these possible relationships. Selective coding, the last step in data analysis, was used to find the core category that represented the underlying story of the data and that connects all categories. I selected this one key category to become the core category because it was the only category that related to all other key categories. I also returned to the data and found that participants had significantly discussed the core category in their interviews as an important concept even though they did not always use the exact same term of 'sense of community'. In the end, this coding process helped me create a conceptual understanding of the issue being studied from the participants' perspectives (Creswell, 2006).

It was anticipated that photo analysis would be carried out during the second interview with the participants. However, since there were no second interviews, the photos were not analysed with the participants.

Quality and rigor. Quality and rigor of qualitative research is assessed by trustworthiness. Trustworthiness is based on the credibility, transferability, dependability, and confirmability of the research (Krefting, 1991; Morse, Barret, Mayan, Olson, & Spiers, 2002). Credible research accurately conveys the experiences and realities of participants (Lincoln & Guba, 1985). Transferability refers to the ability of other researchers to determine whether or not findings can be applied to their research (Lincoln & Guba, 1985). Research that is dependable has consistent findings and the ability to replicate in similar conditions (Lincoln & Guba, 1985).

Lastly, confirmability is ensured when findings are grounded in the data and representative of participants' experiences rather than researcher biases and interest (Lincoln & Guba, 1985). This study has utilized a series of methods that ensure the fulfilment of these measures of trustworthiness.

I employed peer examination for this study. Peer examination involves discussing the many aspects of the study with skilled researchers to deepen the analysis (Creswell, 2007; Krefting, 1991). This ensures the credibility and dependability of the study. In this study, this was done regularly with the help of my thesis supervisor and thesis committee members.

Providing rich descriptions of the participants' experiences and of the research process allows other researchers to determine if the research findings are transferable to their population (Creswell, 2007; Lincoln & Guba, 1985). By using semi-structured interviews based on grounded theory methodology, participants were able to provide a detailed account of their experiences and perceptions towards their neighbourhood environments and its effects on their stress. Therefore, this rich data has allowed me to give a rich description of the participants' experiences to ensure transferability. Also, I gave a thorough description of the research process to ensure transferability of this study.

In grounded theory, the researcher's personal biases will play a part in the collection and analysis of data. A certain level of subjectivity is seen as a strength of the research because in qualitative research, the researcher is part of the study and not separate from it (Krefting 1991; Richards & Morse, 2007; Strauss & Corbin, 1998). Furthermore, a certain level of subjectivity from the researcher will help establish a trust relationship with participants. Davies and Dodd (2002) encourage the researcher and participant to have "a rapport based on a sense of shared understanding and empathy" (p. 283). To ensure rigor in this study, I used reflexivity methods to help myself become aware of my personal experiences and biases relating to this study and to the

participants. With the use of a field journal, I reflected on my personal thoughts, feelings, and ideas from my interactions with the participants. This is an example of how reflexivity was utilized to ensure credibility and confirmability of this study. Reflexivity helped me become aware of my personal biases and how it affected my work in order to modify the research appropriately (Krefting, 1991).

Ethical Considerations

Dalhousie University's Health Sciences Research Ethics Board approved this study.

Before beginning the interview, I asked each participant to read and sign an informed consent document (see Appendix G) explaining the purpose of the study and any risks associated with their participation. To ensure informed consent, I explained the main points of this form with each participant and made sure that they had read the consent form before asking them to sign. Participants were also asked to give their consent to having the interviews recorded and to permit me to use direct quotes in the study. They were also asked to give their consent to having the photos that they have taken published in the thesis. Parental consent was not requested because the participants were of age to consent without parental approval.

I ensured that the privacy of people and places was respected through the picture taking. In order to do this, I reviewed the photo elicitation guidelines with each participant (see Appendix E). This included avoiding taking photos that can identify persons. If participants were to take photos that identified a person, I would have discarded this photo and not included it in the study. I was also careful to provide limited examples of photos to participants. This ensured that the photo ideas were truly from the participants' perspectives and not clouded by my suggestions (Wang & Redwood-Jones, 2001)

I was aware that power relations might exist between participants and myself due to age, education levels, ethnicity, and socio-economic status. I worked at making the participants feel

as comfortable as possible. To do this, I adapted my language to the language level of the participants. Using a vocabulary that relates to the participants helped create a relationship of trust and respect between the participants and myself (Fleming, 2007; Fontana & Frey, 1994). I was also aware of the way I was presenting myself to participants. Adhering to feminist theory, I understood that participants were the 'experts' of their experiences and my role was to learn from them as well as to help them voice their experiences (Fontana & Frey, 1994).

The participants and their interviews have been kept anonymous and confidential. All names were removed and replaced by an ID code. All data and participation information will be kept in a locked cabinet for a minimum of five years at the School of Health and Human Performance at Dalhousie University where only Dr. Lois Jackson (thesis supervisor) and I will have access to it. This ethical consideration was made clear in the consent form. The exception to anonymity and confidentiality is in the case of a disclosure by the participant of being in any kind of imminent danger (i.e. abuse to others or suicide). In this case, I was instructed to first speak with my supervisor for initial assessment and then upon her guidance, contact the proper authorities.

The risk involved in participating in this study was minimal. However, talking about how neighbourhood characteristics relate to stress could have been a sensitive topic for participants. Consequently, the participants were given a list of contact information for local resources (e.g. Kids' Help Phone, bullying hotline, and community and crisis centers' contact information) at the end of the interview and they were encouraged to access these resources as needed (see Appendix H).

A monetary honorarium of $15 was given to the participants at the beginning of the first interview in order to thank them and compensate them for their time and energy.

Dissemination of Results

Dissemination of results will be done through various forums. In order to reach the academic and scientific communities, I disseminated my study during my thesis defense, at Crossroads Conference (an interdisciplinary student health research conference held at Dalhousie University), at the Canadian Public Health Association's Annual Conference, and possibly to other future conferences relating to the topic of this study. I also plan on sending my study to appropriate scientific journals for publication such as *Health and Place*, *Journal of Adolescent Health, Journal of Adolescence,* and *Canadian Journal of Public Health*. To reach community organizations, I will write an executive summary of this study and send it to interested North End community organizations (e.g. George Dixon Centre, North End Library, North End Community Health Centre, YMCA Employment Centre, and Parent Resources Centre). The dissemination of results is done in the hopes of helping them better understand how adolescent girls experience and perceive their neighbourhood in relation to their stress. With this information, these communities (i.e. academic and agencies) could seek to explore this topic further as well as better shape their research and programs to suit the specific needs of this population.

Chapter 4: Results

This chapter describes the results of eight in-depth interviews with adolescent girls between the ages of 15 and 17 years living in the North End of Halifax, Nova Scotia. In terms of participants' socio-demographic information, one participant was aged 15 years, four participants were 16 years old, and three participants were 17 years old. All participants were enrolled in high school at the time of the study. Two participants worked at part-time jobs, while the others did not work in the paid labour force, although some of them anticipated summer employment. All participants, with the exception of two, had lived in this neighbourhood for their entire lives. The other two stated that they lived in this neighbourhood for approximately seven years. When asked to describe their ethnic or cultural background, three participants identified as Black and one participant as half Black and half White. Some participants stated that they did not identify with an ethnic or cultural background. They may not have felt comfortable indicating their ethnic or cultural background or they may not have been aware of it. It is also possible that they did not completely understand what was meant by the terms ethnic or cultural groups.

This chapter begins with participants' general perceptions of their neighbourhood in order to give the reader an idea of the neighbourhood's composition. Secondly, since all participants identified key characteristics of their neighbourhood's social and physical environments as either stressors, stress-relievers, or as both, the following sections of this chapter discuss the key themes relating to neighbourhood-level stressors and stress-relievers. The themes related to key stressors include violence and criminal activity, neighbourhood conflicts, and stigma. Themes related to key stress-relievers include strong sense of community, community organizations, neighbourhood-level stress-relieving activities, and personal support within the neighbourhood. Quotes from the interviews are used to illustrate some key ideas and participants are identified with a code in order to maintain their confidentiality. Also, some photos taken by

participants were included in this chapter. These photos are used only for the purpose of adding emphasis and visual aid to the text. These photos were selected because they clearly relate to what participants talked about during their interviews. For instance, a participant discussed a specific stigmatized geographical area of the North End and below this statement is a photo of the intersection representing this area.

The majority of the key themes seem to be part of the social environment of the neighbourhood, despite the fact that the researcher probed for stressors and stress-relievers from both environments. However, since the physical and social environments often overlap, many of the themes from these studies also intertwine with both the physical and social environment. For instance, community organizations can be part of the physical environment because their buildings are physically within the neighbourhood and they can also be considered part of the social environment because they deliver supportive services to the community.

Most participants had similar views on the key neighbourhood-level characteristics that cause stress and relieve stress. However, in a few cases, a particular neighbourhood-level characteristic was identified to be a stressor for some participants, but for others it was considered to be a stress-reliever. For example, several participants discussed the presence of the local police in their neighbourhood environment as a stressor due to some poor community relationships with the police. Conversely, a few participants did not identify police as a stressor, but as having helped create a safer environment by addressing crime in their neighbourhood.

This chapter also discusses participants' suggestions for improving their neighbourhood, which mainly include ways of strengthening and maintaining their sense of community. In fact, the sense of community is quite an important concept in this research and it is considered to be the overarching theme that connects all other themes together. Participants identified sense of community to be a fundamental concept in relation to their neighbourhood since they believe that

neighbourhood-level stressors threaten their sense of community. Conversely, participants believed that neighbourhood-level stress-relievers are critical elements of a strong sense of community.

Participants' General Neighbourhood Perceptions

When speaking generally about their neighbourhood, participants talked about the North End as characterized by a lot of diversity in terms of the people, places, and events. For example, some participants mentioned people from different cultures and ethnicities as part of their neighbourhood. Most participants also discussed the strong presence of both family and friends in their neighbourhood. In fact, many participants identified most of their friends as also extended family members. In relation to places, participants described many restaurants, corner stores, community organizations, and "hangouts" (e.g. an open field and basketball courts). They also talked about diverse community events including Community Beautification Day, block parties/barbeques, and Canada Day festivities.

Although participants described their neighbourhood as a good place to live mainly because of its strong sense of community due to the close relationships among residents, there were also perceived negative aspects such as violence, crime, and stigma. However, in spite of these negative aspects, participants wanted outsiders to know that their neighbourhood is primarily a good place. One participant states:

> I just want people to know that it's not only a bad place. Yeah, people do suffer in here
> for different reasons but that's not the point. There is good things that happen in my
> community … it's not only bad, there's good stuff too. There's actually more good stuff
> then bad, if you really look at it. (Participant 1)

Key Neighbourhood-Level Stressors

      Violence and criminal activity. According to all participants, violence and criminal activity were considered neighbourhood-level stressors. For some participants, the simple presence of and exposure to violence and criminal activity in their neighbourhood is stressful. One participant explains this in relation to criminal activity: "What stresses me out about living here? The drug addicts. They're just everywhere. Like, you can see them shootin' up in the corner sometimes" (Participant 2). Some participants also reported feeling stress from the thought of themselves or a loved one being accidentally caught in the midst of violence. However, many participants indicated that incidents of violence and crime typically involve only those who are involved in a specific conflict: "No one's just going to come up and shoot you for nothing. Like, you have to actually do something to that person for it to escalate that far" (Participant 1).

      Some participants expressed frequently worrying about the risk of community members they care about partaking in violence and criminal activity. Furthermore, it appears that these participants worry and experience more stress about losing a male loved one to the world of violence and crime than a female loved one because they believe there is more pressure for boys to engage in a lifestyle of violence and crime than girls. "I just worry a lot, I find, like the most is with my brothers … I'm not saying it's not hard for girls too but for boys, they're like peer pressured into selling drugs and or smoking weed" (Participant 7).

      Some participants discussed a particularly stressful event at great length where a well-known and positive young man from their community was shot and killed in the same neighbourhood. Participants explained that this incident was not only stressful for them, but also for their families, friends, and the entire community.

When someone gets killed in our neighbourhood it like stresses everyone out because like this is our neighbourhood. Everyone knows everyone and we're friends with everyone. So that has a big impact on like everyone. It would probably be talked about for like months. That's a lot of stress to carry. (Participant 8)

Some participants argued that violence and criminal activity contributes to the stigmatization of their neighbourhood. The occurrence of violence or crime often leads to negative media coverage of the neighbourhood. As a result, outsiders perceive the North End in a negative light. Some participants expressed the importance of stopping the violence and crime in order to end the stigmatization of their neighbourhood.

I just think the violence should stop because how the media is going on … So, I would rather it stop than the media going on and on and on and every time the next thing happen they're going to bring up the stuff that happened to months ago. It's just been going on for this long like, there's no point giving the media something to talk about. (Participant 4)

Several participants also discussed the relationship between violence and criminal activity and the threat to the sense of community in their neighbourhood. They argued that people in their neighbourhood are hurting themselves and each other by engaging in violent and criminal behaviour. Consequently, this jeopardizes the strong sense of community that they believe is quite important to reducing their stress: "We could be coming together instead of doing this and that [violence and crime] … and at the end of the day we're all one big family… So, I just think the violence should stop" (Participant 4).

Despite the fact that participants identified violence and criminal activity in this neighbourhood as a stressor, a number of participants indicated that they have become accustomed to this violence and crime. According to participants, violent and criminal incidents

happen often in their neighbourhood, thus they feel that they have somewhat adapted to them in order to prevent them from being a major stressor in their everyday lives. Participants feel that it is too emotionally and psychologically difficult to always feel stress in anticipation of violence and criminal activity or to always feel stress from actual violent or criminal events. One participant demonstrated her adaptation to violence and crime when she stated:

Like when you hear a shot it's not like oh my God there's a shot … I've been used to it. Like if I was outside and shot at, I would like run or something cause I don't want to get shot, but yeah, I'm kinda used to it now since it's happened for so long. (Participant 1)

Another participant also explains how she has become accustomed to the violence in her daily life by saying:

You can't let the violence and stuff affect you the next day and next day and next day. And it can't stop you from doing what you're going to do with the kids, and with the parents, and with this and that. This happened this day, so move on to the next day. … Like days goes on and you have to live it by the day, not by what happened yesterday. (Participant 4)

Neighbourhood conflicts. Participants identified two key neighbourhood-level conflicts that are discussed in the following sub-sections. The first conflict is between participants and other adolescent girls in their neighbourhood. The second conflict reflects the tense relationships between participants and the local police.

A) Conflict between adolescent girls. According to participants, many of the adolescent girls who live in the North End have grown up together and until recently, they all considered each other friends. However, at the time of the interview there were conflicts among these adolescents girls that interfered with their friendships. Gossip, mistrust, and feelings of jealousy were reportedly the main causes of the conflict. As one participant indicated: "Most of them will

be like hi in your face and then later when you're not there they'll talk about you and stuff. …

There ain't nobody you can trust" (Participant 3).

These conflicts have escalated to verbal taunting, physical fighting, and fears about being in the same physical space with their rival group. One participant reported that she actively avoids specific places in the neighbourhood such as stores, restaurants, and certain community organizations because she is afraid of meeting her "enemies". She has tried to walk away from these girls, but sometimes they do not permit her to do so and force her into verbal and physical fighting. This is very stressful for this participant because she no longer can spend as much time in her neighbourhood as she would like. She stated that she sometimes has to send a family member or friend to do her errands because she avoids walking to and from local restaurants or corner stores: "So we all [her close friends] really try and stay away from that kind of stuff [conflict] cause it's not a good environment for no one's health" (Participant 5).

Participants also talked about conflicts between adolescent girls in their neighbourhood as hindering the neighbourhood sense of community. These girls are focused on the conflict itself and on avoiding each other, which prevents them from coming together as a community. However, one participant argued that these conflicts with other adolescent girls are merely a phase and that in a few years when they have all matured, they will once again be friends. "Yeah, we're just growing apart. But at the end of the day, whatever does happen, we're obviously going to be back to friends" (Participant 6).

B) Tense relationship with the local police. Participants reported a constant police presence in their neighbourhood due to the satellite police office within this neighbourhood (see Figure 1 below). According to most participants, there exists a tense relationship with some of the community members and some of the local police officers. This tension is reportedly due to some community members' perception, including some participants, of the police not fulfilling

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their role of protecting the community. Participants argued that in times of emergencies, the police do not always respond immediately.

> When there's a problem they [the police] don't react as quickly … You'd think that the police would be there in the snap of the fingers, but when you're knocking on the door it takes like 10 minutes for them to come … and they're right here [in the neighbourhood]. It doesn't make sense. (Participant 1)

Some participants argue that the police's tardiness in responding to emergencies aggravates the situations, which may cause an incident to become a news worthy event. Also, one participant believes that the police tend to find problems where they do not exist or target certain stigmatized population such as African Nova Scotians or youth, again creating news for media reports. Consequently, some participants believe that the police's behaviour further stigmatizes their neighbourhood by attracting the media's attention.

> I don't like how the police treat the community. Not even the people, it's just the way they make it seem like we're in Brooklyn and there's bodies dropping everyday. … They go on like it's so so bad … I just find that they make it seem like it's really really really worse than what it is. (Participant 7)

Also contributing to the tension between participants and the police is many participants' belief that the police do not prioritize neighbourhood issues by severity, but rather by police preference. "They [the police] only go help people they want to help … they won't help people that really need help that they don't want to help" (Participant 4). Another participant supported this view:

> They'll [the police] nag at little kids … girls who are pregnant I've seen them get arrested for nothing, no apparent reason at all. And they should be out there trying to find like the people who are causing like real drama and all that stuff. (Participant 8)

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Figure 1. The police's community office situated within the North End.

Some participants felt that the police target them specifically, stating that when they are just "hanging out" in the neighbourhood, the police often follow them and sometimes wrongfully accuse participants of behaving unacceptably. This was stressful for these participants and therefore, they would avoid certain areas if police officers were present. They also felt that they could not enjoy their time with their friends because they were distracted the need to deal with the police's presence. Some participants explained that the police also tend to say certain things to them or about them that can be offensive or as one participant called them "smart remarks".

In order to explain some of the problematic behaviour on the part of the police, a few participants identified police officers' behaviour as racist. One participant suggested that some police officers clearly give preference to a White person's story over a Black person's.

If it were a White person and a Black person going at it, they [the police] would quickly assume that it was the Black person who started it. Like they wouldn't hear like both sides of the story. Like, the White person would just walk free. (Participant 8)

Tensions with the police were also discussed as linked to what one participant identified as police lack of integration within the neighbourhood. She thought that since the police's office

is located within her neighbourhood, they should be involved in community events in order to provide a positive image of the police. She felt that if community members witnessed efforts from the police to build positive social relationships with community members, it could hopefully improve their overall relationship.

They're [the police] supposed to be here to make a change … and like all they do is walk around all day. They don't like play any games with the kids. … instead, they walk around with their heads held high, like they're too good to be there. (Participant 8)

In spite of concerns about the lack of positive relationships between community members and the police, a few participants mentioned seeing some positive police presence, although minimal, at some community events. There were also few participants who expressed how relieved they felt that their neighbourhood is a not as dangerous as it once was since most criminals are in jail due to the police's work. Therefore, they perceived their neighbourhood to be a safer place because of the police presence.

Stigma. Participants considered their neighbourhood to be stigmatized and this stigma was a major stressor and concern for all participants. They indicated that people from outside of their neighbourhood believe that the North End is a dangerous place. However, according to participants, violence and criminal activity can and does occur in many neighbourhoods, not only theirs. Yet, their neighbourhood has been labelled as dangerous. The North End, according to participants, is not as bad as it is often portrayed. "It's a good place … if you live there then you would know that it's not all that bad" (Participant 2). Most participants believed that once outsiders experience their neighbourhood, they lose some of their judgemental views because they see first hand that it is not a violent and crime-ridden neighbourhood. "I see a lot of newcomers, but they don't find it as bad as people describe it. So, like it's not bad" (Participant 4).

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All participants discussed various forms of media as a major contributor to this stigma. The media, through televised news programs and through local newspapers, tends to focus on reporting negative incidents. Participants felt that no media sources report any of the positive events and contributions of their neighbourhood: "They're [outsiders] sitting at home watching the news thinking 'Well, I've never seen anything good about this place, always something bad. It must be a bad place.' I don't think we're as well represented as we could be" (Participant 7). In fact, two participants discussed the survey conducted by a local newspaper, *Metro Halifax*, where people in Halifax voted an area of public housing that extends around the intersection represented in Figure 2 (below) as the most dangerous area in the Halifax Regional Municipality (Boutilier, 2010). "Most of the things they [the media] say is more opinion than fact" (Participant 8).

Figure 2. The street signs of Gottingen and Uniacke Streets in the North End of Halifax.

The stigmatization of this neighbourhood has led to two participants feeling personally judged by others because they come from and live in a negatively labelled neighbourhood: "I feel like they're judging me basically cause that's where I come from" (Participant 2). Another participant believes that people who live outside of this neighbourhood hold lower expectations

of people from her neighbourhood. She feels that outsiders do not expect residents of the North

End to reach the same levels of success as someone from outside of the neighbourhood: "Another

thing that's a lot of stress to carry is everyone … from other places don't expect … people from

our community to make it as far as anyone else can" (Participant 8). Outsiders have expected this

participant to act loud and rude simply because of where she is from.

> If I don't tell anyone where I'm from, they just think I'm like a regular girl. But as soon
>
> as I say, oh I'm from like where I'm from, it's like they classify me as like a whole
>
> different person and everything I'd said before goes out the window. (Participant 8)

She found these negative and, in her opinion, inaccurate expectations stressful because she

worries that some of her community members will believe them and thus, will not fulfil their

potential, but rather engage in violence and crime.

Key Neighbourhood-Level Stress-Relievers

      Sense of community. All participants described their neighbourhood as possessing

strong social cohesion, which is also referred to as a strong sense of community. Both terms

"social cohesion" and "sense of community" are very similar. Since participants used the term

"community" when speaking of their neighbourhood geographically and socially, I found that

"sense of community" would be a more suitable term to use when describing this community.

      Participants talked about the importance of their neighbourhood's sense of community in

their lives, and many talked about this as being a stress-reliever or stress buffer. A sense of

community is an integral part of the social cohesion of a community. According to the

participants, this sense of community exists because everybody in the neighbourhood knows one

another and most people care about and support each other.

Our neighbourhood is different because every parent cares for every child. It's not only

her own or who they know. It's like if a new child comes running through and they get

hurt, they're going to look out for them. Like it's like everybody's a big one big family.

… Like there's no saying no to anybody around here. (Participant 4)

Participants also discussed the role of events such as block parties and community barbeques to

help bring neighbours together in a positive setting. Enjoying each other's company seems to

strengthen the bonds between residents. "I like everything about that [community events]

because it shows that everyone can come together and be civilized, that we're not just like crazy

people" (Participant 8).

Participants expressed conflicting views in relation to notion of the community support

that they receive from their sense of community. Some participants explained that anyone may

knock on anybody's door for anything they need and their neighbours will offer their support. "If

somebody sees you crying or something, they're calling you in for a plate of food and they talk to

you regardless of who you are. Like anybody would do that" (Participant 4). Conversely, other

participants said that this was possible, but did not happen so much anymore because the sense of

community in their neighbourhood has changed since they were children. These participants

stated that community members used to be close to one another and now there is distance

forming among some of them possibly because participants have noticed the increasing presence

of new neighbours whom they know little about and whom may not carry the same values.

It's like you're not even welcome in other people's home that much anymore. Before,

you could, I didn't have to hang with their child that much, I could still go in, but now it's

more like … 'If you don't hang with my child or you don't hang with me than you don't

come here.' It used to be everyone could do whatever they want. (Participant 7)

Also, as one participant stated, frequently relying on her community for support can lead to a lack of privacy. Since most neighbours know each other, it can be hard to keep personal matters private as news spreads quite easily and quickly. This participant found that making her personal matters public was stressful: "Everyone knows everything. … Everything just gets let out of the box, no matter what" (Participant 8).

Regardless, all participants still believed that the sense of community and community support in their neighbourhood were important stress-relievers. For instance, one participant gave an account of an incident that happened to her where her safety was threatened. In this situation, she immediately relied on her brother, who lives in the neighbourhood, and he asked for assistance from adult neighbours. She says: "If you're in that type of situation and you don't got your family with you, your community is safe. Like my community had my back" (Participant 5).

There were also some conflicting views in relation to the strength of their sense of community. As mentioned, participants described being a part of a neighbourhood with a strong sense of community and its importance in relieving their stress. Nonetheless, as discussed earlier, participants also identified many conflicts within the community that hinder or threaten this strong sense of community. Some participants acknowledged this contradiction, but they felt that in times of a neighbourhood or personal emergency, the community would come together despite some of the existing conflicts. For instance, in the event of past tragedies within the neighbourhood, the community has come together to help each other cope with and heal from these tragedies. One participant and her family experienced a tragedy and she said: "It's just like about what me and my family went through, they've been there through everything. They never let me and my family down. So, I just thank them so so much" (Participant 5). In the case of the young man who lived in the North End and was also killed in the neighbourhood, the community

painted a mural in his commemoration (see Figure 3 below), pointing to the importance of a

strong sense of community during tragic incidents. Some participants believe that putting

conflicts aside in order to support their community would not be possible without the presence of

a strong sense of community.

Figure 3. Mural to commemorate the death of a local young man who was killed in the neighbourhood.

Community organizations. All participants talked about the many community

organizations present in their neighbourhood. However, there were conflicting views with regard

to the services they offered, especially to services for teenagers. A few participants felt strongly

about the lack of teenage-oriented services in their neighbourhood, particularly for adolescent

girls. They said there were many services for children and some for adults too, but there was a

lack of programs for adolescents. This was a stressful for these girls because they felt that they

and other adolescents in the neighbourhood did not receive any support from these community

organizations.

I think they should focus on the teenagers too because once you get older, it just stops.

It's at a certain age, you don't really have no support. It's kinda like you're by yourself.

… it's not only the kids. It's teenagers and adults do have stress too. (Participant 1)

In fact, another participant remarked that the lack of services for adolescents in the neighbourhood happened recently. There used to be many services for adolescents and also some targeted specifically to adolescent girls. Yet, with the change of some community workers, many of these services had ceased to exist: "I don't like how there ain't nothing for teenagers anymore because they took everything out" (Participant 2). These girls often felt that they must visit other neighbourhoods to get the resources they need. Some participant spoke of visiting a youth centre and recreational facilities outside of their neighbourhood.

In spite of this, most participants spoke differently about their neighbourhood's community organizations. These participants said that there were services for adolescents and, more specifically for adolescent girls. Furthermore, these girls utilized many of these services and relied on them for support and stress relief. These services gave them the opportunity to be active and play sports, to socialize with people younger, older, and the same age as them, develop skills, as well as obtain social support when needed. Notably, these participants mentioned some girls' clubs at a community recreation centre (i.e. George Dixon Centre), at the neighbourhood library, and at a local church.

Figure 4. A mural of for the Community YMCA found in the North End. This mural also represents the sense of community talked about by the participants.

It appears that the conflict between adolescent girls in this neighbourhood may have a role to play in their inconsistent views of community services. As discussed earlier, some participants avoided certain neighbourhood spaces to avoid girls with whom they had a conflict. Therefore, it is possible that some participants avoided some community organizations if their "enemies" accessed them. Thus, they could not benefit from the stress-relieving impacts of the services from these community organizations.

In many neighbourhoods, school is often considered an important stress-relieving and sometimes stressful institutional organization. In this study, the local high school is located just outside of the neighbourhood. Therefore, even though all participants were enrolled in high school at the time of the study, few participants discussed school related stressors and stress-relievers. When speaking of school, participants spoke of general academic stressors and rarely spoke of stress-relievers. However, it is possible that participants are receiving support for stress relief from their school environment.

Neighbourhood-level stress-relieving activities. Most participants suggested that when faced with stress, taking part in various activities in their neighbourhood helped to reduce their stress. It was important for participants to live in a neighbourhood that provides spaces to engage in stress-relieving activities. For instance, many participants enjoyed playing basketball. In this regard, one participant noted that when she felt stressed out, she played basketball, either alone or with others, at the neighbourhood outdoor basketball courts. During the winter, she said that the local elementary school and the Community YMCA opened their doors to let adolescents play basketball in their gymnasiums. She expressed that playing basketball permitted her to forget about her stress and to concentrate on something she enjoys and that makes her happy.

> Well, it keeps me out of a lot of trouble. So, like one of the main reasons is that it keeps a lot of kids in school, not just basketball, but sports in general. I think a lot of kids would be out on the streets, but basketball's just like their love. Like you have to be in school to play basketball so. (Participant 8)

Another notable neighbourhood-level stress-relieving activity was practicing religion regularly at home and in a local church (see Figure 5 below). Almost all participants discussed the importance of religion in their lives and in relation to stress relief. One participant explained that it is a way to put life in perspective and to regain focus on her dreams for the future: "You just feel good when you walk out of a church … you go to your future and don't look back on your past" (Participant 3).

Figure 5. One of the many churches found within this neighbourhood.

Hanging out in a local field where there is a playground, basketball courts, a community garden, and a big open space (see Figure 6 below) was also a stress-relieving activity for most participants. These girls found themselves utilizing this space a lot and often with their friends and family, many times for stress relief. Also, a few participants discussed the importance of a local recording studio where many adolescents, some from different neighbourhoods, came together to sing and record songs. One participant in particular spoke to the importance of this studio as a stress-reliever because it enabled her to sing, which helped her release her stress. She also said that it was a way to make new friends, whom she may rely on for support. "It's like when I sing, it's like all my stress just comes out and I feel so much better when I'm singing with my friends. … I find when I sing, I don't feel stress" (Participant 5). Lastly, walking in the neighbourhood, either alone or with someone, was also mentioned as an important stress-reliever for some participants. "I just usually take long walks by myself or with a friend or a cousin or a

family member. We just talk, like we'll just like sometimes we'll go deep and just talk about our problems" (Participant 5).

Figure 6. An open field found in the North End.

However, the conflicts with other adolescent girls and with the police may hinder some participants from taking part in these stress-relieving activities. For some participants, the possibility of meeting some of the people with whom they had conflict stopped them from hanging out in the field or from taking a walk, for instance. Nevertheless, this was not the case for all participants. In addition, one participant continued to hang out in the field despite the presence of police. She acknowledged that the police presence bothered her and her friends, but they did not want to relocate because of the police. Nonetheless, either avoiding certain potentially stress-relieving activities or constantly being under police watch could create stress rather than relieve stress for these girls.

Personal support within the neighbourhood. For participants, an important element of this neighbourhood is the ubiquitous presence of their family members and friends. They indicated that they are related by blood or marriage to most people in their neighbourhood, including most of their friends and "enemies". According to all of the participants in this study,

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the personal support that they received from their family members and friends who live in the neighbourhood was crucial to them. They tended to heavily rely on family and friends in their neighbourhood since they are easily accessible. For instance, one participant said she experienced a great deal of stress, which, in the past, led her to self-mutilation, thoughts of suicide, and substance use. She stated that her family members and friends who reside in her neighbourhood were the reason that she is alive today and that she is pursuing a healthy life.

> They [girlfriends] give me advice on like different topics and stuff. … That's one of the reasons I lived, because of my family and my friends. And because, I don't know, without them like I wouldn't be here 'cause I tried to like hurt myself really really bad a few times. (Participant 5)

Nonetheless, the conflicts with the other adolescent girls in the neighbourhood, which led to the loss of close friendships, had an impact on the stress-relieving support for these participants. Losing close friends meant losing some of the support that they previously received from friends. Participants seemed to be careful with whom they shared their personal stressful experiences since these conflicts made some participants doubtful of who they could trust. "I don't really trust too many people with what I say … because the past people who I trust ended up being a backfire" (Participant 2). However, every participant spoke of at least one friend and several family members with whom they felt comfortable to confide their stress.

Participants Suggestions for a Less Stressful Neighbourhood

When participants were asked to suggest neighbourhood improvements that could lead to a less stressful neighbourhood, some participants had some difficulty coming up with ideas. It is possible that with some more reflection time, these participants could have thought of some suggestions. It is also possible that some participants did not believe they had the power to make any changes in their neighbourhood, thus they seldom thought about it.

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For some participants, a crucial factor to lessen the stress in their neighbourhood would be to increase the amount of social services (e.g. social support and recreational) for adolescents, especially for adolescent girls. Even the participants who did not identify a lack of services for adolescent girls also thought that this population would benefit from more social services. Furthermore, another participant suggested programs and services targeted to children, but mostly pre-adolescents in order to prevent problems in adolescence such as dropping out of school or engaging in dangerous behaviours.

If there was a place where kids can go and hang out … That's why I find like a lot of teenagers are like going turning to the streets because there isn't a place, there isn't much for them to do like to keep them off the streets. (Participant 8)

For many participants, the most significant neighbourhood-level improvement that would lessen their stress was ending the violence and crime in the neighbourhood. How to achieve this, however, was perceived as a major challenge. Nonetheless, one participant did have a few ideas. She explained that many adult residents and other adult community members are youth-friendly people. Therefore, she suggested that the neighbourhood get together and listen to the voices of youth; listen to their concerns, experiences with stress and what they think could be done to improve their neighbourhood situation.

Maybe sometimes youth can talk … They [adult neighbours] really listen to youth like students or kids … Like, if we came together and we just like want to stop violence and stop everything, killing, and all the arguing, so we can come together as one. So we don't give nothing to talk about like things about us. I think they would listen.

(Participant 5)

However, she did identify some challenges to this including the reluctance of some of her friends to speak publicly, especially in front of adults.

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One participant also suggested having someone from outside the neighbourhood, but who has suffered a neighbourhood-level tragedy (e.g. shooting), to come speak to the North End community. The purpose of this guest speaker would be for this community to learn the ways in which communities can recover from such tragedies and how they can come together and strengthen their bonds as well as their support for one another. She believed that residents of the North End are willing to improve themselves and work at improving their neighbourhood, but they need some help and some more information on what to improve and how to do so. Another participant suggested increasing police presence in the neighbourhood in order to address and prevent violence and crime. She was aware of the tense relationship between some community members and some police officers. However, if the police worked at integrating themselves in the neighbourhood and at developing positive relationships with community members, she believed that their presence could be an effective solution.

Core Theme

Each key theme that emerged from the data of this study may be discussed separately as done above. However, these themes also interconnect. Furthermore, there seems to be an overarching theme, considered the core theme. The core theme for this study is the concept of the sense of community that characterizes this neighbourhood. This theme seems to be one of the most important concepts discussed by participants. Also, the concept of the sense of community in the neighbourhood can relate to each theme, both with regard to key neighbourhood-level stressors as well as to key neighbourhood-level stress-relievers.

In relation to key neighbourhood-level stressors, participants discussed each theme as a stressor because it disrupted or hindered the sense of community in their neighbourhood. For instance, violence and criminal activity as well as neighbourhood-level conflicts were hurting the residents of the neighbourhood rather than bringing people together, getting along, and

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supporting one another. This is also applicable to stigma as participants felt the weight of

stigmatization on their community. Each time a negative situation occurs, participants expressed

the frustration of knowing that the media will report once again a negative aspect of their

community to confirm the overall negative image of their neighbourhood. Additionally,

stigmatization may lead some residents to feel ashamed of their neighbourhood and therefore,

some may isolate themselves from the community in order to avoid being associated with the

negative portrayal of this neighbourhood. This isolation makes it challenging for all residents to

get to know each other, support one another, and maintain a strong sense of community.

The concept of sense of community was also reflected in each key neighbourhood-level

stress-reliever themes. Community organizations, friends, family, and the places that exist in the

neighbourhood that permitted the creation and strengthening of bonds between residents were all

part of the development of and maintenance of the sense of community in this neighbourhood.

As explained above, the sense of community was important to participants because they obtained

a lot of their support from their community. Also, having a strong sense of community had given

participants a sense of pride in their neighbourhood despite other negative aspects of their

neighbourhood.

Essentially, participants expressed concern in relation to the disruption of their sense of

community as well as about the future of their community. Therefore, these participants often

discussed the importance of their strong community and the importance of maintaining this sense

of community.

Summary

In general, participants in this study had a positive perception of their neighbourhood and

indicated that they liked where they lived. This was so because, according to participants, the

North End is characterized by a strong sense of community even in the face of some negative

aspects of the neighbourhood. Everyone in the neighbourhood seems to know each other, care for one another, and watch out for everyone else's safety. The community members also tend to frequently come together to either celebrate various events or to support one another, which contributes to their sense of community.

All participants in this study identified key characteristics of their neighbourhood as stressors and as stress-relievers. The key stressful neighbourhood-level characteristics that emerged from the data were related to violence and criminal activity, neighbourhood-level conflicts (i.e. with other adolescent girls and with the local police), as well as the stigmatization of this neighbourhood. On the other hand, concepts of a sense of community, support from community organizations, stress-relieving neighbourhood-level activities, and personal support within the neighbourhood were all identified as key neighbourhood-level stress-relieving characteristics. The overarching theme that connects all other themes together is the sense of community. Participants seemed to speak of neighbourhood-level stressors as threatening the sense of community and they discussed neighbourhood-level stress-relievers in the context of increasing or maintaining a strong sense of community. Most participants seemed to rely a lot on their community for stress-relieving support and therefore, any threat to their sense of community or any challenge in obtaining community support was perceived as stressful.

Some participants also shared ideas for improving their neighbourhood environments to make them less stressful. For many participants, their neighbourhood would be less stressful if violence and criminal activity ceased to exist. In this case, the neighbourhood sense of community would strengthen and the neighbourhood would be less stigmatized. Participants were aware that stopping all violence and crime is an enormous challenge, yet they did have a few ideas. Overall, their suggestions were in relation to increasing social services for

adolescents, permitting neighbourhood youth to voice their opinions and concerns, having guest

speakers talk about community resilience, and increasing local police presence.

Chapter 5: Discussion

The present study's findings indicate the importance of a strong sense of community for participants' stress relief. This chapter aims to highlight the complexities of this sense of community by discussing its benefits, its significance for this specific population, its variation in importance, its fluidity, and existing neighbourhood characteristics that threaten its strength. Also, this chapter discusses the importance of understanding adolescent girls' perspectives on issues of neighbourhood and stress since their voices are often left unheard. Yet, they have specific neighbourhood-level issues that need to be addressed in order to promote their healthy development into adulthood. However, improving a neighbourhood to become characterized by more health promoting environments is not necessarily a simple task. Based on participant suggestions, this chapter also discusses ideas of how health promotion professionals can work with communities to improve neighbourhoods. Finally, limitations of this study and recommendations for future research in this area are examined.

Importance of a Sense of Community

Defining sense of community. Participants spoke of the multiple characteristics of their community, emphasizing those with stress-relieving effects and those that describe a socially cohesive community. They described it as a place where "everybody knows each other", "everyone cares for one another", "they all help each other out in times of need", "we share the same values", and a place where they belong. As one participant commented: "We're just like one big happy family" (Participant 5). Although participants did not use the term "sense of community", the expressions above relate to the vocabulary used within the literature when speaking about a neighbourhood sense of community (Ife & Tesoriero, 2006; McMillan & Chavis, 1986).

Benefits of a sense of community. The health benefits of a strong sense of community have been well studied and research suggests that a sense of community has psychological health benefits for residents (Abada, Hou, & Ram, 2007; Bowlby et al., 1998; Cantillon et al., 2003; Forrest & Kearns, 2001; Ife & Tesoriero, 2006; MacDonald et al., 2005; Morgan, Malam, Muir, & Barker, 2006; Pretty, Conroy, Dugay, Fowler, & Williams, 1996; Shields, 2008; Stockdale et al., 2007; Wen et al., 2003; Wickrama & Bryan, 2003). Studies that have specifically explored the benefits of a sense of community for adolescents' psychological health have found that a strong sense of community is associated with higher self-esteem and overall happiness (Abada et al., 2007; Wickrama & Bryant, 2003). A strong sense of community may also help prevent depressive symptoms (Abada et al., 2007; Wickrama & Bryant, 2003).

One critical aspect and benefit of a strong sense of community is social support. In this case, social support can be considered a form of social capital, as it is an important resource deriving from the strong sense of community. Some studies have found that social support may be particularly important for females, including adolescent girls (Frydenberg, 2008; Matheson et al., 2006; Morrow, 2000; Stack, 1975). Neighbourhood integration and belonging as well as neighbourhood-level social relationships, especially peer friendships, provide this social support, which may help reduce stress. These findings are in accordance with the results of the present study, which found that most participants relied on peer friendships, family members within their neighbourhood, as well as belonging to and involvement within the community for social support. In fact, one participant stated that her friends provided her with the social support she needed to face neighbourhood-level stressors that were leading her to dangerous behaviour (e.g. drug use, self-mutilation, and depression). Participants may also rely on supports found within their school such as teachers, guidance counsellors, coaches, and student associations. However,

since the school is just outside of the neighbourhood, participants did not discuss the role of their school environment for stress relief.

The significance of a sense of community for this specific neighbourhood. The strong sense of community found among participants may stem, in part, from the history of the African Nova Scotians who lived in Africville. Africville was a small community in Halifax that existed roughly between 1850 and 1970 and was mainly composed of African Nova Scotians (Clairmont & Magill, 1999). According to historical documentation, Africville possessed a strong sense of community (Clairmont & Magill, 1999) in which all residents provided strong social and practical support to one another in order to survive in a poverty-stricken community (Clairmont & Magill, 1999; Mackenzie, Gray, Wong, & Ahmed, 1991). In all, the people of Africville were very proud of their community (Clairmont & Magill, 1999; Mackenzie et al., 1991).

In the 1960s, the city of Halifax decided to destroy Africville and relocate its residents to diverse neighbourhoods, such as the North End, for various reasons including unhealthy and poor living conditions of Africville (Clairmont & Magill, 1999). Residents did not agree with the city's decision and consider this event a tragedy. Although their geographic community was devastated when the city of Halifax destroyed it, the residents of Africville still appeared to find a comfort with other community members and the strength to advocate to the city to redress the consequences of relocation and the loss of Africville (Mackenzie et al., 1991). This demonstrates the importance of a sense of community to this particular population. Since some of the people of Africville were relocated to the North End and since some of the participants of this study identified as descendants of Africville, the values of maintaining a strong sense of community may have been passed on to them. Therefore, the history of the Africville community may contribute to the understanding of why participants in this study attributed an immense significance to their sense of community.

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The complexities of a sense of community. The present study is consistent with many other studies that have found important health benefits for individuals living in a neighbourhood with a strong sense of community. However, many past studies seem to have overlooked the complexities of neighbourhoods and their sense of community. For instance, the present study demonstrates that although a strong sense of community contributed to the stress relief of all participants, the importance that participants attributed to their sense of community varied. Some participants discussed the role of their neighbourhood's sense of community for stress relief at great length, whereas other participants spoke less about receiving stress relief from their sense of community. It is not clear why this variation exists, but it is possible that time spent in the neighbourhood can influence the importance that residents attribute to their neighbourhood. The interview questions did not explicitly inquire about how much time participants spent within the geographical boundaries of their community, but some participants discussed spending more time in their neighbourhood than others. Greater amounts of time spent in a neighbourhood may allow them to develop more affective attachments with their neighbours and may provide more opportunities to involve themselves with community volunteering, thus possibly leading them to feel more integrated in and a strong sense of belonging to their community.

The present study also illustrates that a sense of community may be fluid and thus, change over time, which in this case, caused some stress to participants. Some participants explained that their sense of community was stronger during their childhood. When they were children, they knew and trusted everyone in their neighbourhood and thus could ask anyone for any type of support. According to some participants, over time, the number of new neighbours has increased, such that many residents are no longer well known by community members. Also, some participants argued that many of these new residents do not hold the same values of mutual aid and caring that were widespread in the community. As a result, some participants felt that they

could only rely on the people they knew well and trusted within their neighbourhood. They did not feel that they could rely on just any neighbour, and this change in the sense of community was stressful for some participants.

Threats to the sense of community. Participants appeared to express two parallel narratives – one of a neighbourhood with a strong sense of community and one of a neighbourhood with a sense of community under threat. This demonstrates that a strong sense of community can exist in a neighbourhood even in the presence of neighbourhood characteristics that could disrupt it. Disruption or loss of their sense of community is stressful for participants because it may lead to a loss of a fundamental source of social support. Participants identified threats and disruptions to their sense of community to be the same as the key neighbourhood-level stressors (i.e. violence and crime, neighbourhood-level conflicts, and stigma).

Impacts of violence and crime on the sense of community. Participants indicated that violence and crime were disrupting their sense of community due to some residents harming one another, rather than coming together as a community. Participants identified physical fights, shootings, theft, and drug activity as particular types of violence and crime that were most disrupting their sense of community. These types of violence differ from the ones that other studies have found to be stressful particularly for females (Cicognani et al., 2008, Morrow, 2000; Morrow, 2001; Ramussen, Aber, & Bhana, 2004), including random acts of female-targeted violence (e.g. sexual assault) (Cicognani et al., 2008, Morrow, 2000; Morrow, 2001; Ramussen et al., 2004), which participants in this study did not discuss. It may be that participants never experienced female-targeted violence, especially at the neighbourhood level and thus, did not identify it to be a stressor. Also, participants spoke of generally feeling safe in their neighbourhood because they knew most residents and felt that most community members would assist anyone in a dangerous situation. In fact, one participant did speak of being in a potentially

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dangerous situation and many adult neighbours who were witnessing the situation stepped in to help her immediately. In addition, participants knew what situations and what people to stay away from in order to avoid being caught in violence or crime. Participants explained that most of the violence and criminal activity in this neighbourhood is gang related and therefore, this may be why participants did not identify random violent acts targeting females as a stressor, as they do not seem to happen much in this neighbourhood.

Although violence and criminal activity was identified as disrupting their sense of community, Reilly (as cited in Avrashi, 2010) has found that, in some instances, violence and crime in a neighbourhood may also strengthen the sense of community. If community leaders can bring the community together in the event of a neighbourhood tragedy in order to mourn and grieve together through public memorials, the sense of connection, purpose, and safety of the community can strengthen (Avrashi, 2010). In the present study, participants discussed specific neighbourhood tragedies where the community came together to grieve and to support the victim's family. Various art pieces have been integrated within the neighbourhood in order to commemorate the victims of these tragedies. Many participants explained the importance of a mural painted in the neighbourhood to commemorate the murder of a young man. Therefore, such incidents may have heightened the sense of community of this neighbourhood.

Impacts of interpersonal conflicts on the sense of community.

Conflicts among adolescent girls. Conflicts among adolescent girls within their community also appear to be affecting the neighbourhood's sense of community. Since participants identified neighbourhood peer friendships to be an important part of their sense of community and provided a significant source of social support, conflicts or ruptures between friends were also an important stressor for these girls. Given that many of the adolescent girls involved in these neighbourhood-level conflicts, including participants from the present study,

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live in geographical proximity and most of them go to the same school, the stress from these

conflicts may be particularly acute. That is, they are reminded of their conflict every time they

see each other at school, during extra-curricular activities, and within their neighbourhood.

For some participants, these conflicts appear to lead to relative isolation, in so far as some

participants indicated avoiding certain neighbourhood spaces in order to avoid verbal and/or

physical confrontations. Although participants reported a strong sense of community in spite of

this isolation, if it were to increase over time, it could become a chronic stressor thereby

negatively impacting the participants' health (Stockdale et al., 2007). Similarly, isolation may

disrupt the overall sense of community if residents are not integrating in the community. Thus,

isolation may, in turn, lead to a decrease in received community social support since they would

not have significant attachments with community members. For instance, some participants

discussed a lack of community services for adolescents, while others identified many community

services for adolescents and also reported utilizing these services. It is possible that some

participants choose not to access these community services because they know that the adolescent

girls they have conflicts with are attending the same community services. Consequently, in order

to avoid them, they may not benefit from social support from community organizations that could

help to relieve some neighbourhood-level stress.

Tense relationships with local police. Most participants in this study also identified poor

relationships with the local police as disrupting the sense of community. According to some

participants, these poor relationships exist because of the lack of effort on the part of the local

police to integrate into the community and to respond quickly to emergencies. Other participants

identified some police attitudes and behaviours as racist and discriminatory including offensive

language, harassment toward specific groups, and instances where police believe a white person's

perspective over a black person's. For some participants, racism explained some of the police

officers' hostile attitudes towards community members and their unwillingness to integrate within the community. Participants further explained that the police's overall negative attitudes and behaviours create feelings of hostility among community members towards police officers, which further exacerbates poor relationships between these two parties.

There are few studies that have explored poor relationships between neighbourhood community members and the local police force. However, those that exist suggest that police perceptions of the places where they work and the communities with whom they work determine their behaviour (Schafer, Huebner, & Bynum, 2003; Terrill & Reisig, 2003; Weitzer & Tuch, 2004). In other words, when police officers perceive an area or a specific group of people as potentially dangerous, they tend to behave aggressively in these spaces or towards these people in order to address the potential danger (Henry, Tator, Mattis, & Rees, 1995; Terrill & Reisig, 2003; Weitzer & Tuch, 2004). Henry et al. (1995) further argue that police are more likely to overpolice and utilize unnecessary force towards individuals who are stigmatized by dominant society, especially racially visible minorities. Hostile and aggressive behaviours from the police, in turn, often lead to less favourable community perceptions of the police presence, thus leading to poor relationships (Tyrrell & Reisig, 2003).

Findings from the literature on police behaviours within different ethnic communities could help explain the perspectives of participants from this present study of police attitudes and behaviours as racist and discriminatory since people of various ethnicities, including a significant proportion of African Nova Scotians, live in this community. This neighbourhood is also stigmatized as a high-crime, violent, and overall dangerous neighbourhood. Therefore, it is possible that the local police believe that they must utilize aggressive behaviours in order to address issues of crime and violence in this neighbourhood but their aggressiveness may be contributing to problematic relationships between community members and police officers.

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Nonetheless, many participants believe that having a local police office within their neighbourhood is essential to addressing the violence and crime in their neighbourhood. They want to feel that they can rely on the local police to protect their community. What may be needed to improve relationships between the police and the community members are changes at the neighbourhood-level such as community events that involve the participation of police officers. Increased participation may then help police to get to know community members in a positive way, which could in turn alter any discriminatory perceptions of the neighbourhood and further encourage integration in the community. It could also provide an opportunity for community members to get to know the police officers in a more positive light. In fact, Schafer et al., (2003) found that positive contacts between community members and police officers enhance community perceptions of the police and of their services.

Impacts of stigma on the sense of community. Participants identified stigmatization of their neighbourhood as a key stressor and many participants believe that outsiders who have little or no direct experience with their neighbourhood stigmatize their community. This is consistent with other research regarding stigmatized neighbourhoods (Gourlay, 2007; MacDonald et al., 2005; Warr et al., 2009). Although there were conflicts as well as episodes of violence and crime within the neighbourhood, there was also a sense of community, which a number of participants argued is not represented in the media. Stigmatization of the neighbourhood by the media and outsiders negatively impacts residents by causing some stress. This stigmatization also appears to disrupt the sense of community within this neighbourhood.

Many of the studies that discuss stigmatized neighbourhoods associate stigma with economic disadvantage (Kelaher, 2010; MacDonald et al., 2005; Warr, 2005; Warr et al., 2009). In the present study, participants acknowledged that some residents from their neighbourhood lived in poverty, yet believed that their entire neighbourhood was not characterized by economic

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disadvantage. There are some abandoned buildings and some public housing, but there are also, for instance, high-end condominiums and expensive furniture stores. Nevertheless, many outsiders perceive it to be a disadvantaged neighbourhood mainly due to media reports of violence and crime. In addition, since many residents of some parts of the North End originally came from or are descendants of Africville, the stigma of relocation and forced reliance on social assistance may continue to affect these communities.

According to one participant, the neighbourhood stigma leads outsiders to have low expectations of residents' future success. In turn, this participant indicates that some of her neighbours believe these low expectations of them and thus give up on their potential and partake in unhealthy or dangerous lifestyles characterized by violence and criminal activity, which has been identified by this study to disrupt the neighbourhood sense of community. This concept can be considered internalized neighbourhood stigma since residents are accepting the stigmatizing perception of their neighbourhood as their own viewpoint.

Studies have found that internalized neighbourhood-level stigma can lead to the process of community members distancing themselves from their community (Gourlay 2007). Residents may distance themselves because they feel shame to be part of a stigmatized neighbourhood. This distancing from the community by residents may hinder the sense of community, as neighbours decreasingly come together and cease to mutually help one another. In this present study, it may be possible that some residents are distant because they have internalized stigma concerning their own neighbourhood. It may also be true that new residents held negative views of the neighbourhood prior to moving in, and thus, hesitate to integrate within the neighbourhood. However, among the participants in the present study, there was little evidence of such distancing. Rather, all participants discussed the pride they feel for living in their neighbourhood and how much they like and enjoy it. Thus, although stigma was identified as

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hindering the sense of community in this neighbourhood, participants' strong positive emotions for their neighbourhood, in spite of its many issues, highlights the perseverance of the neighbourhood's strong sense of community.

Importance of Adolescent Girls' Voices

The present study has shown that adolescent girls have specific neighbourhood issues that affect their stress. Participants identified some stressful and stress-relieving neighbourhood characteristics that are in accordance with findings of other neighbourhood and stress studies and others that are new to this literature. For instance, stigma has been found to be an important stressor in this study and by past research. Conversely, violence and crime have been found by other studies to be a neighbourhood-level stressor, yet this present study brings forth a new perspective to this literature that identifies different types of neighbourhood-level violence and crime as stressful than typically found for adolescent girls. This demonstrates the importance of understanding all the various neighbourhood stress needs and concerns of different populations living within the same neighbourhood, especially groups that are marginalized.

In the present study, some participants felt that community members and neighbourhood planners often disregarded their specific neighbourhood-level stress needs and concerns. Therefore, their neighbourhood is not built with them in mind and thus does not necessarily address their specific health and stress concerns. Also, these girls have expressed that they want their specific needs, concerns, and opinions understood and that they want to be involved in their neighbourhood improvement initiatives.

Many participants also demonstrated a sense of little control over the neighbourhood-level stressors. Participants rarely acknowledged involvement in the neighbourhood environmental characteristics that caused them stress, rather they seemed to attribute responsibility to the actions of others. For instance, many participants no longer wanted to see

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violence and criminal activity in their neighbourhood and they no longer wanted to see their

neighbourhood stigmatized. However, they felt that violence, crime and stigmatization were

issues too large for them to tackle. Also, when speaking of conflicts with other adolescent girls

and with the local police, or when some participants discussed lack of adolescent services in the

neighbourhood, participants seemed to feel little hope that they could change things. Thus, most

participants did not discuss taking an active role in these issues to try and resolve them. Feelings

of having no control could also be a stressor for participants as they feel that they cannot change

or influence what causes stress for them.

A few factors, such as age, gender, and cultural history, may provide some insight into

why participants feel little control over their neighbourhood. For instance, with regard to age,

youth voices are often disregarded possibly because they are generally perceived by adults as

lacking the maturity to have valuable or important ideas and opinions. Morrow (2000; 2001)

found that youth often felt excluded from neighbourhood civic engagement. In other words, they

felt left out of any decision-making processes to improve or redesign their neighbourhood. Yet,

according to Morrow (2000), adolescents do have valuable ideas on how to improve

neighbourhood environments and thus, should be taken into account.

Gender may also impact the feelings of disregard by others and of lack of control that

participants held regarding their environments. Gender stereotypes often influence the way males

and females should behave, men and boys taking on more dominant roles and women and girls

more passive and nurturing roles (Heilman, 2001). Therefore, when women and girls are

involved in leadership, their opinions may sometimes be undervalued since they are generally

perceived to be more passive (Heilman, 2001). If the adolescent girls in this study felt that their

voices were underappreciated, it may be more difficult for them to advocate for neighbourhood

improvements. However, females and males tend to experience different neighbourhood-level

stressors and tend to hold different perspectives on their neighbourhood environments (Cicognani et al., 2008; Matheson et al., 2006; Morrow, 2000, 2001; Watt & Stenson, 1998), which points to the importance of hearing the concerns and opinions of girls and women in order to properly address their specific issues.

The cultural and ethnic background of some participants may also contribute to participants feeling that their voices are often ignored and that they are limited in controlling their external surroundings. As some participants in this study identified themselves as descendents of Africville residents, it is possible that the history of this community has an impact on their lives. The city's decision to destroy Africville and to relocate its residents was not made in consultation with its residents, rather it was imposed upon them, thus leaving them with no control over their situation (Clairmont & Magill, 1999; Mackenzie et al., 1991). Africville residents did not want to leave their community and some community leaders advocated to the city for reconsideration (Clairmont & Magill, 1999). Yet, their efforts were not heard as the city continued to disregard the Africville community members' interests and proceeded with what the city thought was best for them (Clairmont & Magill, 1999). Many Africville residents have lived or still live in public housing and/or on public assistance, and thus since public housing is controlled by the city, they may still feel a lack of control on their environments. Therefore, it may be possible that the feeling of lack of control has been passed down to their descendants, which include some of the participants in this study.

Despite these barriers, most participants spoke of their high hopes for their own futures. Many of them believed that they had career opportunities and that they could and would have success in their lives. For instance, one participant wanted to become either a police officer or a doctor and she would like to study in the United States. This demonstrates that even though they feel disregarded by some and may not feel that they have control over their neighbourhood, they

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do feel that they have control over themselves and their situations. Another participant hoped to be very successful in her future and she had plans to come back to this neighbourhood and donate in order to help the neighbourhood with the challenges they face. This is interesting since she only felt that she could change her neighbourhood once she becomes a successful adult and once she is living outside of the neighbourhood. Perhaps she understands that employment is limited within her own neighbourhood, thus she may feel that she needs to go elsewhere to succeed.

These high hopes for their future may be attributed to feelings of a desired disconnection from the stigma of their neighbourhood and proving to others that they can exceed the low expectations that outsiders hold of residents' future success. The strong sense of community may also be encouraging and supporting participants as well as other residents to follow their dreams for the future and avoid dangerous lifestyles. In addition, some participants identified an increasing number of community role models, as many residents formerly involved in dangerous lifestyles are improving their lives by leading healthier lifestyles. Thus, seeing the will and determination of their neighbours to live in a healthier way and to contribute to the well-being of their community, may encourage some participants to do the same.

The importance of healthy youth. Adolescents have been demonstrated to be an important target population for future health research (HPP, 2009) because they represent our future leaders. Addressing specific adolescent health concerns may help prevent health problems from carrying on and possibly worsening into adulthood. Healthy youth will likely lead to healthy adults that can actively contribute to their community. Also, involving youth in neighbourhood initiatives may provide them with the skills they need to be engaged in their community as adults. In essence, it is important to understand and address adolescent girls' neighbourhood needs and concerns in relation to stress from their point of view and involve them in the process of neighbourhood improvements.

Implications for Health Promotion

      This study indicates that health promotion professionals can learn a lot about a population's health and specifically about the health of adolescent girls by understanding their neighbourhood's physical and social environments. Therefore, as suggested by the Nova Scotia Department of Health Promotion and Protection (2009) as well as by the Public Health Agency of Canada (2001) it is important to improve physical and social environments, as found in neighbourhoods, in order to improve individuals' health. Much research on neighbourhoods and stress focuses on neighbourhood-level stressors rather than exploring both stressors and stress-relievers. Health promotion professionals tend to believe in the importance of not only improving the health impairing or stressful neighbourhood characteristics, but also building on the health promoting and stress-relieving neighbourhood characteristics.

      The present study's findings highlight a key factor that is quite important for the stress relief of adolescent girls: a strong sense of community within their neighbourhood. It is not surprising that a sense of community is a significant stress-reliever, as much research has found that sense of community has health promoting benefits for residents (Abada et al., 2007; Bowlby et al., 1998; Cantillon et al., 2003; Forrest & Kearns, 2001; Ife & Tesoriero, 2006; MacDonald et al., 2005; Morgan et al., 2006; Pretty et al., 1996; Shields, 2008; Stockdale et al., 2007; Wen et al., 2003; Wickrama & Bryan, 2003). However, since some research indicates that neighbourhoods characterized by violence and crime are depicted as not possessing a strong sense of community (Braverman & Egerter, 2008; Cantillon et al., 2003; Cohen et al., 2003), it may be surprising that a sense of community is quite important for this particular neighbourhood despite its characterization as a dangerous and violent neighbourhood. Regardless of the presence of neighbourhood-level stressors, it seems that a sense of community has protective influences on the residents of the neighbourhood (Jackson et al., 2009). Therefore, it is crucial to

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build and strengthen the sense of community in this neighbourhood, and possibly in others, in order to improve the health of adolescent girls by relieving their stress.

Since residents are directly experiencing their neighbourhood on a daily basis, it is important to involve them in neighbourhood improvement initiatives. It is important to hear their opinions, concerns, and perspectives in order to suit policies and programs to fit their needs and interests. This is especially important for community members who tend to not be heard. As is often the case, youth, females, and ethnic or cultural minorities' opinions and needs are often disregarded. However, they may experience specific and different neighbourhood stressors and stress-relievers than others.

In order to understand the various perspectives with regard to neighbourhood improvements, it may be important to gather stakeholders and permit all to voice their opinions, needs, and concerns. Coming together to discuss neighbourhood issues can be a way of strengthening the community, as neighbourhood stakeholders can take time to listen to one another's perspectives. In the case of the neighbourhood from the present study, this type of meeting would involve community members including adolescent girls as well as other populations, community leaders, community organization workers, police officers, as well as health promotion professionals who are involved in improving the neighbourhood. Stakeholders could discuss important neighbourhood issues from all perspectives and various interventions (e.g. policies and programs) that aim to improve neighbourhood environments and that involve the participation of the community. Since participants seem to feel little control over their neighbourhood environments, providing them with a platform as well as encouraging them to voice their perspectives, interests, and needs could help them feel a greater control over their neighbourhood. Feeling that they can control some of their neighbourhood characteristics may

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lead them to feel empowered. Also, adolescents may be more likely to utilize programs and services that they were involved in designing and implementing.

It is likely that various groups will prioritise different issues, therefore, the presence of a mediator (possibly the health promotion professional) might help the community avoid dominance of one or more groups. A mediator could also help set overall neighbourhood improvement goals that are more inclusive of everyone's perspective. Additionally, it may be possible to have community subgroups that would work at improving specific neighbourhood-level stressors that affect them. For instance, adolescent girls could get together with a few key neighbourhood leaders and try to understand as well as find solutions for the conflicts occurring between adolescent girls in the neighbourhood. Doing this may also help these girls develop conflict resolution skills. This would be an important stressor to address since in order to avoid further conflict, some participants are isolating themselves from their neighbourhood and thus, are less integrated in their neighbourhood than others. It appears that these participants benefit less from community social support, which has been identified as an important stress-reliever. Addressing neighbourhood conflicts between adolescent girls could take down the barriers to community integration and thus, involve all adolescent girls in the community. In return, adolescent girls could then benefit from their community's social support.

Participants in the present study were asked to suggest how their neighbourhood could be improved to become a less stressful environment. Most of their answers directly and indirectly involved improving the sense of community. An important issue that most participants want improved concerns the stigmatization of their neighbourhood. In order to end stigmatization, most participants acknowledged the need to change the image of their neighbourhood, which has been discussed as an important way to end stigmatization in the literature (Gourlay, 2007). Gourlay (2007) has found direct exposure to the neighbourhood by outsiders to be an effective

way of changing the negative image harboured by outsiders. This is consistent with findings from the present study, as participants have been successful at changing some outsiders' negative perceptions by directly exposing them to their neighbourhood.

However, Gourlay (2007) highlights that this strategy does not reach a broader audience. In order to change the mainstream negative image of a neighbourhood, he suggests tackling the physical and social problems that exist in the neighbourhood, which would then change the image of the neighbourhood. Many participants in the present study believed that ending violence and crime in their neighbourhood would in turn, end the stigmatization of their neighbourhood because the media would no longer have any negative news to report. Nevertheless, most participants thought that ending violence and criminal activity was quite an overwhelming task. In addition, social issues such as violence and crime are often complicated issues that relate to other social problems (e.g. poverty and racism). Some participants suggested increasing the number of community events, as they perceived them to be positive and stress-relieving for community members, and inviting the media to broadcast these positive events. This way, outsiders would also see the strong and positive aspects of this neighbourhood and may lessen their judgmental views.

Limitations of This Study

It is important to consider some of the limitations of this study. First of all, recruitment and data collection took place during the winter months. For instance, due to several winter storms, recruitment locations were closed, which delayed my recruitment process. Also, the closure of community centres on stormy days led to the cancellation of some interviews that were booked for those days. In one case, I could not reach a participant to reschedule our interview, and thus lost that participant. Since my study had tight timelines for the completion of my

Master's degree, I could not wait for spring or summer to recruit participants and collect data, when more ideal weather conditions may not have delayed this process.

I found it crucial to work with community organizations for recruitment rather than simply relying on posters because workers at these community organizations know the community members well and could help me find adolescent girls who fit with my study's criteria. Also, adolescent girls seemed to trust the workers of these community organizations and they appeared hesitant to be involved in anything with someone they did not know and trust. Therefore, the liaison between the community organization workers and myself demonstrated to participants that I was someone they could trust. Unfortunately, many community organizations were either difficult to reach or unable to help me recruit participants. By speaking with these community organizations, it seems that this neighbourhood has been studied at great length and some community members may feel some frustration in regards to being over-studied. This may explain why some community organizations were unable to help me with recruitment. The local public library and a recreational centre were the two community organizations that actively helped me in recruiting participants. Since my participants were recruited from these two organizations, it is possible that my sample lacked community diversity. Obtaining the participation of other community organizations in my recruitment process might have helped me to recruit a more diverse sample, such as including girls who were of different ethnicities or who had left the school system prematurely. Also, although recruiting through community organizations was an efficient recruitment method, the researcher was only able to recruit participants who are connected to these organizations. Accessing participants who are less or not connected at all to these community organizations may have yielded some different perspectives.

All participants seemed eager to continue for the length of the entire data collection process. However, only three participants returned their camera and no participant came back for

the second interview. For some participants, it was quite difficult to reach them at home, the number they provided, and did not return messages. In other cases, I was able to reach participants, but personal matters prevented them from spending the required time to continue in the study. Weather, as discussed previously, was also a factor in having to reschedule interviews. No cancelled interview was rescheduled due to difficulties in reaching participants. In order to possibly avoid this limitation, I could have asked for cell phone number only, as most participants had a cell phone that they seemed to utilize frequently and thus, it may have facilitated the communication process.

Lastly, I have limited experience conducting research. Although I was well guided by a supervisor and committee, I am still in the process of developing my participant recruitment, interviewing, and data analysis skills. Therefore, the participant recruitment, data collection, as well as data analysis may have been affected by my limited research experience. In order to lessen the impact of this limitation, I frequently consulted and received feedback from my supervisor and I also held a few committee meetings for their feedback.

Suggestions for Future Research

This study's findings point to several directions for future research. For one, this study only explored the neighbourhood-level stressors and stress-relievers in one neighbourhood. Every neighbourhood is different and the dynamics between the neighbourhood and residents will also vary by neighbourhood. It would be interesting to understand the differences between adolescent girls in other neighbourhoods, both urban and rural.

Although it is crucial to understand the perspective of adolescent girls, exploring other community members' perspectives such as adolescent boys, children, adults, community organization workers, and local police officers may also be important in order to understand community dynamics. Additionally, exploring the perspectives of early adolescent girls (ages

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10-14) may also yield some different results. This could be an important age group to study since preventing problems from developing at this stage, could prevent them from aggravating into adolescence and then possibly into adulthood. Also, this study also focused on adolescent girls rather than boys or both sexes. It would be interesting to further explore how adolescent boys perceive their neighbourhood environments to affect their stress and to compare neighbourhood-level stressors and stress-relievers for adolescent boys and girls to see if there exist any gender differences.

The photo elicitation technique seems to be a good idea and has worked well in many past studies (Epstein et al., 2006; Morrow, 2000; Morrow, 2001; Strack et al., 2004). However, with this specific population, and possibly because this study was conducted during the winter months, the photo elicitation technique may have been burdensome for participants. However, future research on this topic should consider offering other arenas for participants to express themselves. For instance, Uzzell, Pol, and Badenas (2002) asked their participants to draw a cognitive neighbourhood map that permitted participants to illustrate what they considered to be their neighbourhood, identify its distinct characteristics, demonstrate their sense of attachment and belonging, as well as how outsiders perceive their neighbourhood. This cognitive neighbourhood map could be useful in future research exploring the participants' perspectives of their neighbourhood impacts on their stress.

Summary

The findings of this study demonstrate the importance of a strong sense of community in preventing and relieving stress for adolescent girls. The sense of community provides crucial sources of social support, notably from the close ties that adolescent girls hold with community members, that relieve stress for these girls. Any threat or disruption to the sense of community, such as violence and crime, interpersonal conflicts within the neighbourhood, and stigmatization

of the neighbourhood, are stressful for these girls. Therefore, participants explained the importance of resolving these issues in order to strengthen and maintain the sense of community in their neighbourhood, which in return provides them with more stress relief.

This study highlights the importance for health promotion professionals to work in neighbourhoods to help bring community members together and provide everyone with a chance to voice their opinions, needs, and concerns. They can then, as a community and with the help of health promotion professionals, design interventions (i.e. policy and/or program) suited to the community members' needs and interests that will aim to build and maintain less stressful neighbourhood environments.

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Appendix A: Map of the North End of Halifax
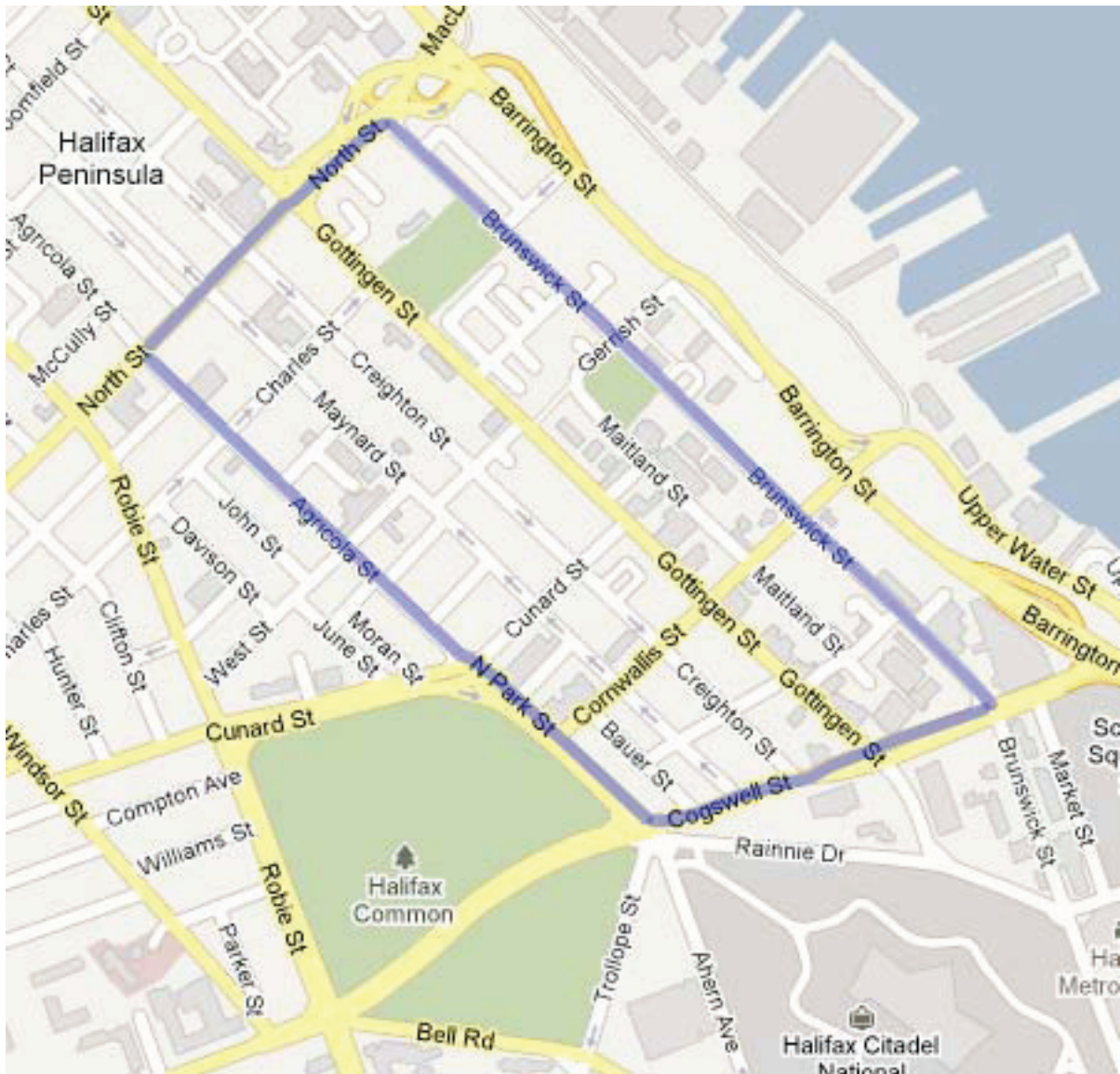
Appendix B: Recruitment Poster

Are you a girl between 15 and 18...

and live in the North End of Halifax?

Participate in a study about how your neighbourhood affects your stress!
Talk about your experiences and show us through photos!

$15 for participating

Contact Josée
nstudy@dal.ca

DALHOUSIE UNIVERSITY
Inspiring Minds

Appendix C: Presentation Script

Hi everyone! Thank you for letting me speak to your group today. My name is Josée Lapalme and I am a student at Dalhousie University. I am doing a study and I am looking for girls between the ages of 15 and 18 to participate. I am doing this study because I want to better understand what you think of your neighbourhood and how you think your neighbourhood affects your stress in a positive and negative way. So, I want to know about the places, the people, or the things in your neighbourhood that make you feel 'stressed out' and the places, people, or the things in your neighbourhood that help reduce your stress. I also want to know what you think can be done to improve your neighbourhood so that it can become a less stressful place.

If you decide to participate, you will be asked:

1). To meet with me at either a North End community centre, at the North Branch Library or at some other place that we both agree upon to talk about your neighbourhood, what stresses you out in your neighbourhood and what in your neighbourhood makes you feel less stressed. I'll also ask you to talk about what you think can be done to improve your neighbourhood so that it can be a less stressful place. This conversation should take about one hour.

2). After we're done talking, I will give you a disposable camera for you to take pictures of what we talked about. So, you could take pictures of the places, people (but not faces!), or things in your neighbourhood that stress you out and of those that you feel reduce your stress. You'll have about a week to do this. If you take photos of someone's face or of something that could identify that person, I will have to immediately destroy the photo.

3). Then, we will meet so that I can pick up the camera and develop the pictures you took.

4). Once the pictures are delivered, we will meet one last time to talk about the pictures you have taken. You can talk to me about why you took that picture, how the thing, place or person in the

picture stresses you out or how it reduces your stress. This conversation will take about 30 minutes to an hour.

I will give $15 to those who participate in this study as a thank you for participating. With your permission, I will audio record our conversations, type them up and then write about what I have learned from you. I might use some of the things you say or some of the pictures you've taken in my Master's thesis, but your name and identity will not be linked to anything you say. So, I will never use your name and I'll keep all your information and notes on our conversation locked up in a cabinet at Dalhousie University that my supervisor and I will have access to. Also, if you decide to take part, you can stop our talk at any time or you can choose not to talk about certain things if you don't want to.

I'll give you an information sheet that says everything I just said to you now and it has my contact information. If you would like to participate in this study, you can either call me or email me. Does anyone have any questions? Thanks again for letting me speak to you about this!

Appendix D: Interview Guide

Before the interview:

1). Thank the participant for agreeing to volunteer for the research study.

2). Provide the participant with a copy of the consent for to review.

3). Verbally review the consent form with the participants and complete signatures.

4). Re-emphasize that what the participant says will be kept completely confidential, which means their name will not be connected to anything they say.

5). Re-emphasize that participation is completely voluntary and that they may stop the interview at any time, or refuse to answer any questions they do not want to answer.

6). Ask the participant if they have any questions before the interview begins.

7). Check the recorders.

8). Start the interview.

The interview:

This interview contains three sections. In the first section, I will ask you to tell me about your neighbourhood, what you like in your neighbourhood, what you don't like in your neighbourhood, how you would describe your neighbourhood and so on. The second section will focus on questions about whether or not your neighbourhood affects your stress and why. I would also like to know what you think can be done to improve your neighbourhood. In the last section, I will ask you questions about yourself, for example, your age, if you go to school, if you work, and so on.

Section 1: Perception of Neighbourhood

Now, I would like to ask you questions about your neighbourhood. Remember that you do not have to answer questions that you are not comfortable with.

1. How would you describe your neighbourhood to someone who doesn't live here?
   Prompt: Friends, family, teachers, different ethnicities, community leaders, etc…

   Probe: What types of places do you find in your neighbourhood?
   Prompt: Stores, restaurants, community organizations, libraries, churches, houses, schools, parks, etc…

   Probe: What types of things or events happen in your neighbourhood (if any)?
   Prompt: Festivals, community garden, criminal activity, etc…
2. Tell me about what you like in your neighbourhood.
   Prompt: places, people, things, events.

3. Tell me about what you don't like in your neighbourhood.
Prompt: places, people, things, events.

4. Tell me about what others think of your neighbourhood.
Probe: Tell me the great things about this neighbourhood that other people might not know about.
Probe: Tell me the not so great things about this neighbourhood that other people might not know about.

Section 2: Neighbourhood Impacts on Stress

Now, I will ask you questions about how your neighbourhood stresses you out or how it doesn't stress you out. Remember that you do not have to answer questions that you are not comfortable with.

5. Tell me about the things, places, situations, or people in your neighbourhood that makes you or others like you feel stress.
Probe: Why do they make you feel this way?

6. Tell me about the things, places, or people in your neighbourhood that help you or others like you reduce your stress.
Probe: Why do you think they help you?

7. Tell me about what you think needs to be changed in your neighbourhood to help you or others like you reduce your stress.
Probe: How would you like to see these things change?
Probe: What can you do to make them change?
Probe: Who else should be involved in making these changes happen?

8. Is there anything else that you wanted to say about your neighbourhood and/or your stress?

Section 3: Socio-Demographic Questions

Now, I would like to get to know you a bit better. Remember that you don't have to answer any questions that you don't feel comfortable with.

9. When someone asks you to describe yourself, what do you tell them?
Prompt: Age, identify with cultural/ethnic group, length of time in neighbourhood, where do you live, do you go to school, do you work, etc.

We are now done the first interview. Thank you for participating in my study!

Appendix E: Photo Elicitation Instructions for Participants

Instructions For Taking Photos

As part of participating in this study, you are asked to take photos of things, places, or people in your neighbourhood that influence your stress in a positive and negative way. I will give you a disposable camera for you to use. If you own a digital camera, you may use it if you prefer. You may take as few photos as you wish or as many photos as there is space for on the camera. However, you will only be asked to bring me a maximum of 10 photos.

When taking photos please DO NOT take a photo of a person's face or of anything that could reveal the identity of the individual. If you would like to take a photo of a person, you could, for example, take a photo of their back, feet, hands, and so on. If you do take a picture that reveals the identity of the individual in the photo, I will have to destroy that photo immediately.

You have about 1 week to take these photos. When you are done, please contact Josée Lapalme by telephone (902-209-5653) or by email (nstudy@dal.ca). We will meet for me to collect the camera to have the photos developed. If you are using a digital camera, please send me the photos by email.

Please feel free to be as creative as you would like when taking the photos. These photos will help me understand how certain things, places, or people in your neighbourhood make you feel stressed out and how they help you reduce or prevent stress for you.

Don't be shy to contact me if you have any questions. Thank you!!

Appendix F: Second Interview Guide

Before the interview:

1). Thank the participant for agreeing to volunteer for the second interview.

2). Re-emphasize that what the participant says will be kept confidential, which means their name will not be connected to anything they say or to the photos they took.

3). Re-emphasize that participation is completely voluntary and that they may stop the interview at any time, or choose not to answer any questions that they do not wish to answer.

4). Ask the participant if they have any questions before the interview begins.

5). Check the recording device.

6). Start the interview.

The interview:
I want to remind you of some of the things you and I talked about the last time we met. I would like you to tell me if I understood correctly.

I will now take out the photos that you have taken and I will ask you to tell me about your photos and about the thing, person or event in your photo.

1. Tell me about this photo.
     Probe: Why did you take it?

2. Tell me about what this photo means to you.
     Probe: Why is it important?

3. Tell me why you think this thing or place (in the photos) makes you feel stress or why it reduces your stress.

4. Tell me why you think you need this (in the photos) to reduce your stress.

5. Tell me about what it was like when you were taking the photos.
     Probe: Did you like it?
     Probe: Was it fun?
     Probe: Did you find it difficult?
     Probe: Did it make you think?

6. Is there anything else that you would like to say about your photos?

Appendix G: Participant Informed Consent Form

Participant Informed Consent Form

Study Title: Exploring How Adolescent Girls Perceive Key Characteristics of
                          Their Neighbourhood as Affecting Their Stress

Degree Program: Master of Arts, Health Promotion
                          School of Health and Human Performance
                          Dalhousie University

Principal Investigator: Josée Lapalme, BSW, MA (candidate)
                          School of Health and Human Performance
                          Dalhousie University
                          6230 South Street, Halifax, Nova Scotia, B3H 3J5
                          Telephone: (902) 209-5653
                          Fax: (902) 494-5120
                          Email: nstudy@dal.ca

Research Supervisor: Dr. Lois Jackson
                          School of Health and Human Performance
                          Dalhousie University
                          6230 South Street, Halifax, Nova Scotia, B3H 3J5
                          Telephone: (902) 494-1341
                          Fax: (902) 494-5120
                          Email: lois.jackson@dal.ca

Contact Person: Josée Lapalme
                          Telephone: (902) 209-5653
                          Email: nstudy@dal.ca

Please feel free to contact Josée Lapalme by phone or email if you have any questions,
comments, or concerns about the research, or if you require further information.

We invite you to take part in a research study being conducted by Josée Lapalme who is a graduate student at Dalhousie University, as part of her Master of Arts in Health Promotion. Your participation in this study is voluntary and you may withdraw from the study at any time. The study is described below. This description tells you about the risks, inconvenience, or discomfort which you might experience. Participating in the study might not benefit you, but we might learn things that will benefit others. You should discuss any questions you have about the study with Josée Lapalme.

Purpose of the Study

This study is being done to understand more about how adolescent girls, like you, think about your neighbourhood. We want to know if certain aspects in your neighbourhood such as things, places, and relationships in your neighbourhood make you feel stress and/or reduce your stress. We also want to know about what adolescent girls, like you, think should be done, if anything, to improve their neighbourhood for it to be a less stressful environment.

Study Design

To collect the information, the researcher will ask you questions in an interview about your neighbourhood and whether or not there are any aspects of your neighbourhood that makes you feel stress and/or reduce your stress. The researcher will also ask you to take pictures of important characteristics of your neighbourhood that makes you feel stress and/or reduce your stress. You will be asked to meet the researcher one last time to talk about your photos.

Who Can Participate in the Study

Any adolescent girl between the ages of 15 and 18 years who lives in the North End of Halifax can take part in this study.

Who will be Conducting the Research

Josée Lapalme, a graduate student at Dalhousie University, will be doing this research with the help of her MA thesis supervisor, Dr. Lois Jackson also from Dalhousie University.

What you will asked to do

If you agree to participate in this study, you must first sign this consent form to let us know that you agree to participate voluntarily. Then, you will be asked to meet with Josée Lapalme for a face-to-face interview that will be audio-recorded. You will meet either in a private room at the North Branch Library or in another quiet and safe location that you and the researcher have both agreed upon. The interview will take between 1 hour and 1.5 hours. The interview can be done at a time that is both convenient for both you and for the researcher.

The researcher, Josée, will ask you questions about your self such as age, if you go to school, if you work, and how long you've lived in your neighbourhood. She will also ask you to talk about your neighbourhood and what things, places, and people in your neighbourhood stress you out or help you reduce your stress, and what you think can be done to improve your neighbourhood, if

anything. The researcher will then give you a disposable camera for you to take pictures of neighbourhood aspects that make you feel stress or help you reduce your stress. These pictures will help us better understand what you were telling the researcher. If you take photos of someone's face or of something that could identify that person, Josée will have to immediately destroy these photos. You will have about one week to complete this part. Then, you will be asked to meet the researcher briefly to give her the camera so she can develop the photos. Once the pictures are developed, you will be asked to meet with Josée one last time. During this second interview, Josée will have a summary of what you talked about in the first interview. She will read over it with you to make sure that she understood what you said in the first interview. Then, she will ask you to explain your photos. This second interview will take approximately 30 to 60 minutes.

In all, there are three parts to this study: 1). First interview 2). Taking photos 3). Second interview. Participating in this study can take up to 3 to 4.5 hours.

You will also receive a copy of this consent form for your records.

Possible Risks and Discomforts

There is minimal risk to taking part in this study. Talking about your neighbourhood and your stress may be upsetting for you because you might talk about personal experiences that relate to your friends and the safety in your neighbourhood. At the end of the interview, the researcher will give you a list of places that you can contact for help. Please remember that you should only share information that you feel comfortable talking about. If at any point you no longer wish to participate in the study you may simply end the interview, or choose not to take photos or schedule the second interview. If after you have been interviewed you decide you no longer want to be part of the study, and do not want Josée to use the things you told her in your interview, simply call or email her to say so within three weeks of the interview.

The decision to participate in this study will not affect in any way access to community services.

Possible Benefits

Participating in this study will not help you directly. We hope to use your experiences, ideas, and pictures to talk to people, like neighbourhood stakeholders, who may be able to make changes in your neighbourhood. We can share some of your ideas and experiences to help them decide how to change your neighbourhood.

Compensation

You will receive $15 (Canadian) at the beginning of the first interview.

Confidentiality and Anonymity

All information from this study will be kept confidential. After each interview, the researcher will type out what you have said word for word. Nothing will have your name on it except for this consent form and a receipt for the $15 that you will receive, which will be kept separately from your interview. Data and all study material consent forms will be kept in a locked filing

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cabinet at Dalhousie University for a minimum of 5 years that only Josée Lapalme and her thesis supervisor will have access to. All this information will be destroyed after a minimum of 5 years.

Josée Lapalme may want to use something that you said (quote) in her thesis, presentations or publication. All personally identifying information (such as names of friends and name of school) will be removed from all quotes. Josée will need her thesis committee's approval for the use of any quotes.

If you talk to Josée Lapalme about a situation where you or a child (16 years and under) is being abused, the researcher is legally obligated to speak with Child Protection Services. Also, if you talk about an immediate intention of committing suicide or about committing a violent act against another person, Josée would feel compelled to call her supervisor immediately to discuss whether or not she should call the police. If her supervisor is not available, Josée would feel compelled to call the police.

Questions

If you want to talk to someone about this study, you can call or email Josée Lapalme at (902) 209-5653

Problems and Concerns

If you have any difficulties with, or wish to voice concern about, any aspect of your participation in this study, you may contact Patricia Lindley, Director of Dalhousie University's Office of Human Research Ethics Administration, for assistance at (902) 494-1462, patricia.lindley@dal.ca.

<u>Signature Page</u>

Study Title: Exploring How Adolescent Girls Perceive Key Characteristics of Their
              Neighbourhood as Affecting Their Stress

To be filled out by you:

I (the participant) have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I hereby consent to take part in this study. However I realize that my participation is voluntary and that I am free to withdraw from the study any time within three weeks of the first interview, and can withdraw my information within three weeks after my interview.

Yes_____   No_____

Audio recording:

I (the participant) agree to have the interviews audio recorded by the researcher. I agree to let the researcher use direct quotes from my interviews with the understanding that my name is not attached to the quotes.

Yes _____   No _____

Use of photos:

I (the participant) agree to let the researcher use photos that I have taken with the understanding that my name is not attached to the photos.

Yes_____   No_____

I would like to receive a copy of the results for this study.

Yes_____   No_____

Participant's name (please print) _____

Participant's signature _____

Date _____

Researcher's name _____

Researcher's signature_____

Date _____

If you would like to receive a copy of the results for this study, please provide your address in the space below.

Please provide your phone number, email address or other contact information in order for Josée to contact you to set up a time and place to pick up the camera and for the second interview. Your contact information will be destroyed once the interviews are completed.

Appendix H: Resource List for Participants
Resource List for Halifax

<u>General</u>

Kids Help Phone, 1-800-668-6868

<u>Halifax</u>

North End Community Health Centre
2165 Gottingen St.
902-420-0303
northend@nechc.com
www.nechc.com

Community YMCA
2269 Gottingen St.
902-422-9622
info@communityymca.ca
www.communityymca.ca

YMCA Employment Services
2269 Gottingen St.
902-425-3464
www.yechalifax.ca

North End Parent Resource Centre
5475 Uniacke St.
902-492-0133
parentresource@hotmail.com

The Youth Project
2281 Brunswick St.
902-429-5429
youthproject@youthproject.ns.ca

Phoenix Youth Programs
6035 Coburg Rd., Professional Centre
902-422-3105
phoenix@phoenixyouth.ca

Mik'maq Youth Option Program
2159 Gottingen St.
902-468-0384

Halifax Sexual Health Centre
6009 Quinpool Rd., Suite 201
902-455-9656
info@halifaxsexualhealth.ca

Avalon Sexual Assault Centre
1526 Dresden Row
902-422-4240, after hours 902-425-0122

Services for Sexual Assault Victims
902-455-4240

Mainline Needle Exchange
5511 Cornwallis St., Halifax
902-423-9991

Direction 180, Methadone Clinic
2164 Gottingen St., Halifax
902-420-0566