Environmental governance, urban change, and health: An investigation of informal recyclers' perspectives on well-being in Vancouver, BC

by

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In Vancouver, informal recyclers take to the streets on a daily basis to salvage and sell recyclable materials from the waste stream. Many of these workers reside in the city’s impoverished Downtown Eastside and are highly stigmatized due to their work with waste and their socioeconomic status.

This research is based on 40 interviews with informal recyclers that assessed their perceptions of work, the social determinants of their health, and access to services. I found that informal recycling can simultaneously benefit and worsen the self-reported health status of workers by providing independent incomes, but also exposing workers to health threats associated with solid waste, stigma, and limited access to services and resources. This study suggests that recyclers’ experiences of poor health and inequality exemplify the uneven rollout of well-intended policies in the city’s physical, social, and political spaces, shaping their geographies of survival in the Downtown Eastside of Vancouver.
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Chapter One: Introduction

Urban areas in the global north have experienced substantial improvements in healthcare, where the average health status of individuals has increased over the last half century. This advancement of health is not equally experienced or distributed amongst all city dwellers (Prewitt, 1997; Friel et al, 2011). It is therefore essential that research be conducted in order to investigate this uneven distribution of health, assess the implications of one’s health status, and ask how we can create equality among city residents.

Vancouver, British Columbia has been repeatedly ranked as one of the most “livable cities in the world” according to The Economist Intelligence Unit’s livability ranking (EIU, 2013). Despite its common framing as a politically and environmentally progressive city, Vancouver’s residents experience vast polarization (Ley & Lynch, 2012), which has significant implications on the inequitable distribution of health resources and threats in the urban sphere. With the intention of discussing urban health inequity and the health status of marginalized populations in a Canadian context, this thesis examines the lived experiences of Vancouver’s informal recyclers (locally known as binnners), a group of non-sanctioned waste workers who take to the streets on a daily basis to salvage recyclable materials from the waste stream in order to generate an income from their sale. In the context of Vancouver’s municipal policymaking agenda to promote urban revitalization and sanitize “public disorder” from the city, these informal waste workers are increasingly voiceless in the governance of the city despite the environmental value of their work. My research seeks to meaningfully include the perspectives and lived experiences of these marginalized workers in investigating their socially determined aspects of health and experiences of the
uneven rollout of policymaking and urban change in the city.

This thesis begins by outlining the pertinent issues concerning informal recycling in Vancouver and describing important concerns in the inner city Downtown Eastside (DTES) neighbourhood. The second chapter includes a description of my theoretical framework (the social determinants of health) and methodology used for this research. In the third chapter, I incorporate the results of my research into a discussion of the existing literature under the categories of health resources, threats to health, and mediating factors. The fourth chapter then takes a macro approach to the issues that binners face and applies them to broader structures of governance and inequality in the city, before concluding in chapter five with a summary of findings and recommendations for future study.

1.0 Informal recycling: Binning in Vancouver

As an informal economic opportunity, informal recycling (binning) is often a survival strategy for no- or low-income individuals and involves the collection and sale of recyclable resources such as beverage containers, metal, electronics, and clothing from households, businesses, or public garbage bins (Gutberlet et al., 2007). In Vancouver, many of these informal workers reside in the city’s impoverished DTES neighbourhood and are highly stigmatized and exposed to health threats due to their work with waste and their socioeconomic position in society. Informal recycling is an unregulated public service that is performed under precarious or hazardous working conditions where workers are exposed to several risks: chemical hazards, infections, physical injuries, exposure to extreme weather conditions, and emotional vulnerabilities (Binion & Gutberlet, 2012; Baud et al., 2001). The occupational health threats that informal recyclers encounter often intensify
their poor living environments, inadequate nutrition, and unsatisfactory housing, which leads to the poor health status experienced by these precarious workers.

In 1997, British Columbia’s provincial government enacted the “Beverage Container Stewardship Program Regulation”, which expanded the provincial deposit program to include most types of beverage containers to be eligible for return under a deposit refund system. As a result of this program, three stewardship agencies were established in order to ensure adherence to the regulations: Encorp Pacific (non-alcoholic beverages), Liquor Distribution Branch (non-domestic alcoholic beverages), and Brewer’s Distributor Ltd (domestic alcoholic beverages). This deposit-refund system established the goal that 85% of the province’s beverage containers be recovered by these stewardship agencies through bottle de pots and recycling programs (Encorp Pacific, 2013). It is within the context of this change in beverage container refund laws that binning gained momentum in the city as popular informal means of producing income for low-income residents.

Vancouver’s informal recyclers work throughout the entire city, many focusing on specific neighbourhoods or parks, while others undertake lengthy routes or traplines that they follow on a daily basis. Although this work takes them to all corners of the city, especially to neighbourhoods that have “rich garbage”, many of these workers are based out of the city’s DTES, as it is where they access resources like shelter, community, and services. The spatial geographies of binning indicate a gap between where these informal workers live and work: few respondents collect recyclables in the DTES where they live,
instead preferring to walk longer distances to wealthier neighbourhoods for more valuable recyclable materials, bringing these back to the DTES to refund or sell.

There are two predominant organizations in the DTES that facilitate the incomes and provide support and social benefits to binners: United We Can (UWC) and the Pigeon Park Street Market (PPSM). UWC is a local social enterprise started by a group of binners in 1995 with the mandate to “create economic opportunities for people with multiple barriers living in the DTES through environmental initiatives” (UWC, 2013). UWC’s largest project is their bottle depot on Hastings Street, which is the main stopping point for recyclers in the neighbourhood. The bottle depot processes an average of 50,000 bottles and serves 700-750 binners per day, while employing part-time low-barrier staff that work on a rotational basis. UWC is not just a depot, but also acts as a support system, providing a sense of place and agency for stigmatized workers who can gain a sense of community and belonging at the depot (Dale & Newman, 2006; Tremblay et al, 2010). Figure 1 is a photograph of two binners in the alleyway behind UWC with their shopping carts containing beverage containers and other recyclable materials.

![Figure 1: Informal recyclers in the alley behind UWC (Wittmer, 2013)](image)
Many of Vancouver’s binners do not only collect beverage containers, but also other materials (household items, clothing, electronics, etc.) to sell informally on Hastings Street in front of the UWC depot, or at the PPSM on Sundays. The PPSM began in 2010 as a protest to ticketing blitzes undertaken by the police against informal vending during the lead-up to the Vancouver Olympic games. Despite these protest roots, the market now holds permits from the municipal government to operate at the Pigeon Park site on Sundays and is a mainstay in the neighbourhood, generating an estimated $5,000-10,000 per week by the 100-200+ informal vendors who use the space to sell recovered goods. The market not only provides vendors a safe place to earn an independent income, but they have several opportunities to get involved in the governance of its organization through participation in weekly meetings and volunteer groups. Both of these organizations are comprised of and work alongside binners in order to provide important supports to their livelihoods and will be discussed in further detail in terms of their role as governance mechanisms in Chapter four: Analysis.

Despite the increasing number of binners in the city and the environmental benefits that they provide through waste recovery and litter reduction, the activity of “scavenging” remains prohibited in British Columbia and these workers therefore incur negative responses from authority figures and community members. These workers are often associated with the waste that they work with and are perceived as being a nuisance or even criminals by the public (Nas & Jaffee, 2004; Tremblay, 2007). Notwithstanding these mainstream perceptions, informal recycling in the form of binning and street vending incorporate a wide range of socially-excluded, impoverished individuals in Vancouver and
the number of people participating in these activities has increased dramatically in recent years (Tremblay et al, 2010).

1.1 Study location: Vancouver’s Downtown Eastside

Vancouver’s DTES is a unique location for studying urban health among marginalized city residents. The neighbourhood is home to approximately 18,000 long-term residents and is often characterized by its open drug scene, homelessness, poverty, and its marginalized community (Linden et al, 2012). This area of the city has a growing population that increased 140% between 1991-2007, with many of these newcomers being vulnerable and in search of shelter, services, or drugs (Campbell, 2009).

The DTES has been long defined as Vancouver’s “place of the poor”, a place that represents the social boundary between the socially marginal or deviant and more “respectable” Vancouver citizens (Roe, 2009). DTES residents are commonly characterized as being both poor and sick. They tend to access low-barrier services and basic resources in public spaces and are often represented by charitable organizations in society as clients rather than as citizens (Roe, 2009). There is significant stigmatization associated with this neighbourhood and its residents, as they are often conveyed in the media with startling imagery and sensationalist headlines.

It is estimated that over 5000 injection drug users reside in the neighbourhood and that thousands of additional users visit the area on a regular basis in order to purchase and consume substances (Small et al, 2007). As a space where illegal drugs are easily accessed,
high rates of health and social problems have arisen in the DTES, including Hepatitis-C, HIV/AIDS, overdoses, and street crime. Addiction and its interrelated causes and outcomes are strongly linked to this neighbourhood and are of great importance when considering health and social issues among its residents (Miewald & McCann, 2013; DeBeck et al, 2011). The high rates of disease and drug use in the DTES have been symbolically linked to poverty, homelessness, and mental illness, and the residents of the neighbourhood are therefore perceived as being a threat to the rest of the city (Myers, 2010). Although these are significant issues in the community and among binners, it is important to recognize that these factors do not wholly define the community or informal recyclers as a group. Informal recyclers are a very heterogeneous group and have turned to this work for a diverse number of reasons. Low-income status and preclusion from formal employment in this neighbourhood is not only the result of addictions, homelessness, and mental illness, but can also stem from language barriers, physical disabilities, or the choice to work for one’s self.

1.1.1 Urban Change and Health in Vancouver’s Downtown Eastside

The DTES is currently experiencing urban change as municipal agendas and the city’s booming real estate market promote urban revitalization and redevelopment in the neighbourhood and surrounding areas. Walks & Maaranen (2008) argue that these types of public policy approaches to city planning often mask gentrification processes and the desire to dilute poverty through “social mix” and the dispersal of existing residents in order to attract new ones (Masuda & Crabtree, 2010). Gentrification is defined in the Dictionary of Human Geography as: “middle-class settlement in renovated or redeveloped properties in older, inner-city districts formerly occupied by a lower-income population” (Gregory, 2009:
This process involves what Dale & Newman (2009) identify as the “hollowing out” of a neighbourhood, whereby surrounding areas gentrify and attract new, higher income residents, while poverty and services for impoverished residents are concentrated into a continually smaller geographic area until they are displaced or pushed out. This process can be seen in the recent revitalization and growth of neighbouring communities like Gastown and Strathcona (see Figure 2), which has led to the increased concentration of marginalized people into the DTES. The changes taking place in the DTES and surrounding neighbourhoods are representative of two opposing forces: gentrification and ghettoization, as the neighbourhood and its surrounding areas are simultaneously up- and downgraded. Smith (2004) explains that the over-concentration of social housing and services in the DTES attracts impoverished residents to an increasingly smaller urban space, while municipal revitalization agendas simultaneously encourage market housing development and increased social mix with the aim of attracting more affluent residents to the neighbourhood and surrounding areas.

Figure 2: Map of DTES and surrounding neighbourhoods (SUNN Vancouver, 2011)
Gentrification is a highly politicized and contested issue associated with urban change. It is a process that often takes place under the guise of urban or neighbourhood revitalization and promotes increased social mix in order to restore “social balance” to the city (Walks & Maaranen, 2008: 294). The literature indicates that urban revitalization planning is a conscious municipal policy strategy embedded within neoliberal paradigms that promote both the economic and social redevelopment of central city spaces (Gregory, 2009; Ley & Dobson, 2008). Roe (2009) states that the societal stigma associated with this “place of the poor” and the neighbourhood’s reputation for public disorder has made it easier for policymakers and real estate developers to justify “revitalizing” the space and displacing low-income residents. Gentrification has especially come to the fore within the last decade during municipal efforts to revitalize downtown areas in the lead up to the 2010 Vancouver Olympic Games. Conversely, Ley & Dobson (2008) argue that the economic and social conditions of the DTES and the efforts of its community have been effective in stalling the gentrification of the neighbourhood.

The DTES is a highly politicized neighbourhood that is at the center of much debate and speculation in Vancouver due to its highly marginalized population and the social and health issues associated with the neighbourhood. Several authors contend that gentrification can be implicated in the growth of social-spatial polarization and inequality (Walks & Maaranen, 2008; Smith, 2003), which are associated with declining health equity and well-being for impoverished urban residents (Freudenberg et al, 2005; Barten et al, 2011). Therefore, as “rennovictions” of low-income housing occurs in combination with encroaching market housing and services and amenities targeted towards new higher-income residents, the impoverished residents experience increased stigmatization and
mental health issues, homelessness due to unaffordable housing, and food insecurity due to local price increases (Sutherland et al, 2014; Walks & Maaranan, 2008; Miewald & McCann, 2013). The relationship between marginalization, poverty, and urban change are complicated in the DTES and urgently require social, environmental, and health-based research that meaningfully include the perspectives of socially excluded residents.

1.2 Aim and Objectives

Drawing on the social determinants of health framework (Marmot, 2005; Mikkonen & Raphael, 2010), this thesis aims to explore the occupational and socioeconomic factors that influence the health status of Vancouver’s informal recyclers, and to link local determinants of health and inequality with larger mechanisms of neoliberal governance in the city.

Objectives:

i. Document the specific health threats that Vancouver’s informal recyclers encounter through their own reported perspectives and lived experiences;

ii. Assess the collective health status of informal recyclers using a social determinants perspective;

iii. Identify the institutional barriers that affect the ability of Vancouver’s informal recyclers to access health services;

iv. Analyze the governance context that influences the geographies of survival that are constructed by binners and other low-income residents of Vancouver.
The health of informal recyclers has been discussed in several studies conducted in the global south (Gutberlet & Baeder, 2008; Parizeau, 2013; Medina, 2007); however, there is little research about this group of precarious workers in the global north despite their recent growth in numbers and reliance on this activity. This thesis builds on baseline knowledge of binning in Vancouver collected by Tremblay (2007) and adds in-depth perspectives about the health threats that these workers encounter through their work and living conditions, while also identifying institutional barriers that limit their ability to access services in the city.

This thesis will contribute to several knowledge bases, including informal recycling in the global north, informal recycler health, health and poverty in the inner city, and the governance of urban inequality. The methodological approach used in this study intended to empower Vancouver’s informal recyclers as they voiced their concerns in a meaningful and respected way. It is my hope that this valuable local-level knowledge will be considered in future policy and decision-making processes.

Chapter Two: Theoretical Framework and Methodology

2.0 Social determinants of health framework

An individual’s health status is influenced by several factors, including the social and economic environment, the physical environment, and individual characteristics and behaviours (see Figure 3); however, my research focuses specifically on the social determinants of health, or the social and economic factors that influence the health of individuals and communities.
I selected the social determinants of health as a framework for this study over other biomedical or environmental approaches to health because the socioeconomic influences on health are an especially prominent and under-researched aspect of recyclers' understandings and experiences of health as inner-city residents who work with solid waste on a daily basis. A social determinants approach to health considers a wide scope of social and economic factors that have significant influences over the health of individuals (see Figure 4). In this understanding of health the hazards that one person is exposed to may be completely different from those that others encounter, depending on their location, work, socioeconomic variables, and access to health services. It is therefore a useful framework for me to use in identifying a range of health opportunities and threats that binners encounter in the urban sphere as they experience health in a context of dynamic geographies of survival, or networks of sites along which binners act to maintain their access to health resources (see Chapter 4: Analysis).
A social determinants research framework is concerned with the ways in which material disadvantage combines with the effects of socioeconomic insecurity and social exclusion. Raphael et al (2008) state that the social determinants of health “appear to be the primary antecedents of just about every affliction known to humankind” (p231). Despite this knowledge of the effects that these determinants have in society, institutional action on the social and structural aspects of health in Canada has been minimal. Several authors then attribute the resulting gradient of health in society to neoliberal policymaking and its agenda to rollback the welfare state (Bryant et al, 2011; Raphael, 2008; Wilkinson & Marmot, 2003). A social determinants framework for health research considers a wide range of socioeconomic and structural factors that have significant influences on public health and is useful in identifying the health resources, threats, and mediating factors that are used and experienced by Vancouver’s informal recyclers.

2.1 Ethical Considerations

The DTES is a frequently researched neighbourhood, so researchers can be met with local cynicism if they come into the area with top-down methodologies for projects with no
specified benefit for the community or participants (Boyd, 2008). I drew on a body of literature that emphasized researcher positionality and qualitative research considerations in order to ensure that my research was conducted ethically and meaningfully incorporated the perspectives of marginalized people. Researcher positionality and reflexivity were essential considerations in my methodological planning and fieldwork etiquette towards the inclusion of binner perspectives.

Baxter and Eyles (1997) state that the researcher is a ‘positioned subject’ and should therefore constantly be aware of their own thoughts and actions throughout the research process. The socially-constructed conceptions that surround the relationship between researchers and participants are of particular concern in health-related research because individual accounts of health and illness are “more than descriptions of one’s physical condition or what people in society should do to avoid disease, but also reflect the individual’s perception of their social situation and place as worthy individuals in society” (Radley & Billig, 1996, p.221). As a relatively affluent researcher (made apparent through my ability to travel and study), my presence and social standing framed the interactions between the participants and myself. In noticing this relative affluence, participants may have chosen to adjust the way that they answered some questions in order to present themselves a certain way or to avoid embarrassment. Interestingly, during my time in the field, I noticeably injured my knee, so while I was conducting interviews, many of the participants asked me questions about the injury, which I gladly answered, and several went on to relate my situation to injuries of their own and warn me to be careful. I believe that through these encounters, my positionality as an affluent researcher was slightly altered in
that my physical disadvantage perhaps made it easier for participants to ease into a conversation about health by relating to my injury.

Health is an especially personal topic, so the interview process and line of questioning were designed to shift the focus from the individual level to the collective experience of binners for some questions, and attempted to circumvent certain uncomfortable topics in order to avoid alienating participants and to maintain rapport. For example, potentially embarrassing questions about personal hygiene behaviours were asked in an open-ended manner: “What is your opinion on the location and availability of public bathrooms in the city.” While some binners went into detail about their ability to shower, wash their hands, or urinate while they work, others chose to simply reply whether they thought access to sanitation in the city was adequate or not. This technique of changing a personal question into a question about societal or structural constraints not only avoids a potentially alienating question, but also frames potentially vulnerable research participants as knowledge holders who have valuable recommendations to make based on their experiences.

In order to conduct empowering research with a vulnerable group, it was essential for me to build rapport and maintain trust with the community by engaging the assistance of a gatekeeper, spending sufficient time in the field to learn the ‘culture’ of the group, and to be present at community events on a regular basis in order to show commitment to local issues (Olson, 2001; Coles et al., 2012; Baxter & Eyles, 1997; Makosky Daley et al., 2010). During my 3-month field season, I engaged with several gate keepers and gate-keeping
organizations [Gate keepers: *Health activist and local healthcare practitioner, Outreach director, Street market coordinators, Community Worker*; Gate-keeping organizations: *United We Can, Carnegie Outreach, First United Church, Pigeon Park Street Market*]. These individuals and organizations introduced me to informal recyclers and other useful contacts and informed me of local issues, which aided me in formulating appropriate interview questions. I also did extensive reading about the DTES, attended local events, and engaged with community members through volunteer positions with different organizations [*Carnegie Community Centre; First United Church; Pigeon Park Street Market*]. Through these experiences, I was able to establish rapport with 7 of my 40 participants before they participated in the interviews. During this process of interacting with community members and organizations, it was important that my research design be flexible in order to be locally relevant and rigorous (Baxter & Eyles, 1997). For this reason, as the field season and my understanding of local issues progressed, my list of interview questions grew and changed constantly. As a researcher in the DTES, I learned that it was essential to be flexible, patient, and compassionate, and worked very hard to ensure that the participants felt as though their stories were being valued and respected in a safe and inclusive research process.

Miewald & McCann (2013) state that there is a “continued need for research into the local geographies and everyday experiences of poverty” (p3). It is my intention that by meaningfully incorporating and voicing binner experiences of poverty and health into this study as the predominant form of data collected, this project will carry benefits to participants and their wider community. Community-engaged research strives to “research
for social change, where the research values participant collaboration and policy relevance” (Boyd, 2008, p.40). I selected this qualitative research approach because it has the potential to produce knowledge that is relevant to both the participants and the community, and advocates for policy changes that diminish environmental, health, and social inequities. Although it has been months since I was last in the DTES, I have maintained contact with several key informants and local organizers and plan to disseminate the knowledge gained from this study to the participants and community through these relationships.

2.2 Data Collection

2.2.1 Discourse and media analysis

I spent three months in the field living near the DTES, volunteering with local organizations [Carnegie Community Centre; First United-Footcare], and attending various community events, including a public protest and the weekly Pigeon Park Street Market and its two associated weekly meetings. During this time, I actively reviewed media coverage and publications on local issues and performed a discourse analysis of municipal government reports [Greenest City Action Plan (City of Vancouver, 2012); Vancouver Agreement, (City of Vancouver, 2000); Project Civil Society, (City of Vancouver, 2006)], which enabled me to contextualize local social and health issues within their municipal governance context. I sought out media artifacts and government reports via Google searches and on the City of Vancouver website, and then coded them for emerging themes and ideas. I used this analysis to establish a personal knowledge base that informed the development of my interview questions and conversations about local issues and programs.
2.2.2 Key informant interviews

I selected an interview methodology for this study because I was seeking to fill a knowledge gap by investigating complex behaviours, collecting a diverse account of meanings, opinions, and experiences, while showing respect for and empowering the people who provide the data (Dunn, 2005). I specifically selected semi-structured interviewing style because of the flexible and conversational way in which the interviews could be conducted (Olson, 2011).

In order to explore the health status of informal recyclers and the governance of health in the DTES, I conducted a series of interviews with a purposive sample of 40 binners and 7 key informants from local health service organizations. The key informants consisted of an outreach nurse, an emergency room physician, the coordinators of the Pigeon Park Street Market, a women’s health care provider and local health activist, a social worker with a DTES-based charity organization, and the director of local street Outreach programs. Key informant participation was necessary in this study because interviews with health care and community workers helped me to delve into detail about needs and barriers within a community (Makosky Daley et al., 2010). My one-on-one interviews with key informants began one month into the field season and occurred throughout the three month field session as their schedules allowed. I connected with service providers by calling and emailing various organizations and networking with people that I met while volunteering. The key informant interviews focused on worker understandings of the social determinants
of health with a specific emphasis on healthcare provision and binner access to care, as well as their experiences and insights into local health and well-being. See appendices for consent forms and interview questions.

2.2.3 Informal recycler interviews

Discussing one’s health and social status can be a sensitive subject, especially among marginalized or vulnerable groups. Because of this, I composed the binner interview questions after a majority of the key informant interviews were completed, as some of the informants offered advice on questions to ask, sensitivities, and things to look out for when interviewing this population. The binner interviews were enabled through a partnership with United We Can (UWC). I conducted these one-on-one interviews during my last week in the field, running them concurrently with a research survey regarding UWC’s intended move to a new facility. While I interviewed 40 binners in a separate space in UWC, additional research assistants completed 100 surveys with binners about UWC’s move. Some of the data from this parallel survey is used to provide baseline information about recycler age, gender, and ethnicity in the chapters that follow. I recruited participants on a voluntary basis by posting signs throughout the depot and having cashiers notify the binners that a survey was taking place about the depot’s impending move. Only those who self-selected for the study were surveyed, and once they had completed a survey, participants were asked if they would like to stay for an additional 25 minutes to participate in an interview about binning and health.
Participants were compensated with $5 for both the survey and interview, each of which lasted about 25 minutes. Payment as an incentive for participation is important in research studies, but it is necessary to determine the appropriate amount of payment so that it is not coercive (Ripley, 2006; Ripley et al, 2012). A primary concern with payment is that if the compensation is too high or if participants are incentivized too much, they may communicate what they believe researchers want to hear rather than providing their own perspectives. We mediated this concern by providing locally-appropriate compensation to informal recyclers and by emphasizing that they were the experts or knowledge holders in the interviews. Our research team ascertained that the appropriate amount of stipend compensation for participation in studies in the DTES was approximately $10/hour. This practice of paying participants in the DTES is considered to be an act of respect to compensate people for their time and to provide a fair rate of pay for the time spent engaging with studies in this highly-researched community.

Among those who volunteered to participate in the health interviews, I obtained informed consent and proceeded with a semi-structured interview format. In order to build and maintain rapport with the binners, I made sure to emphasize that they were the experts in the field and that I wanted to learn from them about their work. The interviews with informal recyclers were focused on both positive and negative aspects of binners health and experiences of health services in the DTES. I intentionally delivered the interview questions in an open-ended manner (e.g. “How do you describe your health?”) in order to allow recyclers to share their own opinions and experiences of both positive and negative aspects
of health. A full list of my interview questions guideline is included in this thesis in Appendix D.

In studies such as this that utilize semi-structured interviews, the sample size is often justified on the basis of interviewing participants until multiple data sources provide similar findings (Francis et al., 2010). Relying on “data saturation” strengthens the credibility and authenticity of statements and outcomes when multiple interpretations of an issue agree with one another (Baxter & Eyles, 1997). I completed 40 recycler interviews and 7 key informant interviews in order to ensure that the data was reinforced and that a state of ‘data saturation’ had been achieved.

2.3 Data analysis

The interview audio recordings were individually transcribed and later coded using HyperResearch (qualitative data analysis software), which helped me to classify, sort, and arrange my data. Once I finished coding the transcripts using broad coding categories (e.g. one for each social determinant of health), I went back through the transcripts and codes to break these categories down into more specific themes and ideas, facilitating further analysis and comparison with the earlier discourse analysis themes. While I transcribed a majority of the binner interviews after the field season was complete, I transcribed all of the key informant interviews while in the field in order to undertake a preliminary analysis of them and to inform future interviews with binners and other key informants. It should be noted that the findings presented in this thesis are the result of my own analysis and interpretation of the experiences, observations, and conversations that I had in the field.
This work is then rooted in my positionality as a researcher and only provides a snapshot of the DTES, the governance of health, and Vancouver’s binners as I interpreted them in the summer of 2013.

2.4 Research challenges and limitations

The potential challenges and limitations of this research project include the relatively short field season, issues with participant recruitment, and my positionality as a researcher. As a result of the temporal constraints on masters-level research, I was only able to conduct field research over a three-month period when in actuality it would take years to understand the culture of the DTES and to fully engage with the community. However, the local connections offered by my advisor at UWC as well as connections provided through my volunteer experiences and key informants enabled me to acquire a level of local understanding necessary to meaningfully interact with informal recyclers during my short time in the field.

Due to the fact that my participant recruitment occurred on a voluntary basis, there are voices and opinions that were missed by this study. In particular, the most marginal and hardest to access residents may have been unlikely to volunteer to participate in such a study. The most visible group of binners that was missed in this study was elderly Asian women, who Tremblay (2007) estimated comprise up to 20% of the binners that use UWC. These women are marginalized due to cultural differences and language barriers, and with the exception of one woman, most opted not to volunteer for the study despite my observations of their significant presence at UWC and working as binners throughout the
city. A further recruitment issue is that these interviews took place during the week before social assistance cheques were issued. A vast majority of my participants stated that they received social assistance payments, yet among 196 homeless participants, Berti & Sommers (2010) found that only 57% of their respondents received social assistance. It could then be surmised that my sample of binners features an overrepresentation of people on social assistance due to the proximity to cheque week, with implications about the number of people who rely on social assistance and regularly turn to binning work at the end of each month. To this extent, Tremblay (2007) noted that the number of binners at UWC tends to fluctuate with higher numbers at the end of the month closer to the issuance of social service cheques. For these reasons, I had to conduct more interviews than anticipated in order to talk to a range of binners and to reach data saturation. With this in mind, the timing of this study also allowed me the opportunity to speak to an important segment of the binning population that I would have missed out on if my interviews had taken place earlier in the month. Finally, binners and other marginalized residents may have declined participation in this study in order to tend to other priorities like working and maintaining their incomes, especially considering the widespread distrust of research that is common in the DTES (Boyd, 2008).

As mentioned in my discussion of research ethics in Section 2.2: Ethical considerations, recognizing researcher positionality and relative affluence during all stages of research was a challenge essential to this study. Throughout the research process, but especially during the interviews with informal recyclers, it was important for me to be reflexive about my positionality as a researcher and to ensure that the interview process did
not take a potentially harmful direction for the participants. Because perceptions of affluence can affect interpersonal relations in data collection and analysis (Dyck & Kearns, 1995), this was an important challenge to acknowledge throughout all stages of this study.

With reference to the above limitations and challenges to this research, my presence as a volunteer at multiple organizations as well as my use of local gatekeepers and a flexible research agenda helped to limit some of the above-noted challenges. My practice of emphasizing the status of binners as knowledge-holders was another important strategy in addressing the limitations of this study.

**Chapter Three: Results & Discussion of the Social Determinants of Health**

**3.0 Self-reported health of informal recyclers**

In order to identify the health status of Vancouver’s informal recyclers, I asked them to describe their health and work-related experiences and to discuss any interventions they thought would improve this line of work and make health services more accessible. In contrast to biomedical approaches to health, this line of questioning was purposive in treating binners as experts in their own health by empowering them to identify health issues and the gaps or barriers to services that they regularly experience. Ninety-two percent of the binners that I interviewed reported that they had at least one health problem, and a majority reported multiple health problems. The self-reported health issues mentioned during these interviews are listed in Table 1 below and have been divided according to whether it could be attributed to binning work or other social-environmental factors based on similar criteria.
identified by Binion & Gutberlet (2012) and Parizeau (2011).

Table 1: Binner self-reported health issues

| Health Problems that may be associated with informal recycling work | cuts, scrapes, infections, violence/fighting, food poisoning, road rash, pain (back, joints, knees, shoulders), arthritis, hit by car, head injuries, colds/flus, needle pokes, eye irritation/infections, sprains (ankles, wrists), hernias, cellulitis/foot issues, abscesses |
| Health problems that may be associated with social-environmental factors | infections (from cuts, clogged lymph nodes, staph infections), dental problems/lost teeth, respiratory issues (COPD), chronic pneumonia, Hep-C, HIV/AIDS, cancer/leukemia, diabetes, high blood pressure, liver problems, digestive issues, bedbug bites/infections, addiction, stress, depression, anxiety |

Table 2: Binner definitions of health

| Most common factors identified in binner definitions of health (in order of popularity) | access to food (nutritious & adequate quantity) |
|                                                                                 | • ability to walk around/work                  |
|                                                                                 | • adequate sleep                              |
|                                                                                 | • having strength/energy                      |
|                                                                                 | • positive state of mind                       |
|                                                                                 | • not being sick                               |
|                                                                                 | • enjoying life                               |
|                                                                                 | • abstinence from drugs                        |
|                                                                                 | • good hygiene                                |
|                                                                                 | • no stress                                   |
|                                                                                 | • no pain                                     |
|                                                                                 | • good relationships                          |

I asked the binners that I interviewed to identify their personal definition of health, or what “being healthy means to you”. The most popular responses to this inquiry related to functionality and included access to an adequate quantity of quality nutritious food, the ability to walk and work, and sleeping well. The most common definitions are summarized (in order of popularity) in Table 2.

Table 2: Binner definitions of health

The health-contributing factors as identified by binners largely seemed to relate to their ability to access physical resources, be mobile and able to work, free from stress, pain, and health threats, and keeping a positive mindset. To these workers, functionality was a
key component of health, which is also seen in Porto et al.’s (2004) study, where informal recyclers in Rio de Janerio self-identified health simply as their ability to work. In addition to this alternative understanding of health, none of the interviewed binners mentioned access to typical biomedical healthcare or having regular contact with healthcare providers in their conception of being healthy. Instead, the binners chose to focus on factors that relate to the social determinants of health and access to the necessary resources for survival.

Health, as defined by the World Health Organization (1946), is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmary”(p.100). This definition of health recognizes the complexity of health hazards and the multidisciplinary nature of both health and disease. However, in the global north, the biomedical approach to health often predominates healthcare and service provision, emphasizing the role of health practitioners in the maintenance of individual health and well-being through conventions like regular check-ups. In the context of the cultural emphasis on western medicine and regular access to physicians, it is significant that none of the interviewed binners placed value on this institutional biomedical approach to health.

The following sections detail the socially determined aspects of health as experienced by Vancouver’s binners. The above conceptions of health are important to keep in mind throughout this analysis in order to understand the self-assessed relationship between precarious resource access and exposure to waste. These factors combine, typically in the absence of health services, to threaten the health status of these workers. The remainder of this chapter is analyzed and organized according to three emergent themes that
I developed through this research: health resources (income, food security, housing); threats to health (occupational hazards and exposure to solid waste, addiction); and mediating factors (social exclusion, gender, ethnicity, mental health).

3.1 Health Resources

In Vancouver’s DTES, changes to the local economy in terms of property development, social service delivery, and employment have raised concerns about poverty, crime, housing affordability, income inequality, and social-spatial polarization (Ley & Lynch, 2012). These changes to the urban sphere have impacted binners and other low-income residents as their access to public spaces, which are central in their acquisition of health resources, becomes constrained and they experience deficits in these health-determining resources. Access to material health-producing resources is essential to the survival of impoverished individuals; however, concurrent deficits of these resources are prevalent among low-income residents and contribute to the poor health status that they experience.

Poverty and material deprivation often result from insecure incomes and have potentially harmful implications for both physical and mental health in terms of access to suitable housing, food, and services. The following discussion of health producing resources focuses on binner access to income, food, housing and services as informed by my interviews and conversations with binners and health service workers in the DTES.
3.1.1 Income

Access to economic opportunities and a secure income has a major impact on an individual’s health status. As a determinant of health, income not only affects the way that one experiences well-being, but it is a key factor in informing their ability to cope with deficiencies in other determinants. Informal recycling in the form of collecting recyclable beverage containers and/or collecting other salvageable items to be vended on the street or in the local Sunday market (PPSM) provide short-term income for impoverished urban residents who suffer from insecure employment.

The mean average earnings reported by the binners that I interviewed was $24, with a range of $3-100 per day. The coordinators of the PPSM stated that their informally conducted surveys of vendors indicate that their average earnings are around $50 per market day. As a significant number of Vancouver’s informal recyclers diversify their incomes within the realm of recycling by collecting a variety of materials and using various spaces (UWC, Hastings Street, the PPSM) with which to refund or re-sell these goods, it is clear that these are insecure incomes in Vancouver’s urban sphere. In this way, despite the flexibility that is associated with informal recycling livelihoods, it is work that is contingent on many factors and is dangerous in the long term because of its precarious nature and the inherent occupational exposure to health threats associated with waste.

*Income deprivation and its health implications*

A perpetual lack of secure employment can lead to poverty and significantly impact a person’s health status. Both the skewed distribution of employment and the material and social deprivation associated with a lack of income are direct causes of health-related
inequities that exist in society (Bryant et al, 2011). In this way, the incidence of poverty and the lack of secure employment experienced by many of Vancouver’s DTES residents can lead to further health-related outcomes such as homelessness, food insecurity, mental illness, and addiction, all of which are common conditions experienced in the neighbourhood. In their study that interviewed women living in the DTES, Lewis et al (2008) found that financial insecurity was by far the most significant reason that participants gave for moving to the neighbourhood. In the interviews that I conducted with binners, two respondents noted in passing that they had started binning when they first came to the DTES. This may indicate that for some informal recyclers, their arrival in the DTES likely coincided with a period of financial insecurity and the initiation of binning as a survival strategy for generating an income. Although it is an income-generating strategy for impoverished individuals, the reliance on this activity and its inherent health threats can also endanger financial status. When I asked a 55-year old female who has been a binner for 20 years if she thought that binning had any health effects, she replied,

“I’m getting to that stage where my body is getting fragile... so it’s getting harder for me to find some ways to make some extra income.”

This quotation indicates that after years of doing this type of informal physical labour, some recyclers can find that their livelihood options become more limited and income more difficult to obtain. As an income-generating activity, survival binning can temporarily improve the financial status of precarious workers; however, the long-term health impacts of the activity may result in further economic insecurity with fewer livelihood options available to these individuals in the future.

*Recycler methodologies: Traplines, income security, and health*
Vancouver’s binners use a variety of methods to collect recyclable materials. While a majority of my participants seemed to combine strategies and locations to collect in parks and pedestrian areas or dumpsters in the city’s alleyways, a significant portion of my sample (23%) indicated that they had established *traplines*, or set routes and partnerships with residences and businesses throughout the city, as a method of increasing the efficiency of their material recovery. In some cases, binners with *traplines* access source-separated materials through partnerships with city residents, but it is still common for those with these established routes to continue to access dumpsters and bins to find additional materials. The trapline partnership may entail that the binner has been given a key to a locked dumpster by the owner, or that they receive beverage containers set aside by local partners in addition to their other binning activities. Tremblay (2007) found that binners who use *traplines* are often completely economically dependent on their routes and partnerships, which can take years to establish, and that they may encounter fewer occupational hazards due to the fact that they don’t completely rely on bins, but access some source-separated materials as well. Over time, while becoming familiar with these routes and the most lucrative areas to work, they also tend to develop a sense of ownership over the territory and the recyclable materials within them. This sense of territorialism can have both positive and negative effects on a binner’s income and health status.

The number of informal recyclers in Vancouver has been steadily increasing (Tremblay et al, 2010). This is a trend that was also recognized by binners in our interviews, as many expressed a need to adjust their routes or *traplines*, work at different times of day, or change their binning methods due to increased competition in their work area. When I
asked about his route, a 58-year old male who has been binning for 20 years explains some of the issues that he regularly encounters:

“Mostly I go up through Robson and stuff like that, eh. It all depends, you know like when you go out and there’s too many people around, too many binners. I get thrown off it quite a bit because there’s just too many people around.”

This quotation is one of many similar experiential statements that indicate that as informal recycling increases in popularity and as dumpsters are more frequently locked to prevent unauthorized access, binners are having an increasingly difficult time accessing the materials upon which they rely for their income and survival. The increase in the number of binners in the city in combination with restrictions on the waste stream not only intensifies the competition over a limited resource, but can also lead to aggression and feelings of territoriality over certain routes or bins.

When income security is so closely tied to these routes, there can be negative consequences for health and well-being. When I asked about the most significant occupational health threats that they perceive that other binners experience, several raised the topic of violence and fighting over routes, bins, and recyclables, indicating this increased competition for limited materials and territories. Territoriality and financial insecurity can also have consequences on the way in which binners access services, as they are unlikely to take time off from their work or route because they don’t want to lose their trapline or partnerships to other binners.

Although having traplines or partnerships can negatively impact health, the binners who utilize these routes or relationships expressed great pride in their work, with some
reporting that they have experienced positive benefits to health and well-being:

“I have 4 hotels that give me all their stuff and I have restaurants that give me all their stuff. I call it a trapline, like everyday I walk the same route: the same streets, the same corners, the same route, the same time. I know what time the stuff comes out and I’m there everyday, half an hour before the maids bring their stuff out and it’s all mine... every morning it’s “hello, how you doing sir? You having a good day?” …The staff, they all know me, it’s almost like I work there. They know I don’t make a mess, if there’s a mess, I’ll clean it up... because it’s downtown and it’s a hotel, you don’t really have to worry about finding needles and syringes and stuff like that. And it’s actually, it’s an oxymoron, but it’s clean garbage- it’s clean because it’s hotel garbage” (58 year old male, binning 4 years).

This quotation reveals the important relationship that traplines and partnerships play in alleviating some of the stigma associated with informal recycling work, and in reducing some of the exposure to occupational risk. Similarly, the binners with traplines and partnerships that Tremblay (2007) interviewed were more likely to take pride in their work and consider it to be a contribution to society. Gowan’s (1997) research on “professional’ binners in San Francisco emphasizes a similar finding, that informal recyclers may not all “resent this badly paid, stigmatized and dangerous work, but instead enthusiastically embrace it as a way to prove their worth in a society ” (161). A study by Gutberlet et al (2009) in Victoria, BC found that the formation of partnerships with residences and businesses is a common strategy for binners to access a consistent supply of non-contaminated source-separated materials. In this way, by choosing to bin and to building partnerships with individuals and businesses, binners are able to reduce their exposure to hazards, reduce stigma, and generate a more secure and stable income.

Social assistance

There is a high level of dependency on social assistance in the DTES and among the informal recyclers in this and other studies. Tremblay et al (2010) point out a strong
correlation between social assistance cutbacks in BC between 1995-2002 and the marked increase in binning activity during these years. The authors also note that the number of binners that use the UWC bottle depot fluctuates on a monthly basis with more activity at the end of the month, which they attribute to the social assistance pay schedule. Out of a survey of 196 homeless respondents in the DTES, Berti & Sommers (2010) found that the most common income strategies in this group were binning (66%), welfare (57%), and panhandling (56%), where most respondents combined these tactics in various ways in order to secure an income. A majority (95%) of the binners that I interviewed reported that they were currently receiving social assistance payments. As mentioned in Section 2.5: Research challenges and limitations, this high reporting of social assistance in my interviews is likely due to the voluntary nature of participant selection as well as the temporal proximity to welfare cheque day when these interviews occurred.

In Vancouver, informal recycling is a strategy often used to supplement inadequate social assistance payments; however, out of my respondents, 50% said that they were still struggling to meet their basic needs, even with binning and social assistance payments combined:

“It’s a dirty job, but it’s great for someone trying to make it through a few long months like August. Like you know, it’s a 5 week-er, so it does help” (44-year old female, binning for 10 years).

In longer months like August when these interviews took place, referred to above as a “5 week-er” above, social assistance payments have to stretch further, often leading to stress and tension in the public spaces of the DTES. Workers at UWC and the PPSM have noted an increase in the number of people who use these income-generating spaces, as well
as the increasing tensions and anxiety among those who use these services towards the end of the month before social assistance cheques are issued. Health service workers and binners agreed that the welfare rates are not sufficient and that people are just getting by with the added financial security that informal recycling provides. Vancouver’s former mayor, Larry Campbell states, “the welfare rates have not kept up with inflation, so people living on social assistance are much poorer now than they were in the 1970’s” (Campbell et al, 2009, p250). As restrictions on social assistance continue to occur, informal recycling as a response to poverty is likely to continue to increase in popularity, and the health of this growing marginalized population will continue to be negatively affected by precarious working and living environments.

_Diversifying incomes_

Among the group of recyclers that I interviewed, diversification strategies were employed by many in order to cope with the low incomes and health impacts associated with informal waste work. Some of these workers also said that they engaged in temporary or contracted employment (cleaning jobs, demolition, moving furniture, domestic service), panhandling, collecting different types of materials (metals, wire), or selling recovered items on the street as informal vendors. Forty percent of the binners that I interviewed reported an additional source of income outside of social assistance payments and returning recyclable items to the bottle depot. Out of the participants that were asked about vending at the PPSM, over 60% said that they have sold recovered materials at the market or along the 100-block on Hastings Street in front of the UWC bottle depot. The need to acquire other forms of employment, formal or informal, indicates that some of these workers either
need or prefer to find alternative sources of income to informal recycling because of the labour exclusion that they face in the city due to addiction, mental illness, physical disabilities, language barriers, ethnicity, etc. In addition to this diversification of incomes, some binners mentioned volunteer activities through local organizations, which aided them in accessing essential services like food.

3.1.2 Food Security

McIntyre (2004) defines food insecurity as “the inability to acquire or consume an adequate diet quality or sufficient quantity of food in socially acceptable ways or the uncertainty that one will be able to do so” (p174). These authors argue that in urban areas, the need for food assistance is growing as the resources to handle this need are shrinking. Within the space of the few blocks that comprise Vancouver’s DTES, there are approximately 50 organizations that offer free or reduced-cost meals. In order to access these meals, people often have to stand in line-ups or participate in municipal, charitable, or religious programs (Miewald & McCann, 2013).

Despite the concentration of services in the DTES, residents still face several social and health-related barriers in terms of accessing an appropriate quality and quantity of food. Miewald (2009) attributes this contradiction in service prevalence and food insecurity to problems with accessing food on weekends, holidays, and evenings when most food programs are closed; mobility; and drug addictions. She also lists several common health-related conditions that affect access to food, including dental problems, digestive diseases, and mental health issues that make eating in public difficult. A majority of the binners that I
interviewed said that they had experienced barriers in accessing food, despite the fact that the use of free food services like lineups was very high in this group (57%). The barriers that prevented access to food among my participants predominantly related to issues with lineups, conflicts with meal site operational hours, and the desire to provide for themselves rather than relying on services or charity, which suggests the importance of dignified food acquisition here. The first quotation below is from a binner who uses his recycling earnings to help him avoid food lineups and charity, whereas the second indicates that binning and the lifestyle factors associated with deprivation force him to use the lineups to secure access to food:

“I’m eating better, and I’ve got a little money in my pocket. I can do things, I can eat. I can stop looking for a soup line somewhere” (55-year old male, binning for 3 years).

“I haven’t been able to eat since I lost my job- and binning, you know, it’s not the cleanest job and it takes a lot out of me, and I haven’t been able to afford decent food a lot of the time. I have to eat at you know, food lines and um- ya, it’s just that- it’s tough” (47-year old male, binning for 2 years).

These two quotations indicate the heterogeneity of Vancouver’s binning community, where informal recycling and its related lifestyle can both help and hinder access to food and other necessary resources. Roe (2009) argues that the poor who use services like food line-ups in the DTES are “clientized”, a process that is enacted as residents are subjected to lineups and regulations in their efforts to access basic necessities like food. Some of the binners that I interviewed explained that they coped with food insecurity by accessing meals while they work through a process that Miewald & McCann refer to as the “Hastings Shuffle”, whereby individuals move from one meal program to another throughout the day. A 47-year old male, binning for 2 years explains his experience with this phenomenon,

“On the Eastside there’s lots of places where you can go at certain hours and I kind of do my routes around the food lines and the different places that have food serving. So I
go binning here, stop at a food place, go do some more binning. Like over here, there’s another place and they all have different hours, so I can work the whole day and have enough food in me, and I save food for the next day also for food in the morning."

This quotation indicates that some binners rely on a network of service providers in the DTES in order to access health resources like food; however, this method of accessing resources was more commonly associated with factors linked to the stigmatization and clientization of local residents. Lengthy food line-ups were a source of anxiety and conflict for some and were perceived to be extremely time consuming and frustrating. Similarly, several authors discuss the importance of dignified food acquisition and obtaining food in socially acceptable ways as key elements in ensuring nutritional intake, avoiding health risks such as food poisoning, and reducing stigmatization (Miewald & McCann, 2013; Gutberlet et al, 2007; Mikkonen & Raphael, 2010).

Eleven percent of my respondents mentioned that pedestrians or other Vancouver residents would occasionally give them food while they were working on the street. A 59-year old male, binning for 15-20 years explains his experience with this kind of informal food acquisition:

“Sometimes people come and give it to you eh. So that’s nice. And there are a few different- people know me eh, so they come along and bring me something- maybe a sandwich” (59-year old male, binning for 15-20 years).

This quotation and statements from other binners who mentioned receiving food from pedestrians, indicated that “being known” (VANDU, 2009) in the area due to the familiarity of a trapline or partnership with residents was more likely to lead to this kind of food donation. A third type of food acquisition raised by the binners was “dumpster diving” or obtaining food from the waste stream. Twenty-two percent of the workers that I spoke with said that they regularly obtained food from the garbage while they worked. This was a
common method used to avoid food lineups and the stigma or conflict that can be associated with them. This observation consistent with Gutberlet et al (2007), who also found that binners in Victoria, BC experienced irregular access to food and a lack of nutrition, where 41% of their survey respondents claimed to obtain their food from garbage bins on a regular basis. According to Eikenberry & Smith (2005), dumpster diving for food is prevalent among low-income urban dwellers who would rather not rely on dumpsters as a source of food, but felt that it was acceptable to eat from dumpsters if they were hungry. Their study also revealed that more divers than non-divers had been diagnosed with HIV/AIDS, and therefore had an already more vulnerable health status. When asked where they obtained a majority of their food, two binners responded:

“Garbage cans. 3 times [a day]- breakfast, lunch, supper” (53-year old male, binning for 3 years).

“I get it from the garbage... I got food poisoning a couple times for some reason” (42-year old male, binning for 1 year).

The first quotation indicates the regularity with which some of these workers use the waste stream in order to access food, whereas the second quotation shows that despite this dependence, there are significant health risks associated with this type of food acquisition. In this way, while there are clearly negative health impacts and stigma associated with recovering food from the garbage (food poisoning, diarrhea, parasite infections, etc.), several of the binners that I interviewed said that they preferred to access food in this way over waiting in lineups and being ‘clientized’. This avoidance of line-ups speaks to the importance of dignified food acquisition and its links to the independence associated with the choice to participate in the informal sector over formalized work. The independence associated with this work was linked by some of my participants with pride in being able to
access resources on their own terms. Similarly, Gowan (1997) refers to one of her homeless ‘professional’ recycler participants, saying that he “prefers recycling and sleeping rough to living in the hotels and spending long hours in service agency lines. In defiance of the wider society’s stigmatization of homelessness he insists that the recycling life allows him to be a man worthy of respect” (173).

Food acquisition and health implications

Chronic food insecurity can result in long-term health effects and is common among vulnerable populations such as the homeless, those with HIV/AIDS, drug users, and people with mental health issues, all common in the DTES. As a result of food insecurity, these populations are prone to suffer from nutrient deficiencies, which contribute to higher rates of morbidity and mortality (Miewald, 2009; Tarasuk, 2004). Binners, as a population that tend to obtain a significant amount of food from lineups and the garbage, have little choice about the types of food that they eat. Miewald & McCann (2013) state that those who use the charitable system in the DTES noted that the food provided was often limited and lacked variety and nutritional value. Their respondents also remarked that the food “fills you up” and “isn’t the healthiest diet, but is better than no diet” (p9). Similarly, many of the binners that I interviewed who used the charitable food system were largely unsatisfied with variety and the quality of the food provided; however, many said they would still eat it:

“The shelter, they give us, they provide us sandwiches in the morning and a supper at night, which is not something necessarily that I want to eat, but 9 times out of 10, I will eat it” (58-year old male, binning for 4 years).

This quotation supports Miewald & McCann’s evidence, that despite the availability of food in the charitable food sector, many binners indicated that the food was not ideal to
them. The eating habits that people develop in the DTES depend very much on their health status as well as their living conditions. One of the most significant barriers to nutritious food acquisition among low-income or marginally housed individuals is the availability of cooking facilities and refrigeration, as those who lack these types of facilities rely more on charitable food, dumpster diving, and tend to eat infrequently (Eikenberry & Smith, 2005). In Single-Room Occupancy (SRO) hotels, there is scant access to refrigeration, and even in some social housing situations, food storage spaces can be quite limited. The lack of food storage and preparation facilities is a major barrier experienced by marginally housed binners, as explained by a 53-year old female, binning for 10 years and living in social housing:

“We’re not getting the protein, we’re not getting the fresh vegetables that we need. [We] don’t have refrigeration, so have to buy on a daily basis fresh vegetables because they’re just not going to stay... so then you just eventually run out of money and when you go Carnegie Centre, First United Church, UGM, you’re still getting the same crap- you’re still getting starch. You know, but that’s what it takes to fill up.”

This quotation suggests that the inability to afford, store, and prepare fresh produce can limit the amount of choice that residents have with the quality and quantity of food that they access. These limitations can have significant health implications as individuals then turn to other methods of accessing food with lower nutritional value or could make them sick. In addition to the concerns about food options and quality in the DTES, 72% of the binners that I interviewed admitted to eating quite infrequently: one-meal a day or less. A community worker expressed concern about the quantity of food and energy necessary for binning as an activity and the actual nutritional intake of many binners:

“One thing I’d say for sure is that their diet- they expel so much energy in a run of the day. their routes can be ridiculously long and by the end of it, they’re pushing huge carts full of stuff... they’re not necessarily able to access free food lineups and stuff like that. So I think the concern for them is being able to sort of maintain their diet in the sense that they’re getting good food so they can have the energy they need to do all that kind of stuff.”
This key informant suggests based on her experience observing and working with binners, that they have immense nutritional needs due to the physical nature of their work, but are often unable to meet these needs. A majority of the binners that infrequently accessed food tended to do so through a free meal offered with their housing or shelter; however, some attributed their lack of appetite and low food intake to mental health issues like stress or to drug-use. The influence of drugs and mental health on food intake is consistent with Miewald & McCann (2012), as these can be major limitations to food security among low-income individuals:

“Like stress makes you lose weight, you know, you feel fatigued and weak from not eating” (24-year old male, binning for 2 years).

“Well- I’m on crystal meth and I don’t eat a lot, but I do get dehydrated” (48-year old male, binning for 15 years).

The first quotation indicates the relationship between inadequate food intake and mental health conditions like stress that binners can experience and the impact that these factors have on health, like weight loss and fatigue. The second quotation raises the link between drug use and food, where one of the many health impacts that substances can have on health is by reducing appetite. A more in-depth analysis of substance use and health will be undertaken in a discussion of health threats in Section: 3.3.2: Addiction.

3.1.3 Housing and homelessness

Housing is both a determinant and an indicator of health. The conversations that I had with binners about their housing indicated that it is a challenge to maintain health when experiencing poor living conditions. Vancouver has the most expensive housing market in Canada. As a result, there is a lack of affordable accommodation available to low-income
residents of the city, as much of the housing available to this socioeconomic group is subpar and can have significant health repercussions (Bryant et al, 2011; Mikkonen & Raphael, 2010). Bryant (2004) outlines the Canadian housing crisis and the health implications that high housing prices and subpar living conditions have on low-income people. He expresses that the experience of poor living conditions and homelessness are two major ways in which this crisis impacts the health of low-income people, and that these housing insecurity factors exacerbate the experiences of other socially determined aspects of health and well-being. My findings in this section indicate that binners tended to identify changes to their living situation as the predominant reason for the improvement or detriment of their health status, even though their work as a binner had not changed.

**Health and the experience of poor living conditions**

In the DTES, a majority of low-income residents live in Single-Room Occupancy (SRO) hotel rooms, social housing developments, or are homeless. Out of my voluntary sample of binners, 40% reported that they lived in a SRO, 45% lived in social housing, and 15% were homeless, although based on the fact that the participants were volunteers, I cannot say that this is representative of the binning population. I suspect (based on my observations in the city) that the homeless group is much more substantial, but perhaps less likely to voluntarily participate in a study. When I asked binners if their health was better, the same, or worse than when they started binning, several respondents indicated that their housing situation was the most influential factor behind any changes to their health status.
Figure 5: Percentage housing type and reported health status of interviewed binners

Figure 5 indicates these responses according to housing type, where, SRO residents predominantly reported that their health was either the same or worse from when they started binning; those who lived in social housing more frequently reported that their health was either the same or better than when they started binning; and homeless respondents almost unanimously reported that their health was worse. The following quotations provide context for these links between housing type and health:

“It’s probably worse... because the place I’m living in is worse” (55-year old female, binning for 8 years).

“Oh, its improved since I moved out of that building... the binning had nothing to do with it...” (56-year old female, binning for 6 years).

The first quotation is an example of a respondent’s worsening health being attributed to a move to less favourable housing; whereas the second quotation is an example of improved housing being an indicator of improved health status. Housing is a determinant and indicator of health, where marginal housing situations were linked with high rates of mortality and multi-morbidity, having adverse implications on the way that services and health resources are accessed (Vila-Rodriquez et al, 2013). In addition, perceived improvements in housing tended to indicate improved health, especially in terms of mental
health status in this group. The following will explore binner experiences of SRO hotels, social housing, and homelessness and the impacts that marginal housing has on health.

SRO hotels are comprised of tiny rooms with shared washroom facilities that were originally created for short-term stays by transient workers from local resource industries. These rooms are concentrated in the DTES and can be rented on a daily to monthly basis, tend to be in poor repair, and are typically the last stop before homelessness (Linden et al, 2012). A city hall report released in 1979, *A Report on Residential Hotels and Rooming Houses*, stated that these tiny “sleeping rooms” were never intended for long-term living as most of the rooms have inadequate or no food storage or preparation facilities, no private bathrooms, and 75% of the rooms were found to be in “poor physical condition” (Campbell et al, 2009). As a result of increasing rents and stagnating social assistance payments, SRO hotels became accepted in the mid-1990’s as “appropriate” housing for low-income people, despite the fact that the decrepit conditions of the buildings had not changed (Outreach Nurse, personal communication). Building upgrades and escalating rents in the city are now making even this type of accommodation increasingly out of reach for low-income residents despite the fact that a majority of these pre-war era buildings are in substandard condition and feature common problems with ventilation, infestation, a lack of heating, unusable bathrooms, security or privacy issues, and overcrowding (Sutherland et al, 2014; Pederson & Swanson, 2010; Masuda & Crabtree, 2010; Myers, 2010; VANDU, 2009).

The poor physical living conditions of SRO rooms expose residents to various health threats. Among the respondents who indicated that they lived in a SRO hotel and their health status had remained the same or gotten worse, linked several health risks to housing issues, including ventilation (mold, mildew, construction dust from outdoors);
infestation (bed bugs, cockroaches, rodents); unusable bathrooms; and security or privacy issues (noise, violence, feeling unsafe). These housing-related conditions are strong determinants of both physical and mental health, as seen in the following quotations:

“And the place just sucks. I’m stressed out, I’m depressed, I don’t sleep, it’s just horrible there, there are bugs in there - it’s driving me insane… I’m tired, I’m just exhausted all the time. Like I really hate it” (56-year old female, binning for 8 years).

“It’s nasty, man. Before, I haven’t been there that long, but you hear all kinds of people screaming, pushing and shoving… and cops and fire department are always there and come knocking and pounding on your door” (56-year old male, binning for 15 years).

These two quotations reveal the mental and physical effects of marginal housing, where living conditions associated with bugs and noise can impact physical health (e.g.-exhaustion) and mental health (e.g.-stress). Although a majority of respondents who lived in SROs were largely unsatisfied with their housing situation and reported health threats associated with it, 6% reported that their health had improved while living in a SRO hotel. For these individuals, the improvements in health status were attributed to a perceived upgrade in housing: a shift from being homeless to having their own space and a roof over their head. In this way, housing acts as an indicator of perceived changes in health status.

Social housing has slowly increased in prevalence in the DTES, but the demand for these types of residences far surpasses the supply. Forty-five percent of the binners that I interviewed said that they lived in social housing, either suite-style or private apartments. A majority of those in social housing said that their health had improved or remained the same from when they started binning. Those who reported being safer and healthier largely attributed this to their new living space when compared to previous housing situations—predominantly SRO hotels or homelessness:
“I have no complaints about it, laundry facilities, so you know if I get dirty, then I can clean up. I got lucky when I got in there because I was homeless before” (57-year old female, binning for 5 years).

“You’re not worried about someone busting down your door, so it takes the paranoia away a little bit. It’s not loud, and you get to sleep. It’s quiet” (52-year old male, binning for 10 years).

The first quote indicates the improvement of physical resource access for this individual in their improved social housing situations with the availability of sanitation and improved hygiene. The second quote shows improved mental health status and reduced stress associated with an improved living situation in social housing. A majority of those who reported an improvement in health attributed this change to a better living situation due to increased access to sanitation facilities like private bathrooms and laundry facilities, increased feelings of safety, and the ability to sleep better. These factors are important in the lives of binners, as when access to basic services like sanitation and laundry are not provided in association with housing, they must be accessed publically, which encourages feelings of stigma and can be dangerous. Respondents who reported their health as being worse in social housing largely attributed this change to a reduction of social services and programs that had previously been provided by their housing but had lost their funding. It should be noted that a majority (66%) of the social housing residents were female, which may have implications about gendered access to housing in the neighbourhood. A gender-based analysis of these relationships will take place in Section: 3.3.2 Gender; however, it is clear that males and females access and experience housing and living conditions in different ways in the DTES.

Homelessness is more prevalent in B.C. than anywhere else in Canada (VanWynsberghe et al, 2011; Bryant et al, 2004). During the last three years, estimates have
indicated that the number of homeless people in Vancouver has remained steady around 1,600 people, with a high proportion residing in the DTES (Thompson et al, 2012).

According to the 2013 Vancouver Homeless Count Report, Vancouver’s homeless population continues to be disproportionately male, Aboriginal, middle-aged and older, and in poor health (Eberle Planning, 2013). Similarly, the homeless respondents in this survey were predominantly male (83%), Aboriginal (50%), and were an average age of 41, which is younger than the mean age of my sample (53 years old). Additionally, the city’s 2013 homeless count revealed that the homeless are in poorer health now than in any previous year and that addiction and suspected mental illness in this population is increasing (Eberle Planning, 2013). Individuals who experience homelessness are exposed to a number of health threats based on both the environment in which they live and the social factors that pushed them to the streets and keep them out of affordable shelter. Out of the 40 binners that I interviewed, 15% reported that they were currently homeless, with a majority of these being male with a perceived worsening health status. The most common issues that homeless individuals associated with their living situation were bugs, thieves, a lack of privacy, sanitation, a lack of sleep, and increased levels of stress and anxiety.

Even in the absence of a binning context, the homeless have been reported to be at an increased risk of contracting a wide range of medical problems and have a shortened life expectancy as compared to the general population. Chronic conditions such as Chronic Obstructive Pulmonary Disease (COPD), seizures, musculoskeletal disorders, tuberculosis, and skin and foot problems are common among homeless populations where a shortened life expectancy commonly results from complications such as chronic diseases, violence, drug overdose, AIDS, suicide, and homicide (Hwang, 2001; Barondess, 2008). When
combined with the occupational risks of informal recycling, it is not surprising that so many of the homeless respondents perceived that their health had declined.

Sanitation, housing, and health

There is a significant amount of stigma associated with informal recycling and the ‘dirtiness’ connected to this work. Informal recyclers often lack access to the sanitation facilities that could enhance their physical well-being and reduce stigmatization. Instead, many of these workers tend to access sanitization in the public sphere, resulting in the further stigmatization of this livelihood. After our interview, the coordinators of the Pigeon Park Street Market reflected on the market’s blog about the lack of low-barrier sanitation services available to informal recyclers and the way that this can impact health:

“In the morning when we were washing the park, one of the vendors ran up and asked our volunteer to clean his feet with the garden hose... he jumped at the chance of a cold shower.”

This quotation provides an example of a binner’s public use of informal sanitation (a public garden hose) for the purposes of hygiene and washing his feet. When I asked binners for their opinions about the location and availability of public washrooms in the city, several indicated that they used informal means like alleyways to perform bodily functions or water from puddles to clean out cuts and wounds because of the lack of facilities available to them. The informal nature of this work does not qualify informal recyclers for protection under formal health and safety regulations. They therefore lack access to facilities such as washrooms and eye-washing stations and must rely on either their housing situations or publically available facilities.

One of the most significant health factors mentioned by the respondents across all housing situations was the relationship between housing, hygiene, and health. Having
access to a private and clean bathroom was consistently reported as being of major importance to binners, whether or not they had access to such facilities through their current living situation. Seventy-five percent of the binners that I interviewed indicated that they regularly utilize public washroom or sanitation facilities, and 58% said that they often experienced barriers in accessing these facilities because of the lack of options, the cleanliness of public facilities, rules that only allow customers to use washrooms, and their inability to take their cart or bags of recyclables into facilities with them:

“You know, you go to a bar and they don’t want you in there and I tried Safeway once too, and I have to go- I just go in the alley (55-year old female, binning for 20 years).

“There aren’t [public bathrooms] unless you find a community center somewhere and you go in there and you have bags and bags of bottles so you can’t even go in” (53-year old male, binning for 30 years).

The first quotation reveals the stigmatizing barriers that binners can face in their attempts to access private washroom facilities, while the second quotation indicates additional barriers that these workers face in accessing public washrooms due to the presence of their carts and recyclable materials. As a result of the stigma that is often associated with informal waste work, several respondents reported that they had been kicked out of shopping centers and restaurants because they had been using the washroom.

Informal recyclers can therefore have added difficulties in accessing sanitation facilities in public spaces. This is especially true in the DTES, where recent ticketing crackdowns (Pivot, 2012) have targeted local residents for violating by-laws like public urination and defecation, which is a necessary behaviour for many impoverished urban dwellers that work and live on the streets. Mitchell (1997) argues that the illegality of such behaviours (and other uses of public space by the urban poor) is part of a new legal
framework in cities where public spaces can only be accessed by housed or “legitimate” urban residents. A more in-depth discussion of conceptions of binning and public space will take place in Chapter 4: Analysis. This lack of access to private and public sanitation facilities due to the criminalization of impoverished behaviours can largely be attributed to marginal housing situations, a lack of available publicly available facilities, and workers’ inability to leave their recyclables unattended in public. Inadequate access to sanitation has significant work-related implications as it can significantly affect the health status and the stigmatization of informal recyclers.

Barriers to housing

Binners face many barriers in obtaining and maintaining housing due to issues with mental health like hoarding, storage of collected goods and shopping carts, as well as stigmatizing labels and stereotypes of these workers as being “unemployable” and “hard to house”. A DTES community worker explains the relationship between accessing appropriate housing, stigmatizing labels, and the frequent evictions experienced in the neighbourhood:

“The big one here that we struggle with a lot is appropriate housing… we’re constantly working with people who are chronically homeless or hard to house- [with] those kind of labels, it can be hard to find housing… it’s not just about sticking someone in a SRO and wiping your hands, people need lots of support to maintain housing. We have a lot of people who get housed and get evicted just as fast, like it’s sort of a cycle.”

The cycle of eviction mentioned above was a theme revealed by several other key informants in connection with hoarding and collecting-behaviours, They explained that hoarding tends to disproportionately affect binners as people who collect things for a living because of the mindset and habits associated with this work, and the experiences of scarce resources in the neighbourhood. In this way, when binners get into a housing situation,
some will continue to collect things and start keeping items inside their homes. These interviews revealed that some binners collect and store with the intention of fixing or selling items later, but for others, hoarding is a habit of passive acquiring, which is common in the DTES. An outreach director who has visited many binners in their housing explains:

“There’s the theme of mental health running through the folks that collect, and they’re the same folks that we have trouble with hoarding later on, you know, the next time we deal with them. We’ve worked with a number of people who have been evicted because of hoarding—when they have a dry place to put stuff, they collect more stuff.”

According to the key informants, there is no difference between social housing and SRO residents when it comes to hoarding, as it is a major local issue in both types of housing situations. Tendencies towards hoarding are even exhibited among some homeless binners, where “mobile hoarding”, or connecting shopping carts full of collected items together with bungee cords can also be observed in the city. Although several of my key informants identified hoarding as a major issue among this population, few binners alluded to the fact that they were collecting or hoarding themselves. This lack of acknowledgement of personal hoarding in the interviews suggests that there is significant stigma associated with this behaviour; however, two binners did comment on hoarding:

“I just collect whatever’s there, whatever I can think of. And then usually it ends up… my room’s all piled up, I gotta get rid of some stuff” (42-year old male, binning for 1 year).

“I keep my place clean and I’m somewhat of an organized person and I don’t hoard shit like others” (53-year old female, binning for 10 years).

The first quotation reveals the only self-identification with hoarding-type behaviours among the binners that I interviewed. His addendum about needing to get rid of some of the items he has piled up in his room indicates a sense of stigma or shame associated with this practice. The second quotation is a reference to the state of other people’s rooms that this
binner has seen, where binning seems to come up as a common problem. Hoarding is concurrently a housing and health issue, as those who hoard can be and are often evicted from their housing situation because of this tendency to collect.

Binners tend to be marginally housed and often face barriers in obtaining and maintaining their housing situation once they are settled. Evictions are regular occurrences in the DTES and are frequently based on behaviours related to addiction, mental illnesses, or behaviours like hoarding. Not only are these workers often precariously housed or homeless, the instability of housing situations in the DTES acts as a significant challenge to these low income workers and tends to exacerbate poor health.

3.3.4 Access to services

Vancouver’s DTES contains 35% of the city’s social services that are targeted towards helping low-income people obtain basic resources like shelter, food, income, and health care; however, many of the neighbourhood’s residents experience poor access to these resources and suffer from poverty and poor health (Miewald & McCann, 2013). The neighbourhood’s marginalized population frequently encounters barriers in accessing care, including stigmatization and issues with systemic or cultural biases in care provision. Low socioeconomic status and stigma not only result in higher exposure to health risks, but also impact the way that health care is accessed.

Binners, as precarious workers, have specific health needs due to the additional hazards that they encounter due to their work environment on the streets and their direct contact with solid waste. Informal waste work not only exposes informal workers to
physical hazards and contaminants associated with waste, but also exacerbates poverty-related feelings of stigmatization due to their perceived affiliation with garbage and uncleanliness. Occupational experiences relating to hazards and stigma influence the willingness and ability of binners to access services and healthcare.

Precarious work and access to healthcare

Out of the binners who accessed health services within the last 12 months, 41% reported positive experiences while 30% reported negative experiences with many refusing to return to those facilities in the future. Although there is a high concentration of social services in the DTES, 29% of the binners that I interviewed expressed that they experience difficulties in accessing healthcare and other services in the neighbourhood. Fifty-five percent of the respondents reflected that it is easy to access services, yet 53% of those said that although health care is easy to access, they choose not to use it. This choice to avoid health care and services was more common among male binners than females and was often associated with a discussion of feeling disrespected in past experiences with institutional service provision. Several binners made statements similar to the following about avoiding care due to perceived disrespect or stigma:

“Well it’s easy to access, but you’re not getting respected. You’re not taken seriously”
(42-year old male, binning for 1 year).

The above quotation reveals the perception expressed by some binners that healthcare was available, but that they preferred to avoid it due to interactions with care providers and institutional approaches to healthcare that they find belittling or disrespectful. While many reported that they preferred to avoid hospitals and clinics altogether, health service usage in the group that I interviewed was fairly high with 84% reporting that they
received care within the last 12 months. Of those, 64% obtained their care from the Emergency Room or DTES-based walk-in clinics, while only 13% had seen a family doctor. In this group, men were much more likely to avoid or put off seeking healthcare, whereas women were more likely to have regular contact with a physician. This is consistent with Campbell et al (2009) who state that among the residents who used services at the Kettle Friendship Society, 85% considered St. Paul’s Hospital emergency room physicians to be their primary care provider. Among the binners that I interviewed, healthcare usage was high due to high need of this population. Service usage is then aided by the concentration of services in the neighbourhood that makes them accessible when individuals choose- even if they can be stigmatizing experiences for some. In this group, emergency rooms and walk-in clinics preside as the most common form of health service accessed because of the immediacy and availability of these services in the DTES. These facilities are often sought to treat health issues that are acute or have been often left too long (due to a hesitation in accessing care) rather than as preventative or health-building measures.

**Barriers to healthcare: Stigmatization**

Perceived stigmatization from healthcare workers was a significant barrier that the binners I interviewed identified in their decision-making around healthcare and social services. Similarly, a report by VANDU (2009) states that 70% of the women that they interviewed described stigma as a regular aspect of their healthcare experience and that they expect to be treated “like garbage” when accessing care based on their appearance or their DTES address. Because of these types of experiences where marginalized people feel
disrespected or discriminated against, many people will avoid accessing care in the future or seek it only in emergency situations:

“As soon as you give a DTES address, you don’t get the service that everybody else gets. And it’s really transparent, it’s right there. You just don’t get the service that you would get if you were living on Commercial Drive or living in the west end” (53-year old female, binning for 10 years).

This quotation indicates that space is an important implication with stigma, where having an address associated with poverty or urban disorder can have an impact on perceived health service experiences. Stigmatizing health care experiences, like the one described above, seem to predominantly result from one-on-one interactions with healthcare providers, and likely derive from observed differences in social status. Many of the respondents additionally associated these feelings and experiences of stigmatization with subpar medical treatment by healthcare providers. An emergency room physician describes the relationship between stigma and perceptions of treatment among individuals who seek intermittent treatment or tend to avoid seeking care until it is an emergency situation:

“For sure, patients in chronic pain hate the emergency department. I would say, because they get really poor treatment there and are accused of being drug-seekers- but very often they are drug seeking, but in very legitimate pain and it’s really hard because the emergency department just isn’t the right place to treat it... if you just end up treating chronic pain intermittently in the emergency department, it’s not a consistent relationship that they have with one provider and really, that’s sort of the issue- that they need constant access to care over time.”

This quotation reveals that the relationship between medical treatment, stigma, and addiction is complicated for precarious workers like binners. However, when care is only sought out in emergency-type situations, they are not receiving the complete care that they need, which can further entrench cycles of stigma, disrespect, inadequate treatment, and avoidance. The outcome of this relationship is that binners, who already experience marginal health status due to poverty and occupational threats, continue to avoid healthcare
and social services, and have a higher likelihood of developing more serious health problems, infections, and complications.

**Barriers to healthcare: Institutional and cultural**

In addition to stigmatizing experiences, many of the binners that I interviewed expressed that institutional and cultural barriers also prevented them from accessing services. These types of barriers included long wait times at clinics and hospitals, territorialism while binning, and a lack of immediacy in service provision.

As a result of the heavy reliance on walk-in clinics and emergency rooms, many of the binners that I interviewed identified long wait times as a barrier in their access to healthcare and services in the DTES. Several binners mentioned their dislike for waiting in line-ups, which correlates with the clientization of DTES residents (see Section: 3.1.2: Food security). The experience of being clientized and waiting in lineups in order to access basic services can result in anxiety, stress, and stigma, which can affect mental health create negative associations with the act of accessing services. A report by VANDU (2009) expressed concern about the barriers that women face in the DTES in accessing healthcare, where 80% of their respondents regularly experienced long wait times at community clinics and said that they had to “plan their day around the doctor” or put in a full day of waiting at a clinic in order to be seen. Long wait times are a barrier to care because many people with addictions or mental illness are unable to sit and wait in a room for hours. Binners and other precarious workers are especially affected by long wait times because they often need to work long hours in order to meet their basic needs and cannot afford to take the time off. In
this way, the territoriality and *traplines* associated with binning can negatively affect health by reducing the likelihood that these workers will take time off to seek out necessary services. A community worker explains her perceptions of the barriers that binners face in accessing healthcare,

“I notice that binners are very territorial and they don’t like taking time off because they’ll lose their territory to somebody else. So I think that if something was for serious wrong with them, they could come and access services during the day like everybody else, but I think...they’re torn between wanting to make that money and not wanting to lose ground to anyone else and accessing services.”

This quotation indicates that binners may perceive that if they take time off, they fear that they will lose their territory or claims to certain dumpsters, which can threaten their livelihood and their health (see Section 3.1.1: Income). As a specific group, while some binners expressed no difficulty in accessing services, a majority reported some type of negative experience or barrier in relation to accessing health services. Not only were these barriers related to stigma or work, but also to the immediacy of service availability and therefore larger governance structures in terms of what types of programs are funded and available in the DTES. Key informants explained that services like detox, rehab, mental health services, and specialist appointments are often difficult to access in the neighbourhood because they are in high demand and have long waiting lists associated with them. Because of the instability of social calendars and prevalence of addictions in the DTES, immediacy in service provision is important. Due to the fact that there are long waits associated with clinics and hospitals, as well as long waiting lists to access certain services, overly-clientized DTES residents tend to avoid or get fed up with these services because they cannot physically or financially afford to wait. For impoverished people that live on a day-to-day system of earning money, it is important for local services to be catered to both the immediacy and availability needs of people who need them in that moment, but also
diversify the system to allow for others to make appointments rather than having to plan their day around the doctor. Despite the prevalence of services targeted towards low-income residents in the DTES, the health needs of precarious workers like binners are not being adequately met due to barriers that persist in terms of stigma and the appropriateness or immediacy of services.

3.1.5 Summary

Vancouver’s DTES neighbourhood contains a high proportion of the city’s social and health services, yet many of its marginalized residents experience significant deficits in the socially determined aspects of health and face barriers in accessing necessary services. These necessary resources typically include income (acquired in this study through binning and vending), food (acquired independently, from charitable line-ups, or from the waste stream), housing or shelter (SROs, social housing, or homelessness), and social and health services.

Informal waste work can provide some benefits to health through independent income acquisition that enables improved access to some of these resources; however, the main findings of this section indicate that this work, combined with experiences of impoverished living conditions, can act as a significant barrier in accessing health resources and services. In this way, work-related factors like *traplines*, territorialism, collecting behaviours, and shopping carts act in both capacities, where they enable more efficient resource recovery and improved incomes, but also act as a barrier to accessing material resources like sanitation, food, housing, and health services.
When the barriers faced by informal recyclers are considered in the societal and institutional context of the city, the stigmatization and clientization that they face in public spaces can affect the physical and mental health of these marginalized workers. They are often placed at a higher level of risk due to their consequent avoidance of social and health resources in the city and the undignified or risky ways in which some of these workers are forced to access these resources in the urban shadows. As survival workers who spend a majority of their time working with waste in the public sphere, Vancouver’s binners as a group tend to suffer from poor health. This is due to their daily contact with waste as well as the barriers and constraints that they face in accessing the resources and services that they require.

### 3.2 Threats to Health

Informal recyclers perform a public and environmental service through the collection of recyclable materials from the waste stream, but their work exposes them to a unique set of risk factors that threaten their health and well-being.

Although informal recyclers in Canada have access to public social services such as welfare, unemployment, and disability payments, they lack access to labour standards, injury compensation, and income security due to the informality of their work (Baud et al, 2001). Occupational risks are then absorbed by the individual worker rather than by the employer as structuralized risks. The health threats that informal recyclers encounter affect their ability to navigate the city and access to health resources. Occupational injuries and illnesses as well as addiction to substances are factors that threaten many binners’ ability to
work and acquire survival resources. The following will detail factors that threaten the health status of informal recyclers and cause poor health outcomes: occupational exposure to hazards and addiction.

3.2.1 Occupational hazards and exposure to solid waste

Occupational health is a multidisciplinary field concerned with the protection and promotion of worker health by preventing occupational diseases and accidents and eliminating hazardous factors and conditions in the workplace (WHO, 1995). In the formal sector, occupational health policies are intended to reduce risk factors and promote socioeconomic determinants of health; however, informal sector workers are typically unregulated and exposed to many health threats through their occupation. Several studies based in the global north have found that formal-sector solid waste workers experience increased occupational health risks, injuries, illnesses, and stigma due to their work with waste materials. Results from a study by Cointreau (2006) indicate that American waste collectors were four-times more likely to experience musculoskeletal restrictions, back pain, and arthritis than other general labourers and that many workers experienced stigma related to their work. Similarly, Engkvist et al (2011) found that waste treatment employees in Sweden were affected by three times as many occupational accidents and nearly twice as many work-related diseases as the total work force in the country. It is clear that work with solid waste is more dangerous than other forms of labour due to the inherent physical strain in combination with exposure to contaminated materials. Informal sector waste workers operating under precarious conditions are therefore at a significantly more increased risk of encountering hazards and experience a poorer health status.
As one of the most disadvantaged groups in the urban sphere, binners are exposed to a disproportionate amount of risk associated with their work and their living conditions compared to other groups (Sakar et al, 2003; Gutberlet, 2008). Although 92% of the binners that I interviewed reported that they experienced health problems, many thought that the hazards, injuries, and illnesses that they and others experienced were “just part of the job” and were predominantly unpreventable. The acceptance of this occupational risk was commonplace among this group and seemed to be coupled with feelings of stigmatization. The following outlines the occupational health effects that informal recyclers encounter according to four categories outlined by Binion & Gutberlet (2012): infection, musculoskeletal damage, mechanical trauma, and chemical hazards.

Infection

In the absence of adequate protective equipment, informal recyclers can inadvertently come into contact with infectious by-products of waste. Infections can be contracted through contact with bacteria, viruses, fungi, or biological pathogens in waste or through the consumption of recovered food, which puts binners at risk for stomach infections, diarrhea, and parasitic infection (Binion & Gutberlet, 2012). Seventy-two percent of the binners that I interviewed mentioned infections as being a health effect of binning work, either observed in themselves or in others. These infections ranged from food-related illness, staph infections, viruses, to consequences of being pricked with needles. For those who regularly access food from the garbage, the infectious nature of some recovered foods was found to have an adverse effect on the health of binners and on their ability to generate an income. A 33-year old female, binning for 5 years attributed her ongoing staph infection
and the ‘super bug’, or drug-resistant bacteria to her work with solid waste:

“I got a staph infection from touching dirty things- it nearly killed me... I got the super bug from touching dirty objects as well... It’s fast among dirty people and dirty things.”

This respondent not only discusses the exposure to infectious materials through binning work, but also states that these effects are common among “dirty people and dirty things”, an implication which ties in feelings of stigma that she experiences. In addition to infections caused by physical injuries and consumption of contaminated food, viral infections can be easily contracted due to low baseline levels of health and nutrition. The illnesses that can result from various types of infections can have a negative impact on other aspects of binner health, especially when combined with factors related to impoverished living conditions that are often experienced by these workers.

Musculoskeletal damage & ergonomic injuries

Ergonomic and musculoskeletal injuries result from repetitive motions and lifting heavy objects such as carts and bags filled with solid waste. The repetitive movements and heavy lifting that are inherent in solid waste work can lead to sprains, fatigue, muscle pain, and back problems in workers (Binion & Gutberlet, 2012). Among formal sector waste workers in Sweden, Engkvist et al (2011) reported skeletal injuries, sprains, and strains as the most common injuries and were predominantly a result of heavy lifting. Fifty-eight percent of the binners that I spoke to reported ergonomic or musculoskeletal injuries in themselves or others that were a consequence of binning, including general soreness, back pain, joint pain, sprains, and strains.

“... and sometimes my back just goes out. 3-4 times a year, and those are the only days I don’t go binning, just ‘cause I literally can’t move... Even though I look fine and some days I can carry 80-90 pounds, and I can do that, but some days it just acts up
This quotation reveals the nature of musculoskeletal injuries associated with binning, where previous injuries can be aggravated and new injuries result from the heavy lifting implicated with this work. Physical pain was frequently reported and in some cases, more serious or chronic injuries acted as a barrier to being able to work. This is consistent with Gutberlet et al (2009), who found that physical soreness was one of the most common ailments (30%) among binners in Victoria, BC. As a common condition experienced by many binners in the DTES, physical pain and musculoskeletal injuries were said by some of the interviewed binners to be self-medicated through the use of substances, creating a more complex picture of the health threats that informal recycling work has on individual workers:

“Binning and pushing carts and jumping in and out of bins and ripping bags all day—sure I have stress on my muscles and stuff like that…. my shoulders big time, like I got a dislocated shoulder that pops out all the time… Like I’m a recovering addict user, which means that I still have little mistakes here and there, normally I’m doing pretty good. Today, I didn’t do anything yet, I’m not going to do it right away, I’m going to wait until after supper and work first—because I use it for pain relief” (31-year old male).

The above quotation shows the link between pain caused by musculoskeletal (and other) injuries and the use of drugs by some binners to self-medicate for this pain. Several workers indicated in their interviews that they experience high levels of pain because of their work; however, their desire to use medical services is low and prevalence of addiction is high. As indicated in the quotation above, when these workers experience pain, there is a tendency among some to self-medicate, therefore reinforcing the relationship between survival binning and addiction (see Section: 3.2.2: Addiction).
Mechanical injuries

Mechanical injuries include cuts and lacerations, fractures, falls, and traffic accidents. These kinds of injuries are a significant health issue related to informal recycling due to constant contact with recyclable materials and items protruding from the trash (Binion & Gutberlet, 2012). Seventy-two percent of the binners that I interviewed reported that they or other binners regularly cut themselves or experienced other mechanical injuries while searching for recyclable materials. Further, some noted complications from these abrasions (such as infections) due to inadequate sanitation and wound treatment. In Victoria, BC, Gutberlet et al (2009) found that one in three binners regularly experienced cuts and infections. In their survey, skin and viral infections were significant health concerns, where 37% of these infections were caused by cuts from broken glass and metal. Many of these cuts and infections occurred on the extremities of the body and stemmed from a limited use of protective equipment and inappropriate footwear. A community worker reflects:

“...lots of cuts on their hands and on their arms and legs from jumping into bins and stuff like that without protective gear on. And "street feet" - being on their feet all the time, not in proper footwear, or they wear them so much they get worn out quick.”

In addition to cuts and foot problems referred to in the above quotation, several participants reported other types of mechanical injuries such as head injuries, broken legs, and broken ribs - all injuries that occurred during the process of climbing in and out of dumpsters, especially when the dumpster was wet and slippery from rain. A 48-year old male, binning for 15 years explains:

“I slipped cause I put my foot... you know in the bin, where the forks go in? They call those the ears, so I always stick a foot in the ear... so I was up there and it was wet eh, and I slipped and I fell down and I broke ribs on the other side.”
This quotation indicates the common-place nature of these types of slips and falls when climbing in and out of dumpsters, where the resulting injuries like fractures, broken ribs, and head injuries can have negative implications on binner abilities to work and their health status overall. Some of these injuries could be prevented with the use of protective equipment and sturdier footwear. However, these types of injuries also require societal interventions, where bins could either be made easier and safer to access or the recyclable materials could be set aside from the rest of the waste for collection.

*Chemical hazards*

Chemical hazards are threats can cause poisoning and skin injuries such as burns and respiratory illnesses, where exposure and effects can be sudden or take place over a longer amount of time (Binion & Gutberlet, 2012). While only 10% of my sample of binners specifically noted chemical-related health hazards, some of the binners reported non-work related respiratory conditions like Chronic Obstructive Pulmonary Disease (COPD), chronic pneumonia, or chronic bronchitis that were often aggravated during exposure to hot weather or chemical hazards like traffic exhaust, which is commonly experienced through their daily work on the streets. The chemical hazards that binners reported included various detergents, bleaches, chemical powders, and fuels that they found in bins while searching for recyclables. These hazards can have especially adverse health effects due to the lack of sanitation facilities available for binners to use. A 42-year old male, binning for 1 year explains:

“One time, I went into a bin and some chemicals came out and irritated my eyes and stuff. I washed them out in a puddle.”
This example reveals not only the chemical threats to binners when they enter a bin, but also the lack of sanitation facilities immediately available when hazards are encountered. In this way, binners who are exposed to chemical hazards (or other health threats like needle pokes, cuts, etc.) have no way to clean these injuries except to use puddle water from an alleyway. This then indicates the severity of the existing gaps between the hazards of informal waste work and the lack of sanitation facilities associated with marginally housed workers. Chemical hazards, while somewhat underreported in this cohort of binners, represent a very real health threat to those that participate in informal recycling, especially those that physically enter dumpsters to find substances and for those who already suffer from respiratory or skin infections and lack access to appropriate sanitation facilities.

_Binning and hazardous materials_

Informal recyclers encounter several types of hazards through their work, predominantly during the act of salvaging materials and from violence directed at binners. Eighty percent of the binners that I interviewed said that they had encountered materials that they considered to be hazardous to their health while they were working, including broken glass, needles, pipes, fuel, paint, dog feces, cat litter, dirty diapers, rusty nails, dead animals, dirty laundry, wires, razors, blood-contaminated items, detergents, chemical powders, knives, and various sharp protruding objects. Hazard exposure frequency varied from “every single bag” to infrequently. The types of hazards and frequency of exposure can be linked to specific work practices. Those who utilized partnerships with residents and businesses (23%) or limited their collection methods to picking up from the ground in parks
and sidewalks tended to report fewer incidents with hazardous materials than those who physically climbed into dumpsters.

As discussed in Section 3.1.1: Income, the binners who had partnerships with residents and/or businesses reported lower exposures to hazardous materials. As a strategy that facilitates the collection of recyclable materials, partnerships provide income stability through exclusive access to separated materials, and therefore assists binners in avoiding hazardous materials. Several of the binners who stated that they had partnerships with residents reported that these working relationships allowed them to avoid dumpsters and to feel safer in their work environment.

An additional physical hazard related to binning is violence or conflict over territory. According to Gutberlet et al (2009), binners in Victoria, BC reported that they experienced occupational threats such as being robbed, followed, or harassed as a consequence of territorial competition among binners or general dislike of another person. Violence and conflict over territory was a theme that arose in several of my discussions with binners as a health hazard relating to this line of work:

“I see a lot of them, they argue and fuss and fight over nothing. I would say that it’s hazardous to their health... especially some of the old timers eh... you know, after putting in all day or all night’s work, and then somebody goes and rips them off or something like that” (56-year old male, binning for 15 years)

This quotation indicates the confrontations and physical violence between binners, which was especially prominent in my discussions with men. Violence was not only a phenomenon that existed between binners as a result of competition over territory or materials, but was also directed at binners by other members of the public. Although few of
my respondents spoke to relationship, Berti & Sommers (2010) state that 88% of their homeless respondents (many who were binners) reported being victimized within the 2 years previous to their study. Exposure to violence emerged as an important occupational hazard and is especially significant when considering that 25% of my respondents stated that they preferred to work overnight.

Protective equipment use

In the informal sector, the risks inherent in waste work can be exacerbated due to the fact that these workers tend not to use protective equipment, either because they cannot afford or access it, or they prefer not to use it. During my interviews with binners, 55% reported that they use some kind of protective equipment. Latex gloves were the most common protective equipment identified by this group of binners; however, this type of glove is arguably not going to provide adequate protection from sharp or protruding objects. Of the binners who reported using gloves or other types of protective equipment, many said that they obtained their gloves from local organizations where they volunteered, implying that they are only accessible to those who are able or willing to obtain volunteer positions in the DTES. Among those who do not use protective equipment, the predominant reason provided for avoidance was the level of discomfort associated with it and the fact that they can’t “feel anything” through the fabric:

“Sometimes they get in the way, if they aren’t really... you can’t feel nothing and you just can’t work with them cause it makes you clumsy” (59 year old male, binning for 15-20 years).

This quotation alludes to a theme that Parizeau (2013) identified in Buenos Aires, Argentina, where among her sample of informal recyclers who do not use gloves, 50%
preferred to work barehanded because it enabled greater tactility as they opened bags of waste and dug through bins, and gloves caused them discomfort. She also reported that these workers tended to over-report their use of protective equipment as compared to observations. Similarly, over half of my respondents self-reported that they use protective equipment regularly, but when I asked about their observations of protective equipment use in other binners, only 20% said that they had observed other binners using protective equipment. This indicates, similar to Parizeau (2013) that over-reporting the self-use of protective equipment may be commonplace in these workers, perhaps because of perceptions of researcher status or fear of stigma.

3.2.2 Addiction

Addiction is an important social determinant of health that threatens the health status of many binners and other residents of the DTES. The “open drug scene” in the DTES has been associated with multiple indicators of vulnerability to harm, adverse health outcomes, and social implications (DeBeck et al, 2011). Although I did not explicitly ask my respondents about addictions in the interviews that I conducted, 44% alluded to a current addiction and 7% said that they were ex-users or recovering addicts. Because of the stigma associated with addiction, the differences in social status between the participants and myself, as well as the tendency for many binners to refer to addictions in ‘other binners’, it is likely that more than half of the binners I interviewed were impacted by some kind of addiction. Addiction was brought up as a factor predominantly during discussions of basic needs, health status, and access to services, and is an issue that occurs concurrently with
mental illness and poor physical health for many binners and low-incomer residents in the DTES (Linden et al, 2012).

In the DTES, addiction acts as an especially significant barrier to employment, where many people with addictions are precluded from work and turn to the informal sector in order to make an income. In this way, binning is an appealing income generating option due to its temporal flexibility and potential for the income needed to sustain their habits. Addiction and its interrelated causes and outcomes also impact the ways in which informal recyclers access physical resources and experience the other determinants of health in the urban sphere. Addiction to harmful substances not only consumes income, resulting in financial insecurity, but it is also a root cause of ill health and worsening health inequalities (Wilkinson & Marmot, 2003).

Substance use has several associated health impacts, including poor nutritional status, unstable mental health, and dental issues. The relationship between addiction, health, and binning was acknowledged by many of the binners that I spoke with, whether or not they discussed personal addictions or their perceptions of others. Several participants reported that the health of other binners is largely dependent on how the money they earn from working is spent, with some noting that they thought that the biggest factor leading to poor health among binners is addiction. When I asked what “should be done to improve the health of binners”, a 53-year old male binning for 3 months replied:

“It’s an addiction issue. You have to tackle the addiction issue and you attack everything.”
This quotation indicates that some binners may be aware of the relationship between addiction and binning and that there is a need for increased attention to substance use in order to improve the health of local residents. Despite the income that informal recycling generates for people who have addictions, this work can also have detrimental health effects when combined with drug-related illnesses or autoimmune disorders (HIV/AIDS, Hepatitis-C). In a health study of 293 residents living in SRO hotels in the DTES, Vila-Rodriguez et al. (2013) found that 95% of their participants reported using drugs, while the serology from their participants revealed that 18% of their participants were HIV-positive and that 70% were Hepatitis-C-positive. These findings are significant when considering the health status of the area’s informal recyclers, as these chronic conditions make an individual much more susceptible to physical health threats like viruses and bacteria in this line of work.

Addiction threatens the physical and mental health of many of Vancouver’s binners. Substance use additionally has material impacts on informal worker health status by affecting the way that individuals access health services, interact with healthcare workers, and are perceived by the public.

3.2.3 Summary

Within this analysis of the social determinants of health as experienced by binners in Vancouver’s DTES, there are several factors that threaten the health and well-being of these informal sector workers. These health-threatening factors- occupational exposure to hazards and waste as well as addiction and exposure to the neighbourhood’s open drug scene - entrench and exacerbate the health status of these marginal workers while negatively impacting their access to necessary resources (sanitation/hygiene, health services) that could
help to promote better health in this population. Occupational hazards associated with solid waste work, violence, and addiction combine to create a unique set of health challenges for Vancouver’s binners. These challenges often lead to increased stigma and poorer health, while concurrently reducing access to income, food, housing, and services.

It should be noted here that although a majority of the binners reported experiences of poor health, exposure to hazards, and injuries, some binners (15%) noted that this work has had some positive impacts on their health as well. These workers most commonly expressed that this work improved their health because of the regular exercise associated with it and the sense of purpose that it provides to their day. This positive reporting of health outcomes was especially common in conversations with some of the ex-drug users who said that they bin in order to stay active and to keep busy and avoid drugs. For the majority of those that I interviewed, informal recycling is seen as survival work associated with many hazards and poor health. However, there was a small percentage of binners that said that despite the injuries and illness they incur through this work, that they love their job and would not choose to work for anyone else or do any other activity because of their desire to be independent.

3.3 Mediating factors

Several social determinants of health, including social exclusion, gender, ethnicity, and mental health, function together to mediate health resources and threats. These determinants affect different dimensions of an individual’s identity and have material impacts on the health of vulnerable populations. Mediating factors influence the way that
impoverished urban residents like binners access health services, while negative or oppressive experiences associated with these factors entrench vulnerability and exposure to health threats.

3.3.1 Social exclusion

Social exclusion is defined as the “inability of certain subgroups to participate fully in society due to structural inequalities in access to social, economic, political and cultural resources. These inequalities tend to arise due to the intersecting experiences of oppression as it relates to race, class, gender, disability, sexual orientation, immigrant status, and the like” (Galabuzi, 2004, p238). In economically polarizing cities, individuals that reside in low-income areas, like the DTES, experience social inequalities through increased exposure to health threats and surveillance by public authority figures (Kennelly & Watt, 2011). These stigmatizing experiences act as barriers to accessing services and exacerbate feelings of disconnect from society. As a mediating determinant of health, social exclusion impacts the physical and mental health of Vancouver’s binners as an outcome of social and spatial inequalities in society that marginalize vulnerable urban residents and exclude them across multiple dimensions of identity.

As Vancouver’s urban sphere shifts in favour of wealthier residents, the social exclusion of informal recyclers and other marginalized residents has material health impacts, impacting way that low-income residents access services and resources. Because the activity of “scavenging” remains prohibited in Vancouver, binners are stigmatized and at risk for encounters with police (Gutberlet et al, 2009). The increased surveillance and
criminalization of poverty-related behaviours (street vending, public urination, loitering) further entrenches feelings of exclusion and stigmatization as these behaviours are commonly associated with deficiencies in basic health resources like income and housing (Wittmer, 2013). Stigmatization resulting from interactions with wealthier members of civil society can act to marginalize informal recyclers and affects their ability to navigate the public sphere and access resources. Among the binners that I interviewed, 68% reported that they frequently experienced negative reactions from the public. Many binners stated that they have come to expect disrespectful treatment from the public because of their affiliation with garbage. When I asked recyclers how they thought that binners were perceived or treated by the public, a 56-year old female binning for 4 years replied:

“The majority really look down their nose at you for it. Most definitely. Like they just think you’re dirty, filthy, you know, you’re scum... there’s always going to be some sort of prejudice I suppose, people experience that a lot down here.”

This quotation specifies that some binners perceive that their public image is associated with being dirty and filthy, assuming characteristics associated with garbage. The relationship between informal waste work and the stigmatization of living in the DTES is then exacerbated by the fact that many binners expect to be treated poorly and have come to expect a marginalized lifestyle and social exclusion.

Although a majority of the binners reported negative public attitudes and reactions to binning, 31% said that they often had positive interactions with the public. For these binners, social exclusion takes place on a larger systemic scale. A majority of my respondents noted that more and more dumpsters are being locked up across the city, which is an act that excludes recyclers from a main resource across the city. Social exclusion has
manifested in the lives of binners in the social, economic, and spatial organization of the city, but also in the actions and responses of the public. The widespread practice of locking garbage bins is one such example, where the incomes available to survival workers are minimized alongside the reduction of access to recyclable materials. The disempowerment of informal waste workers is seen throughout the literature, but when coupled with the exclusionary forces of criminalization and clientization, stigma seems to be more strongly held and self-reinforced among many of my participants. In contrast, several of the participants who reported positive interactions with the public also tended to identify recycling as being work that allows them to be independent, work for themselves, and improve health outcomes by having regular clients through partnerships along their traplines. This positive understanding of binner health in the context of this work that tends to be stigmatizing is consistent with Gowan’s (1997) article that states “given their stigmatized social position, recyclers are choosing to concentrate their efforts on using their work to redefine themselves as people with full humanity rather than victims” (183).

3.3.2 Gender

The DTES is a gendered space in terms of its historically male-dominated population, the work that males and females typically do, and the ways in which men and women access physical resources like income, food, housing, and health care (Linden et al., 2012; Myers, 2010). In the DTES, the social determinants of health (as resources and threats) are experienced differently by men and women and contribute to the low baseline levels of health experienced by both sexes. In this way, the particularities of male and female health issues differ from one another.
Informal recycling in Vancouver has typically been a male-dominated occupation, and even with the growing female presence in this activity, 70% of the participants in both the UWC Depot-move survey and my interviews were male and 30% were female. For women in the DTES, this work has typically been survival sex work; however, a trend that is being noticed by binners and frontline workers is that informal recycling is increasingly becoming a more popular livelihood option among local women. This observation is supported by Tremblay (2007) who suggests that the income-generating opportunity that binning provides has decreased reliance on sex work for some women in the DTES. Key informant observations reflected that men tend to dominate as survival binners because they are thought to have fewer options for economic advancement in the informal sector otherwise. Some of my key informants indicated that while many women in the neighbourhood turn to survival sex work or binning as a method of coping with poverty or obtaining drugs, men turn exclusively to binning when in the same financial situation.

In addition to the increasing number of women working as informal recyclers in Vancouver, gendered work practices within binning were an emergent theme in this study. Women were much more likely to work with a partner, with 67% of the women and only 12% of the men who were interviewed reporting that they worked with another person. Women were more likely to team up with another woman for this work; however, a small number of women reported that they worked with a male friend or partner while they collected materials. A 53-year old female, binning for 10 years and who bins predominantly overnight with a female friend explains:

“I partner up and we watch each other’s back and make sure we don’t get too far apart
and we can see each other. But we’re always unsafe because you don’t know, you don’t know if there’s someone out there who’s loaded or high and is just looking to do some damage to somebody and it can be really convenient for them. So I always partner up, I never go alone, and [she] doesn’t go alone."

While a majority of the women that I interviewed said that they worked with other women, the women who worked with male partners indicated that they each performed different occupational roles. Men tended to do the dumpsters and garbage bins while women searched the ground for recyclable materials and helped with sorting materials. This trend emerged not only within partnerships between men and women, but also among men and women who worked alone, where female binners were less likely than men to go into dumpsters.

*Gender and access to services*

Men and women access resources and experience health threats differently from one another in the DTES. During recent decades, there has been significant development of women’s only resources in the neighbourhood due to the fact that women were unsafe in the male-dominated urban space. All of the key informants that I spoke to noted that this increase in women’s services was one of the most significant positive changes to the neighbourhood in the last decade. A 57-year old female, binning for 5 years also brought up the changes to services for women in the neighbourhood and discussed their personal impact:

“"Yes. My dentist is across the street... and I go to the women's collective clinic, which is a block down. It's a really good place, they've got lots of resources for women down here now” (57-year old female, binning for 5 years)."
Similar to the woman quoted above, several of the women that I interviewed for this study reported higher levels of access to social housing (see Figure 6), more independent food access (see Figure 7), and less drug dependence than men, (who in this sample, predominantly lived in SROs, accessed their food from lineups or the garbage, and were more likely to have drug dependence). Throughout the interviews, women tended to speak more favourably about their living situations and access to services than men, but members of both groups reflected on their worsening health status despite some improvements in neighbourhood services.
There were similar gendered differences in the way that the respondents said that they accessed food. The presence of women’s-only services in the neighbourhood may affect the way in which some women and men access food, as many of the female respondents (56%) reported that they ate frequently whereas 80% of men reported that they ate one meal per day or less. In their study of the DTES foodscape, Miewald & McCann (2013) reported that women tended to use the women’s-only food programs as their main food source because they were perceived as being safer spaces and providing better quality food. Due to their exclusion from the food provided by women’s services, some of the men that I spoke to indicated that they indirectly access food through a female partner in favour of going to lineups or to the garbage.

“I usually only eat once a day- later in the afternoon. Usually, 80-90% of it, the girlfriend brings home from the women’s places” (51-year old male, binning for 9 years)

This quotation indicates that this particular male not only eats infrequently, but that a majority of his food is sourced from his female partner who brings it home from women’s services. The gendered differences in access to resources like housing, food, and services indicate that women are perhaps more likely than men to seek out assistance when needed. However, the stereotype of service-reliant women may be perpetuated with informal categorizations of the poor by social workers, whereby women can be perceived as being more “deserving” of services. Cramer (2005) explains that this informal categorization of women as the “deserving poor” stems from stereotypes of women being more blameless or vulnerable in poverty situations. She argues that this stereotyping often results in women being housed faster than males, as service staff routinely made more of an effort to support and progress female cases because of their perceived deserving status. Despite this
favourable status that women may hold, their health outcomes and perceived baseline levels of health were equal to that of the male participants, with 40% of the total sample reporting worsening health since the inception of their binning. Even with the increase in women’s only services and social housing in the DTES, women were still as likely as men to report poor health, indicating that the particularities of health are experienced differently by male and female binners.

The low health status experienced by women is especially concerning when one considers the women who were not residing in social housing or able to access food or women’s services on a regular basis or at all. The women who reported living in SROs (13%) or were homeless (6%) reported worsening health coupled with indicators linked to food insecurity, addiction, and tended to avoid health services as a result of stigmatization. This group of women were therefore at a high risk for several health threats and are an incredibly hard-to-reach population in terms of service interventions. Based on the voluntary basis of this study, I expect that the number of women who fall into this category and are excluded from even the women’s only services is much higher than indicated in this survey. This is confirmed by a study by VANDU (2009), which indicates that despite the national attention to women’s services and harm reduction in the DTES, women who use drugs in the community reported persistent health inequities and barriers when accessing all types of services.
3.3.3 Ethnicity

Ethnicity is a determinant of health that mediates the multiple insecurities, stigma, and poverty that is experienced by some binners, as there is an over-representation of certain sub-groups in the binning population. The DTES has long been a place where the vulnerable and socially excluded go for social acceptance and access to low barrier services. According to Roe (2009), this includes recent immigrant groups, Aboriginal people, drug users, alcoholics, and the poor. The population of the DTES and its surrounding neighbourhods are comprised of a range of ethnicities.

Among the self-selected sample of informal recyclers that I interviewed, a majority (53%) reported that they were Caucasian. However, Aboriginal and elderly Asian people also have high representations in Vancouver’s informal recycling population, which has significant implications on the ethnic dimensions of this type of informal work. Among the binners that I interviewed, 32% of the respondents reported that they were Aboriginal (Native, Haida, First Nations, Cree, Metis). This number is further confirmed by the UWC survey of 100 binners completed in parallel with this study, which indicated that 33% of respondents were Aboriginal. The disproportionate relationship between poverty and ethnicity is evident here given that 2% of the city’s overall population is Aboriginal, yet 32% of the city’s homeless population (City of Vancouver, 2011) and 33% of this binning sample are Aboriginal. Aboriginal status is an important issue to consider in this neighbourhood, as there are specific health issues and outcomes that pertain to Aboriginality and its relationship with homelessness, addiction, and poverty. A study by Wilson & Cardwell (2012) found that over 50% of Canadian Aboriginal people now live in
urban areas, so it is necessary to consider their health status separately from those living on reservations and in comparison to the non-Aboriginal urban population. In 2001, the average income of Aboriginal men and women were 58% and 72% of the income of non-Aboriginal men and women (Mikkonen et al, 2010). One third of employed Aboriginal people were reported to work in some of the lowest paying occupations in the country and their mean income was 50% lower then the national average (Shah, 2004). There is significant occupational- and income-related inequity associated with Aboriginal groups in Canada, and this plays out in the way that this group experiences health in urban areas.

Elderly Asian recyclers, predominantly women, are highly represented in Vancouver’s binning population, but there was very little representation of this group in my study, likely due to the voluntary nature of participation. These women tend to collect discarded beverage containers from parks, sidewalks, and at public events throughout the city and seem to have specific areas or routes that they follow akin to traplines (Tremblay, 2007). Chinatown (an adjacent neighbourhood to the DTES) has a significant population of immigrants, many who take part in binning as an income generating activity. According to Cox & Watt (2002), immigrants tend to enter the informal economy because they are precluded from formal sector employment due to their immigrant status, language barriers, or a lack of skills. It was estimated by Tremblay (2007) that up to 20% of the informal recycling population that use United We Can are Asian women from Chinatown. Despite their productivity in collecting bottles, this is a highly marginalized group due to language and cultural differences and they are therefore difficult to access. Only one of the binners that I interviewed identified as being an Asian woman, but the observed presence of this
binning group throughout the city and their importance in the informal recycling economy was noted by all of the key informants. Future research on informal recycling in Vancouver should therefore seek to incorporate these women as there are cultural, gendered, and stigma-related aspects of informal recycling work for this group that differ from the rest of the city’s binning population.

As a place where stigmatized and impoverished people typically reside, the multi-ethnic DTES and surrounding neighbourhoods hosts a significant portion of Vancouver’s most vulnerable people. Ethnicity, including Aboriginal status, is an important factor that mediates access to services and resources with disproportionate insecurities, stigmatization, and poverty experienced by specific groups that are overrepresented in the city’s informal recycling population.

3.3.4 Mental Health

Mental health is defined by the World Health Organization (2010) as being a “state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to their community” (1). Mental health is determined by social, psychological, and biological factors and has a clear association with poverty and vulnerability. Mental health underlies and mediates the experience of the social determinants of health for impoverished city residents as they experience access resources and avoid health threats through their living conditions and work.
According to Campbell et al (2009), many mentally ill people are drawn to the DTES because of the cheap rent, charitable food, and the accepting community that the neighbourhood is so well known for. Unfortunately, these people are also exposed to the area’s open drug scene with increasingly cheaper and more potent drugs: “people went from struggling with a mental illness to becoming drug addicted, very sick, and often homeless” (p83). Although mental illness does not affect all binners, mental health emerged as an especially prevalent theme in my conversations with respondents. A majority of the discussion of mental illness came up during our conversations about poor living conditions, where 48% of my participants indicated that their mental health suffered as a result of noise, fighting, and a lack of sleep associated with their living situation, as well as increased levels of paranoia, anxiety, depression, and stress. Up to 80% of the women and 52% of the men that I interviewed indicated that they experienced stress, anxiety, or depression as a result of either their living conditions or work with solid waste.

Mental health issues, including addiction, often precludes some individuals from formal sector work, leading to financial insecurity, stress, and precarious work options. Binning is an alternative work option for those who are unable or choose not to obtain formal sector work. This work then mediates an individual’s mental health status by providing income-generating options, but at the same time, can prove to hinder mental health status through the stresses and stigma associated with the work. Among the group that I interviewed, the stresses associated with informal recycling were largely a result of stigmatization and inadequate access to health producing services and resources. When I
asked if binning has had any health effects on him, a 24-year old male, binning for 2 years explained,

“... the stress of being broke all the time and having to get in and dig through other people’s garbage and stuff is kind of degrading... like stress makes you lose weight, you know, you feel fatigued and weak from not eating.”

For the above and several other respondents, the financial stresses associated with poverty and reduced access to resources was compounded with stigmatizing aspects of waste work. The stress that poverty and stigma have on many binners often resulted in physical health issues, including the above listed fatigue, weight-loss, and weakness. Several authors have discussed the negative public perceptions and stigmatization that informal recyclers incur as a result of their work with waste (Tremblay, 2007; Gutberlet, 2010; Binion & Gutberlet, 2012; Parizeau, 2013). This is consistent with my findings, where stress, anxiety, and depression due to stigma and financial insecurity were reported as a significant occupational health threat in terms of mental health status and were often coupled with or exacerbated by addiction issues.

Informal recycling has a significant impact on the mental health status of already vulnerable individuals who do this type of work. Binning can cause or exacerbate feelings of stigmatization, stress, and anxiety, and affects the way that workers perceive themselves as being deserving of their marginal status. Although the relationship between binning and mental health is predominantly negative, some binners said that the work helps them to get outside, interact with people, exercise, and abstain from drug use. Mental health is a determinant of health that mediates the experience of other determinants and affects the
ways in which binners are able or willing to access health resources and avoid health threats in the city.

3.3.5 Summary

Several mediating factors function together to shape the way that Vancouver’s informal recyclers experience health in the city. These social determinants of health (social exclusion, gender, ethnicity, and mental health) function across different dimensions of an individual’s identity to mediate access to health resources and exposure to health threats. The above perspectives outlined by binners indicate that this group tends to experience differential access to services, housing, food, and income from other low-income residents due to social and structural interactions in the urban sphere that are influenced by their work with solid waste. These mediating factors can then influence the way that informal recyclers experience health, while stigmatizing experiences associated with these factors contribute to the entrenchment of vulnerability in the city.

Chapter Four: Analysis

4.0 Geographies of survival and the landscape of urban change

In this chapter, I draw on Mitchell and Heynen’s (2009) “geographies of survival” as a tool with which to explain the importance of functionality in binner health and the ways that these workers experience the social determinants of health in the city. This concept explains that impoverished city residents construct pathways through the urban landscape that “link together places to sleep or rest… locations to eat a meal or forage food, hidden
corners of security and safety… and even sometimes such relatively permanent fixtures as homeless encampments or shanty towns” (613). Geographies of survival are linked with the social determinants of health and urban inequality in public, social, and political spaces as the urban poor structure these survival pathways through the city in to maintain or improve their experiences of health resources, health threats, and personal mediating factors. Because my participants identified functionality (working, eating, sleeping) as being foremost in their understandings of health, the social determinants of health and the geographical networks through which they experience these determinants are important to analyze in the context of a changing urban sphere.

The DTES is often framed as a neighbourhood in need of intervention. Vancouver’s former mayor Larry Campbell, wrote a book about the municipal politics surrounding the DTES and the “Four Pillar Approach” the city has taken to harm reduction and social services. The presence and availability of low-barrier services in the DTES are an indication of the influence of Canada’s welfare state in the neighbourhood. Campbell’s (2009) perspective and the experiences expressed by binners in Section 3.1.4: Access to Services, indicate that Vancouver’s informal recyclers have different access to health services than these workers in the global south as a result of the welfare state as an influential urban force. With this in mind, several authors argue that the Canadian welfare state has eroded in recent years (Raphael et al, 2008, Bryant et al, 2011; Teghtsoonian, 2009). The changes to the welfare state indicate that there are other urban forces that affect the way that binners and other low-income residents experience their geographies of survival in the city.
Local manifestations of neoliberal trends, while not totalizing, are an example of an urban force that influences several factors that affect the urban poor. Neoliberal policy interventions act as a major force in the transformation of urban environments, where the redefinition of public space (Brenner et al, 2009) often comes to exclude informal recyclers and other marginalized urban residents. Neoliberalism is a dynamic and unstable process and is susceptible to local resistance due to its contextual embedding in local institutions and practices. Neoliberal governance is therefore not static; rather it touches down in the city as multi-scalar adaptable strategies that change based on local contexts of contestation and resistance (Peck et al, 2009; Kiel, 2002; Larner, 2000).

This chapter focuses on neoliberal governance as being one of several trends that alters several aspects of binner experiences of health and well-being in Vancouver by affecting service provision, urban planning, and the governance of public space. Based on the local context of Vancouver and its DTES, even well-intentioned policies and programs do not roll out evenly across the urban environment. Instead, the geographies of survival and experiences of the social determinants of health for binners and other low-income urban dwellers tend to be increasingly restricted based on the framing and transformation of urban public spaces. Urban change as experienced by Vancouver’s binners is therefore a reflection of the growing physical, social, and political inequality between the city’s wealthy and poor residents.

I begin this chapter with an overview of neoliberal urbanism in Vancouver, focusing on neoliberal constructions of disorder and rollbacks to the welfare state. I then discuss
three spatial manifestations of these constructions (in physical space, social space, and political space) and the contestation of “legitimate” uses and users of these spaces via local governance and informal recycler geographies of survival.

4.1 Urban Neoliberalism in Vancouver

Urban neoliberalism is represented by a set of multi-scalar political and ideological practices, whereby “rational” political and corporate authorities act to reregulate everyday urban life by emphasizing individual responsibility, the unrestricted accumulation of capital in a free market, and the deregulation, roll-back, and privatization of public services, public spaces, and socioeconomic intervention (Keil, 2002; Mitchell, 2004; Larner, 2000). Neoliberal modes of governance are a prominent trend in the governance of urban space that contributes to a socially, economically, and spatially unequal landscape within cities. Despite its predominance in mainstream society and policymaking, urban neoliberalism is not a fixed ideology, but a phenomenon or process that is contradictory and susceptible to change in response to local contexts of resistance and opposition (Larner, 2000). To this extent, Keil (2002) states, “As a state strategy, urban neoliberalism creates new conditions for the accumulation of capital; yet it also inevitably creates more fissures in which urban resistance and social change can take root” (579).

In recent decades, both the Province of British Columbia and the City of Vancouver have developed several political strategies and policies that exemplify the neoliberal processes and practices that Brenner & Theodore (2002) outline in their analysis of “actually existing neoliberalism” in cities: the restructuring of the welfare state;
transformations of the built environment and urban form; reregulation of urban civil society; and re-representing the city. These mechanisms have touched down in Vancouver via cuts to social assistance and public service provisioning (Tremblay, 2007); a real-estate boom, the 2010 Olympic games, and the re-development of urban areas towards elite consumption (Barnes et al, 2011); increased criminalization, surveillance, and enforcement of “public disorder” (Berti & Sommers, 2010); and rhetorical agendas to revitalize and “green” the city (City of Vancouver, 2012). As indicated in my conversations with health service workers and binners about their experiences in the city, these characteristic elements of neoliberal modes governance act in combination with other urban forces to exacerbate the spatial and social polarization of the city.

The DTES and its marginalized residents are institutionally framed as being synonymous with “public disorder”. The publically understood association between urban decay, drug addiction, and various stigmatized activities (drug dealing, panhandling, binning, vending, and homelessness) then emphasize perceived social differences and exacerbate inequality between these and other members of society (Berti & Sommers, 2010; Gordon, 2010). To this extent, Wardaugh & Jones (1999) state that in the neoliberal version of poverty, “it is not marginality per se that is dangerous: rather it is the visible presence of marginal people within prime space that represents a threat to a sense of public order and orderliness” (112). Marginalized citizens are often made to be invisible in society due to institutionalized neoliberal conceptions of poverty, where adaptations like informal recycling are understood by the public as “disorder” rather than as a “means of survival, and
these workers are then unable to meet their basic needs without breaking the law (Berti & Sommers, 2010).

In 2005, the provincial government introduced the BC Safe Streets Act and amendments to the municipal Trespass Act. These mechanisms of governance were introduced with the intention of tightly regulating binning and panhandling in an effort to decrease “public disorder”. Shortly after these initiatives were introduced, Vancouver’s former mayor Sam Sullivan developed Project Civil Society, a 2006 municipal policy initiative with the familiar goal of actively targeting “crimes of disorder”. This initiative specifically refers to binning as a “problematic behaviour” because of the “general level of chaos and disruption that can result from th[is] activit[y]” (City of Vancouver, 2006: 24). In order to reduce the perceived disorder caused by binning, this municipal project suggested making bins less accessible by locking or putting up fences or gates around them, an effort which has become quite common-place as indicated in the discussion of bin locking in Section 3.4.1: Social exclusion, and by a 53-year old male, binning for 13-years below:

“Its getting fewer and fewer, there’s more getting locked up and locked up. More now than I’ve ever seen.”

Informal access to the waste stream is further restricted through solid waste by-laws introduced in the same year. The by-laws (see City of Vancouver, 2006) are enforced with a $100 fine for binners if they are caught removing refundable materials from recycling bins (Tremblay, 2007). These by-laws increase the stigmatization felt by informal recyclers and can also deter residents and businesses from supporting or forming partnerships with them due to the illegality associated with binning. Locking bins and enforcing by-laws could also be interpreted as being a method of reducing exposure to occupational hazards and
protecting recyclers from negative health outcomes. However, these actions have been taken without consulting recyclers about potential actions to improve their health. Rather, the binners who discussed locked bins in our conversations said that the locks just added some difficulty to their collection of recyclable materials and pushed them to obtain materials in more precarious or risky ways. Such innovations in governance that restrict access to the waste stream create tensions in the lives of binners and in their geographies of survival by limiting their livelihood and survival options.

In addition to the above understandings of poverty and disorder, recent trends in urban planning and policymaking have promoted urban redevelopment and revitalization projects that exemplify neoliberal shifts in the governance of the city (also see: City of Vancouver, 2000; 2006; 2010; Mason, 2007). These policy plans and their “greening” and “revitalization” rhetoric reflect dominant societal narratives that privilege certain uses of space while criminalizing others. Smith (2003) discusses the effect of such urban revitalization agendas, where simultaneous pressures associated with gentrification and ghettoization overlap and create inequality within the community. In this way, the DTES attracts marginalized people because of its concentration of low-barrier services and its accepting community (see Section: 3.1.4: Access to services); however, it is simultaneously encroached on by urban redevelopment towards elite consumption and services, and accompanied by the surveillance of impoverished residents. These municipal policies encourage increased “social mix”, which Walks & Maaranen (2008) argue actually acts to further polarize communities and push low-income residents out.
As discussed in Section 1.1.1: Urban change and health in Vancouver’s Downtown Eastside, gentrification is a highly contested issues in the DTES. Some authors argue that this type of urban change is very prevalent (Sutherland et al, 2014; Dale & Newman, 2009; Walks & Maaranan, 2008; Miewald & McCann, 2013), while some maintain that the DTES community has been successful at maintaining the neighbourhood and keeping gentrifying forces away (Ley & Dobson, 2008). What is clear here is that although revitalizing and “greening” action plans are intended have desirable effects on Vancouver’s economy and improve its aesthetic, my conversations with binners and DTES-based service workers indicate that low-income residents feel that they have been left out of the conversations that shape their city and their livelihoods. It is within this shifting urban context and the predominant societal framing of “disorder” that Vancouver’s binners and other impoverished city residents experience increasingly inequitable access to the necessary health-producing resources and sites that comprise their geographies of survival in the city.

4.1.1 Neoliberalism in healthcare

Neoliberal approaches to healthcare tend to place the responsibility for one’s health and socioeconomic situation on individuals rather than on the social and structural factors that influence the inequitable distribution of health resources in society. This emphasis on individual-level responsibility values a person’s financial independence, which has significant implications for health as access to socially determined health resources are framed as an individual rather than societal responsibilities (Raphael et al, 2008). Larner (2000) states that neoliberal strategies “encourage people to see themselves as individualized and active subjects responsible for enhancing their own well-being”(13).
Similarly, Isin (1998) suggests, “citizens are redefined as clients…who are responsible for their own success, health, and well-being” (582), which is a prominent theme in Sections 3.1.2: Food security and 3.1.4: Access to services, in my discussion of the clientization of DTES residents. An outreach nurse that I interviewed spoke passionately about the detrimental effect that individualizing health and healthcare has on impoverished residents:

“As a society we have to change our attitudes about people, about what our responsibility is for people, how much control people actually have over their circumstances... We’re work ethic-y people, so we value people who look to us to be contributing in a certain way, so we’d have to get over that... we need to have a bottom line that’s higher than our bottom line. And you know, a lot of those people making those decisions wouldn’t have a clue how to live in that way. But I think what’s driving them, is this attitude of “if they only tried harder to get there”. So as long as they persist with that attitude, this doesn’t change."

This quotation indicates that the individualized approach towards “socially acceptable employment” over less conventional work does not serve those who face the stigmatizing gaze of the wealthier and more powerful “other” in society. In this way, the dominant socio-political attitude towards impoverished residents as being individuals who are not trying hard enough, impedes progress towards health equity and poverty reduction because decision-making often reflects the priorities of the more ‘valued’ or wealthy constituents over low-income “clientized” groups (Bryant et al, 2011; Raphael et al, 2008; Mikkonen & Raphael, 2010). The discourse surrounding the individualization of economic and social contributions to society is extended to the healthcare sector in a study by Teghtsoonian (2009). Teghtsoonian discusses the concept of “responsibilization” in mental health treatment in BC, arguing that there is a strong governmental emphasis on individual-level variables rather than on public policies or wider societal issues. As a result of the responsibilization of health, individuals, families, and workplaces, rather than publicly funded services, are said to act as the main resources for those who are dealing with mental illness in British Columbia. Mental health issues were a major theme discussed in the
interviews that I conducted with binners and key informants (see: Sections 3.3.4 Mental health and 3.1.2 Addiction); whereby a lack of publicly funded resources and support available to people with mental health issues was an important emergent theme in my interviews with both groups.

“There’s enough clinics who are going to look after, you know, regular old clinic stuff…but there’s not enough of an initiative to deal with the mental health stuff. There’s just not. And they need to get their head around the epidemic of that. They got their heads around the epidemic of Hep-C conversions and you know, the province put a whole bunch of money into harm reduction activities... but the mental health stuff has seemingly crept up on them too and they don’t seem to understand the impact that has on the city as a whole” (Outreach director).

This quotation reveals that from the perspective of frontline workers, mental health and addictions are the foremost health issue in the neighbourhood. However, deficient public funding and the responsibilization of mental health have left low-income residents (who often cannot afford privatized mental health treatment and lack familial support) to cope on their own. A report issued by the Vancouver Police Department by Thompson (2010) echoes this call for increased public funding for mental health, stating that police officers have become society’s de facto front line mental health workers, with nearly half of the emergency calls from the DTES and surrounding neighbourhoods involving a mental health issue. Due to this lack of publically funded social support for mental health, the binners who discussed mental health, addiction, or concurrent issues are framed by governing institutions as being individually responsible for their health status and treatment, despite the social and structural conditions associated with poverty and the experience of poor living conditions that contribute to and exacerbate mental and physical health issues (see Chapter 3: Results and discussion: Social determinants of health).
4.2 Physical Space

Vancouver’s informal recyclers experience inequitable access to physical space in the city because of dominant perceptions of their “disorderly” use of it and the subsequent criminalization of their livelihoods. The act of accessing resources (including solid waste) in public spaces is essential in binner constructions of their geographies of survival. In Section 3.1.2: Food security, I discussed what Miewald & McCann (2013) term the “Hastings Shuffle”, whereby several of the binners that I interviewed referred to their incorporation of a network of food line-ups and dumpsters into their daily binning routine in order to access food. In addition to food, these workers tended to diversify their geographies of survival to encompass a variety of other physical spaces in the public sphere, including sites to access recyclable materials (dumpsters/bins, curbs, parks); economic opportunities (United We Can, Pigeon Park Street Market, panhandling); housing (individual unit; shelter; outdoor spaces); and sites that provide washrooms or sanitation opportunities (public washrooms; alleyways).

Vancouver’s DTES is comprised of a geography of spatial outcomes that reflect the balance of economic and social power in the city (Young, 2011). It is a central yet contested site in the survival pathways adopted by these workers in that despite its proximal location to the downtown core and potential for high property values (Ley & Dobson, 2008), it is a place defined by conditions that implicate it with poverty. These conditions have given rise to a local community culture, where public spaces (e.g. sidewalks, parks) are used by local residents as the “living room of the neighbourhood” (Outreach Director, personal communication; Masuda & Crabtree, 2010). This street-based culture is highly contested in
Vancouver: on one hand, these public spaces are perceived as being sites for homeless and addicted individuals to “participate in unsightly or unruly behaviours” (Masuda & Crabtree, 2010: 663); on the other hand, these sites are gathering spaces, important in the neighbourhood’s role as a “therapeutic landscape”, or a place that “offers support, solidarity, and acceptance to marginalized people facing environmental injustice in the inner city (Masuda & Crabtree, 2010: 656). Some of the binners that I interviewed noted their awareness of this tension in the uses of public space in the neighbourhood, while also conveying their observations about the spatiality of wealth and inequality in the city by making reference to their choices of working in “richer areas” or with “rich garbage”. Despite the multiple uses of public space in the city, the “right to be” (Mitchell, 2003) in these spaces is largely dictated by the priorities of the more powerful members of society.

“It comes back to the structure of the economy about who’s valued and who isn’t. Ya, so we’re going to listen to the valued voices and ignore the unvalued voices”- even though the unvalued voices are the ones that actually know what the problem is.” (Health activist)

This quotation indicates that the needs of impoverished citizens are made to be invisible in the public sphere due to the prioritization of the voices and needs of wealthier or “valued” citizens over those who are considered to be low-income. This prioritization is represented through the physical exclusion of low-income residents from urban spaces as they are pushed further into the invisibility of the margins and urban shadows of the city. Marquez et al (2011) discuss this spatially-based privileging of the urban sphere by referring to “zones of exclusion”, whereby low-income residents are internally displaced from city spaces that they formerly occupied due to their inability to economically participate in the new gentrifying economy of downtown areas. Within this analysis of neoliberal urbanism and the governance of urban spaces towards privileged uses, zones of exclusion can be understood as a process of both spatial marginalization and inequality. In
this way, as urban revitalization and redevelopment plans encroach on the DTES, low-income residents become increasingly excluded from spaces within their neighbourhood and are eventually displaced by more socially acceptable “legitimate” uses and users of public space. These exclusionary processes are rooted in predominant perceptions of “disorder” and criminality, whereby certain activities (e.g. binning, street vending) undertaken in public spaces by certain groups of residents are criminalized through by-laws (e.g. Project Civil Society, BC Safe Streets Act; bin-locking; fines). These governance mechanisms are enforced through increased policing and ticketing blitzes, where perceptions of disorder then become legally prohibited acts.

The process of sanitizing physical space occurs in Vancouver through the criminalization of “disorderly” activities associated with poverty (binning, street vending) and encouraging urban revitalization and redevelopment with the aim of increasing social mixing. These mechanisms of urban governance can be linked with neoliberal trends and exacerbate processes contributing to socioeconomic inequality in the city. Restrictions that are placed on key sites along binner survival networks (e.g. parks, sidewalks, dumpsters, bins) aim to dilute poverty by dispersing impoverished residents and reducing unsanctioned activities in public spaces through intensified policing (Masuda & Crabtree, 2010). In this way, unequally empowered and subordinated groups experience differential access to publicly, privately, and informally-acquired resources in the urban sphere. These structural differences have material impacts on the health of those who lack physical access to the means necessary to maintain or improve their experience of the social determinants of health.
The governance of public space in the city is likely not intended to cause poor health in low-income residents, but in the absence of meaningful consultation with groups that are perceived to be unsightly or disorderly, my research finds that the (unintended) result of restrictions on public space is the physical exclusion of binners from important sites in their geographies of survival. As Dale & Newman (2009) argue, although the revitalization of the city does provide environmental and economic benefits, it is necessary for city officials and developers to be mindful about “who this development is for, who is poorly served by the current trends, and what the social costs are of displacement of existing residents” (p679). When policymakers prioritize the use of urban spaces towards more “legitimate” or privileged uses and physically exclude and enact surveillance towards others, those who are deemed to use public space in a disruptive or disorderly way must cope or push back by further diversifying their work practices and livelihood strategies (see Section: 3.1.1: Income) or by accessing resources in more precarious and risky ways.

4.3 Social Space

Informal recyclers are one of the most widely excluded and disempowered groups in society because of their low socioeconomic status and their work with solid waste (Gutberlet, 2010). These workers experience social inequalities in the city, are highly stigmatized, and are often associated with the garbage that they work with, and are treated as a nuisance or even as criminals (Nas & Jaffe, 2004; Tremblay, 2007). Smith (2003) emphasizes the importance of policy as both a mediating and exacerbating force in the growing social inequality in the city. The experiences of Vancouver’s informal recyclers indicate that the governance of the city unevenly impacts residents based on their
socioeconomic status. The sanitization of public spaces towards privileged uses of space also act to legitimize certain users of these spaces and enact forces that socially exclude low-income residents from public space. In this way, the institutional framing of poverty (and associated activities like binning) in the city has led to inequalities in Vancouver’s social space, with significant impacts on the way that impoverished residents access resources, encounter threats, and experience health in the city.

The physical restrictions on informal recycling (e.g.- bin locking; solid waste and trespass by-laws) as well as on poverty-related behaviours like public urination (see Section 3.1.3: Housing and homelessness) have significant social implications that affect the way that these workers experience the city. Binners enact their geographies of survival as stigmatized clients to low-barrier services rather than as citizens (Roe, 2009; Isin, 1998; Larner, 2000). Although these prohibited activities and behaviours predominantly result from deficits in the social determinants of health and exposure to health threats that are commonly associated with poverty (e.g.- lacking housing, a secure income, and access to sanitation), the most visible government interventions in the DTES that binners and service providers discussed with me in interviews were program reductions, social service cutbacks, ticketing blitzes, and the push of urban revitalization and redevelopment towards the neighbourhood. These types of social interventions influence the ways that binners experience health, as resources, services, and law enforcement are unequally distributed and targeted towards certain residents and communities rather than others. In this way, societal narratives surrounding “disorder” in city spaces have significant implications on the skewed social experiences (and therefore the well-being) of stigmatized residents as they navigate and cope with increasing restrictions on their geographies of survival.
Ruckert & Labonte (2012) discuss the impacts that neoliberal governance mechanisms and the erosion of the welfare state (represented here as health and social service budget cutbacks and welfare program reductions), have on the health of urban populations. This shift is evident in British Columbia, where the devolution in government provisioning of health and social services can be seen in the 2001 reduction of the number of regional health authorities from 52 to 5, a “cultural shift” towards business management practices in healthcare, and in budget cuts to services and programs (Teghtsoonian, 2009). In the DTES, these trends translated as the rise of contracted community organizations and not-for-profit groups replacing the welfare state model as service providers for the poor. This contracting model has resulted in multiple insecurities for local service providers as they are reliant on short term funding contracts and charitable donations, but are unable to plan or hire for the long-term and must adhere to neoliberal priorities in their attempts to access these funds (Roe, 2009). Masuda & Crabtree (2010) discuss this need for health and food provisioning agencies to adhere to austerity politics and dominant understandings of the impoverished “other” in order to access funding: “DTES residents are often communicated as mere numbers…the quantitative results of these programs are then communicated in public relations, grant applications, and reports so as to bolster efforts to secure additional funding in order to maintain services” (660). In this way, neoliberal ideologies concerning funding and contracted low-barrier services can perpetuate the clientization of stigmatized residents. Several key informants attributed many of the barriers in service provision to restrictive funding measures:

“I feel like agencies are scrambling over funding, like they’re only giving out this much for grants, or this much for this… instead of us fighting over these little crumbs that are only going to last X amount of time, you can hire people, but you don’t know how long you can keep them, its hard to maintain staff in that kind of environment... there’s turn over all the time.”

(Community worker)
“It’s the way that the government funds things today- it’s the way that “we’re not going to do it ourselves, even though we’re best equipped to do it”- there’s no question about it, the city of Vancouver is best equipped to do many things... but they don’t want to have to say to taxpayers, “we’ve hired a person to do this.”...so they contract... they foster this dysfunctional relationship between service providers who know best, but do things on the cheap or expand too quickly too soon and don’t have supervision because it expanded too quickly too soon. It is a perfect example of just, we’ve lost our way and don’t know what the hell we’re doing and nobody came to save us in time.” (Outreach director)

The first quotation indicates that the short-term nature of the current funding model for low-barrier services in the DTES makes it difficult to retain staff and plan for the long-term, while also encouraging inter-organizational competition for funding rather than promoting a cohesiveness among service providers. The second discusses the problematic nature associated with the devolution of public service provision to the contracting model and the lack of overarching regulation associated with these funds and contracts once acquired. The most prominent trend that emerged from the key informant interviews was that the short-term contracting model and cuts to local health-promoting programs (e.g.- The Contact Centre, Saferide), are making the task of supporting the health and well-being of DTES residents increasingly difficult.

In addition to this erosion of the welfare state in favour of contracted funding models, several authors have discussed the relationship between the devolution of public spending on social assistance payments and the impacts that this has on the well-being of low-income urban populations. Tremblay (2007) discusses the detrimental social and economic impacts of social assistance re-regulations and cutbacks on the lives of binners in Vancouver that occurred in the 2000’s. Similarly, Bradley et al (2011) and Stuckler et al (2010) found that decreased public spending on social assistance can be directly correlated with worsening health equity in the city. These types of shifts can be seen in Vancouver,
where restrictions on eligibility and the stagnation or decrease of welfare rates have had very real impacts on the lives of binners in terms of their ability to afford basic resources like housing and food (see Section: 3.1.1: Income). To this extent, the Carnegie Community Action Project released a hotel and housing report that indicates rents in the DTES are rising faster than the rate of inflation and are quickly becoming unaffordable to residents who depend on welfare payments (Sutherland at al, 2014). These increasing housing costs are especially troubling when considering the welfare rates in BC, which indicate stagnation since 1986 for single employable people, and an overall decrease for those receiving disability payments (Tweedle et al, 2013). The City of Vancouver’s tendency towards market-oriented neoliberal policymaking is visible here in its support of the city’s booming real estate market and the push of urban revitalization towards the DTES. In this way, low-income residents experience stagnant or decreasing social assistance payments, increasing housing costs, and reductions to social service program budgets.

The social discrimination and stigma experienced by binners is not only enacted through service reductions and the clientization of vulnerable residents, but can also be seen in the way that restrictive by-laws are enforced through increased policing and ticketing blitzes in the DTES. Between 2008 and 2012, 95% of the city’s street vending tickets were handed out in the neighbourhood. Many of these blitzes occurred in the lead-up to the 2010 Olympic games, but are still an on-going issue in the neighbourhood (Pivot, 2012). A 48-year old male, binning for 15 years discusses one of several unaffordable tickets that he has received in the neighbourhood, this ticket was specifically for vending recovered clothing on Hastings Street:
“I got a ticket for doing it out on Hastings here... $250... we get the most tickets in the DTES, tickets compared to anywhere else, any other neighbourhood... I can’t afford to pay that.”

This quotation was one of many that indicate not only that tickets for informal recycling are handed out fairly regularly, but also that they are unaffordable to informal recyclers. Similar to the male binner above, most of the binners were aware of the injustice and inequality that they experience in terms of this targeted ticketing in the DTES. The spatially targeted criminalization and enforcement of poverty-related coping mechanisms emphasizes the social differences between the residents and behaviours in this neighbourhood as compared to other city dwellers and contributes to exacerbate the social exclusion and stigma that these workers experience on a daily basis (see Section: 3.3.1: Social exclusion).

As necessary services and supports are rolled back and under-funded, vulnerable urban populations must structure their geographies of survival around an increasingly complex and unequal distribution of resources that are socially skewed in favour of middle- and upper-income residents. This uncertainty can be further exacerbated with growing socioeconomic inequality in the city, where those who lack the economic, social, and cultural capital to access services and participate in the governance of society are faced with increasingly limited options in the construction of their livelihoods and survival networks. With this in mind, despite the criminalization of informal recycling and the clientization of impoverished residents in the DTES, these workers have proven to be dynamic and resilient to imposed exclusionary restrictions through the adjustments that they make to their geographies of survival in the city. These networks are continually constructed and
restructured by binners, not only facilitating their survival, but also serving as a form of resistance and contestation to the social inequalities inherent in the urban social space.

4.4 Political Space

As urban political space is increasingly opened towards revitalization and redevelopment agendas, informal recyclers and other low-income residents experience more restrictions in the governance of their access to urban physical and social spaces. The prioritization of the voices of wealthier residents ensures that the inequality, poor health, and poverty experienced by the urban poor will persist as they are pushed to the margins of political space. Growing urban inequalities create tension in the lives of binners as their work and impoverished status are criminalized and their geographies of survival are constrained; however, within the local neoliberal discourse, resistance and contestation to oppressive governing mechanisms are common, and “arguments for the highest and best use are challenged by an alternate ethical discourse of preservation and public investment that has its own legitimacy” (Ley & Dobson, 2008: 2486). An outreach nurse that I interviewed described this tension between the challenges associated with precarious living and working conditions and the subsequent contestation of these challenges through coping and resilience:

“...a lot of those things contribute to your well being, they don’t usually have on their side. So it’s hard to live outside, it’s hard to work as hard as they work, and yet on the other hand, they’re awesomely resilient.”

As indicated by this quotation, Vancouver’s binners cope with and contest the challenges they face in the urban political space by altering their geographies of survival and pushing back from the margins. The predominant framing of poverty in the city as “disorder” is increasingly influenced by neoliberal policymaking, but is also informed by
other urban forces such as legacies of colonialism in the city and the DTES. For example, there is an overrepresentation of Aboriginal people in the DTES population and in the sample of binners accessed for this research (see Section 3.3.3 Ethnicity). This overrepresentation indicates the colonial influences on context of the modern urban sphere. Although neoliberalism is a strong political force in urban governance, it is an incomplete phenomenon where some issues can present a contradiction or crack in the surrounding discourse. Well-intentioned policy initiatives framed in “revitalization” and “greening” rhetoric have attempted to tackle aspects of inequality and health in the city, yet policymaking, service provision, and predominant societal attitudes are understood and approached in such a way that prevent vulnerable populations from participating in these processes. Significant barriers then continue to affect low-income people as they access the services and low-barrier resources that are essential in their geographies of survival.

The following sections discuss several recent governance mechanisms that may inadvertently contribute to the entrenchment of poor health for informal recyclers. However, there are also several examples here of how cracks can form in the governance of neoliberal political space that represent resistance to social norms and facilitate coping and survival behaviours.


The Vancouver Agreement (VA) was a well-intentioned tri-governmental policy approach towards health and disorder in the DTES that aimed to create “safe and sustainable communities where all organizations from informal groups to governments
work effectively to improve the quality of everyone’s life” (City of Vancouver, 2010: 7).

The VA ran from 2000-2010 and identified four areas of implementation in the neighbourhood: economic revitalization, safety and security, housing, and health and quality of life. My key informant interviews reveal that the agreement was effective in introducing harm reduction strategies and increasing women’s services in the DTES; however, many of the neighbourhood’s marginalized residents and precarious workers have remained outside of the realm of health services and improved living conditions.

Overall, my key informants expressed skepticism about the municipality’s touted “success” of the VA. As frontline workers in the neighbourhood, their opinions tended to be in line with Matas’ (2009) Globe and Mail report, that stated that despite the $27.5 million spent on various projects in the neighbourhood, the residents were “hardly better off” in the end. This perspective is consistent with my findings about binner health status in Chapter 3: Results and Discussion: Social determinants of health. The exception that most informants referred to was the opening of Insite, Canada’s first (and only) Safe Injection Site (SIS). Municipal policy documents and the VA highlights report (City of Vancouver, 2010) also uphold Insite as one of the big successes of the VA decade; however, the development of this harm reduction initiative was not so much the progressive policy triumph that it is promoted to be. Instead, the advent of Insite was more so an example of local-level contestation and grassroots pushback against exclusion from the city’s political space.

In April 2003, a group of local activists opened an unsanctioned SIS after years of sustained political inaction on a promise to open a SIS in the DTES and a large-scale police
crackdown on drug users in the neighbourhood. Throughout the operation of this SIS, volunteers attended weekly city council meetings and organized demonstrations to maintain pressure on city council and the Vancouver Police Department to open a legitimate SIS towards harm reduction (Small et al., 2007; UHRI, 2009). Eventually, in September of 2003, Insite was opened but without the passion and push from local residents and activists, this important neighbourhood service (and progressive policymaking success of the VA) might not have existed (Kerr & Wood, 2004). A study by Faford (2012) explains, that “rather than being the translation of scientific evidence to a decision maker leading to a binding decision, Insite is perhaps better understood as…the result of coalition building, the mobilization of public opinion, lobbying, and political and ideational struggle” (912). This observation is supported by recent attempts by the federal Conservatives to close down Insite and the community activism that has been necessary to keep it open.

Several key informants and binners referred in their interviews to the positive impacts that Insite has had on the neighbourhood and for some, on their own lives, by reducing overdose deaths and health complications associated with public injection settings through the harm reduction model. The development of Insite can then represent slight changes in the conceptualization of drug addiction as a health issue (rather than a criminal issue) and supervised injections as being a health service. In this way, the presence of Insite in the DTES is representative of a political re-framing of addiction as a social and health issue, as well as the redistribution of urban resources (e.g. property) towards low-income or drug-addicted city residents (Young, 2011). Insite is an exception to typical neoliberal approaches to governance and the uneven rollout of policymaking in the city. However, as a majority of the key
informants and binners noted, there were far more service reductions and budget cuts in the neighbourhood during recent years than successes like Insite.

A second critique of the conception and rollout of the VA is the mismatch in priorities between local residents and policymakers. A majority of the VA funding (48.7%) was put towards economic revitalization initiatives (see Figure 8) with the goal of “revitalization without displacement” (City of Vancouver, 2010: 12). Despite this, many of the key informants and binners that I spoke to and several academics (Roe, 2009; Linden et al, 2012; Marquez et al, 2011) have argued that the gentrification of the DTES has never been more prevalent and that low-income residents are increasingly being physically and socially excluded from neighbourhood spaces.

Ley & Dobson (2008) outline that the key elements of the VA’s revitalization agenda were intended to encourage social mixing and social upgrading, which as discussed in Section 4.1: Physical space, can lead to increased polarization, inequality, and eventual displacement.
of low-income residents (Walks & Maaranen, 2008). The prioritization of urban revitalization exemplifies a top-down approach to governance, where policymaking favoured elite uses and users of public space and low-income areas are sanitized of “urban disorder”. Figure 8 also indicates that not only did a majority of VA funding go towards revitalization, but that Safety and Security (under which “treatment & harm-reduction” was designated) received the least amount of funding. This prioritization further indicates that the understanding of issues in the DTES was sourced from outsider opinions of local needs. As predicted by Barnes et al. (2011) at the onset of many of these projects, “the city’s credo of promoting revitalization without gentrification in the DTES is no doubt a commendable one, but the former aim may be easier to achieve than the latter” (315).

Despite its intentions to improve the health and living conditions in the DTES, the VA was a project that exemplified neoliberal approaches to governance in the city. Rhetorical approaches that prioritized urban revitalization received a bulk of the funding, and issues that local residents wanted addressed (e.g. harm reduction) received the smallest proportion of project funding. However, despite the unequal distribution of these funds, local actors pushed for the introduction of Insite and harm-reduction initiatives into the neighbourhood, indicating that urban political space responds to local contestation. It is therefore important for these types of “progressive policies” and cracks in the neoliberal model to be incorporated into long-term planning rather than being exceptions in order to work towards a more equitable society and “improve the quality of everyone’s life”.


4.4.2 Greenest City Action Plan (2012-2020):

The City of Vancouver has recently introduced the Greenest City Action Plan (GCAP), a set of ten goals that seek to “green” the city through mechanisms like urban revitalization, increasing green infrastructure and energy, increasing urban green space, creating green employment opportunities, and eliminating waste (City of Vancouver, 2012). This idea of promoting a greener, revitalized city is consistent with Brenner & Theodore’s (2002) description of neoliberal modes of re-representing the city, whereby the need for this type of urban revitalization is often concurrent with a re-association of the working-class city with “urban disorder” and danger (372). As the city promotes the green revitalization of the city, there is little mention of low-income or marginalized groups in the GCAP plans. Even as the number of binners in Vancouver increases, these workers have been largely excluded from participation, even in the plans promoting green jobs and solid waste reduction.

The first goal of the GCAP is the intended development of a green economy, in order to “transform our city and enjoy cleaner air, more green space, healthier people, and create new job opportunities at the same time” (City of Vancouver, 2012, p20). The primary target for this goal is to double the number of “green jobs” throughout the city. The GCAP uses a UNEP (2008) definition of “green jobs”, where these positions “contribute substantially to preserving or restoring environmental quality... reduce energy, materials and water consumption... decarbonize the economy and minimize or altogether avoid generation of all forms of waste and pollution”(cited by: City of Vancouver, 2012, p15). The GCAP fails to fully encompass the UNEP conception of green employment, where
these jobs are not only a notion of a more sustainable society, but are also to be “more equitable and inclusive of all people” (UNEP, 2008, p1). In this way, the green economy should not only consider the production of a greener, more sustainable city, but an equitable one, where green jobs are decent work that promote dignity and health for those who are vulnerable within society.

A majority of the intended green jobs will be in the green building and clean technology sector, with 4% of the overall projected jobs being in waste management and recycling. In order to promote “community economic development”, the GCAP vaguely outlines that 10% of the green jobs created will be designated as low-barrier employment with a majority of these positions falling into the category of waste management and recycling (City of Vancouver, 2012, 13). Because a majority of the intended low-barrier employment has been specified for this small waste management sector, questions should be raised about societal understandings of waste work, health, and poverty. As discussed in Section 3.2.1: Occupational hazards and exposure to solid waste, studies on formal sector solid waste work have linked solid waste work with disproportionate levels of workplace injuries, illnesses, and stigma. The UNEP (2008) uses recycling work as an example of potentially unhealthy and undignified work, stating that “many jobs that are green in principle are not green in practice” (5), due to environmentally inappropriate or unhealthy work practices that can remove decency and dignity from work. Although this work helps to preserve natural resources, it is “often dirty, dangerous and difficult, causing significant damage to the environment and to human health. Employment in this industry tends to be precarious and incomes are low” (5). Although Vancouver’s potential low-barrier green jobs in waste and recycling may offer job security in the formal sector, it is still precarious,
low-paying, high-risk work, which entrenches poor health outcomes and stigmatization for these workers. These jobs may also be inaccessible to a majority of the city’s binners because of the barriers that preclude them from participating in formal sector work to begin with. The specification of waste and recycling work for low-barrier applicants has significant implications about which citizens are able or willing to work with solid waste, and raises questions about the city’s GCAP objective of creating a *greener and healthier city for all* for its low-income residents.

The fifth goal of the City’s GCAP is the Zero Waste by 2020 target. In the original GCAP document, there is no mention of binners in the solid waste reduction plan; however, new city initiatives have made an effort to consider these workers. In 2012, Encorp Pacific partnered with the municipality and designed a garbage bin with binners in mind. The bin is easy to access, with a large door in the middle of the bin that makes it easy to see inside and access bottles (see Figure 9). One hundred new bins have been placed in several major public beaches and parks in the city and were introduced as a socially conscious initiative that works towards the Zero Waste goal with binners (V’Inkin Lee, 2012).

*Figure 9: Unveiling the new "binner friendly" bins* (Maretwired.com, 2013)
The new garbage and recycling bins are a step in the right direction for the municipality in terms of their consideration for binners and an innovative solution to waste management in public spaces. With this in mind, it is important to also understand the small scale at which these bins have been distributed and the minimal impact that they have on binner occupational experiences. As mentioned in Section 3.1.1: Income, only a small portion of my respondents collected recyclables exclusively in public parks, with a more substantial number of people saying that they worked out of dumpsters, used *traplines* or partnerships, and most frequently- combined various binning methods and locations. While the new ReturnIt bins may facilitate binning work in the locations that they have been placed, the scale of the program is limited (to 100 bins in high-traffic public parks- keeping in mind that there are thousands of binners in Vancouver) and there are still significant restrictions on all other aspects of binning in the city as dumpsters are locked at a wide scale and by-laws are still enforced on binning and vending. In this way, the municipality is still controlling and binner livelihoods and uses of public space by designating areas where it is appropriate to bin and locking binners out of areas where they deem it to be inappropriate.

As mechanisms of governance in Vancouver’s political space, the VA (2000-2010) and the GCAP (2012-2020) are well intentioned in their goals to improve physical and social space in the city. However, these plans lack input from the margins of society and therefore promote governance approaches that feature “greening” and “revitalization” rhetoric in the rollout of initiatives in urban physical and social spaces. These governance approaches contextualize low-income uses and users of these spaces as disorderly and dangerous and exacerbate social-spatial polarization and inequality in the city (Brenner &
Theodore, 2002; Berti & Sommers, 2010; Mitchell, 1997). In this way, as urban political space shifts in favour of neoliberal governance mechanisms, low-income residents are increasingly excluded from physical and social spaces in the city as their social needs and physical bodies are pushed further into the margins and excluded from participation or consideration in political discourse. Through this exclusion, the most marginalized and hard-to-reach citizens experience negative effects of policy initiatives (e.g. displacement, criminalization) and encounter continual restrictions in accessing resources and services in their geographies of survival. As this gap between well-intentioned policies and entrenched neoliberal rollout continues to widen, vast spatial, social, and political inequalities will continue to restrict the lives of binners and make their (and service providers’) attempts to meet basic needs increasingly more difficult (See: Section 3.1.4: Access to services).

4.5 Local contestation to top-down governance

As an incomplete and contradictory phenomenon, neoliberal modes of governance respond to contestation and opposition by local actors and organizations. Insite is an example of this push back against neoliberal political approaches, but there are also informal recycling-specific mechanisms of resistance in Vancouver’s governance. Local actors and groups have contested the criminalization of this binning and the restrictions that these precarious workers face in their access to public spaces. On the most basic level, these workers individually oppose discriminatory “sanitization” laws by adapting their geographies of survival to cope with the imposed restrictions on their lives. The DTES-based bottle depot United We Can (UWC) and the Pigeon Park Street Market (PPSM) (see Section 1.0 Informal recycling: Binning in Vancouver) are organizations that both represent
and are comprised of binners and are mechanisms of grassroots governance that bring some of the restrictions that these workers face into the political and public forum.

**United We Can (UWC): Social Enterprise**

UWC is more than a bottle depot. It is an employment hub for DTES residents and an organization that plays a major role in advocating for Vancouver’s informal recyclers and providing a sense of community for these stigmatized workers. In this capacity, UWC is engaged in local politics, playing an important role in supporting and advocating for the binning community (Dale & Newman, 2006; Tremblay, 2007). UWC has received municipal backing, where the city government is often praised for the existence of this progressive social enterprise. UWC received VA funding and support which went towards the development of a new business plan, calls for expansions of services, and a site search for the relocation of the depot (City of Vancouver, 2010); however, the criminalization of binning through by-laws and bin-locking that took place during the same era indicate a contradictory shift in the municipal support of this organization. By implementing and enforcing criminalizing by-laws against binners and locking bins, the municipality is paradoxically affecting the viability of its most socially and environmentally successful and self-sustaining poverty reduction project in the DTES (Dale & Newman, 2009).

**Pigeon Park Street Market: Protest turned mainstay**

The weekly binners’ street market at Hastings Street and Carrall Street is another important local governance mechanism that allows marginalized informal recyclers to have a voice in Vancouver’s political space. Despite the market’s protest roots, the coordinators
now work with the city, holding a temporary permit to the Pigeon Park space on Sundays between 10am-4pm, and gaining access to a small lot on Hastings Street for storage and the potential to run a small market during the week. The municipal support of the PPSM through permits and the use of an urban lot indicate a crack in the typical neoliberal framing of poverty, yet this support is undermined by the municipality’s refusal to fund or provide basic necessities for the market and their new vacant lot (access to sanitation facilities, waste pick-up, electricity, water) where the vendors are attempting to run a more frequent market, rather than illegally selling on the streets and risking police confrontation. In addition, the PPSM and its recyclers experience similar contradictions in governance as UWC, where legal restrictions on the waste stream limit access to materials. Binners therefore have to develop alternative (and sometimes riskier) methods of collecting recyclable items in their geographies of survival.

Several cracks have emerged in the governance of Vancouver via grassroots organizations and local activism that have garnered the municipal support of grassroots poverty-reduction efforts in the DTES. Despite the municipality’s support of UWC and the PPSM, these mechanisms of locally based governance have simultaneously been affected by municipal efforts to legitimize uses and users of city spaces. As exceptions in the neoliberal city, UWC and the PPSM are examples of how grassroots efforts can effectively partner with the municipality in order to maintain the economic benefit of these services on the lives of the urban poor. However, these cracks need to be widened through activism and citizen support in order to support long-term planning and integration of these organizations in the governance of the city. This long-term approach would require an emphasis on binner
consultation and the removal of legal restrictions and stigma that undermine informal recyclers in their daily acquisition of health resources and services.

4.6 Binner recommendations towards improved work conditions

Informal recycler perspectives about necessary changes and interventions in urban political spaces can act as another crack in the governance of the city. Vancouver’s informal recyclers are an important group to be included in governance, as their experiences from the margins of physical, social, and political spaces offer a valuable perspective on urban inequality. When I asked binners and key informants what interventions they thought could improve the health of these workers, the primary response from both groups indicated that changes to societal attitudes should be the biggest priority. An outreach nurse explains below,

“As a society we have to change our attitudes about people, about what our responsibility is for people, how much control people actually have over their circumstances. And then we have to move to make some real, structural changes in the world out there” (Outreach Nurse).

While binning remains a prohibited activity and informal recyclers are associated with disorder in urban physical, social, and political spaces, my interviews revealed that binners perceived that a majority of city residents have also maintained negative attitudes and fear associated with the impoverished “other” (Gordon, 2010). As a highly visible population throughout the city, several binners that I spoke to thought that societal attitudes should be changed by increasing public understandings of the environmental value of this work and the hazards associated with it. UWC’s founder Ken Lyotier expressed a similar opinion in the Vancouver Sun- that he hopes that the new ReturnIt garbage bins “might result in a change in public attitudes” about Vancouver’s binning community (V’Inkin Lee,
2012). By raising awareness of binners and designing bins that facilitate their occupation in high-traffic public areas, the city may be improving public knowledge and acceptance of these informal workers. Many binners suggested that with improved understanding of binning, city residents might then be more inclined to form partnerships with them. As indicated in Section 3.1.1: Income, partnerships were important for positive health outcomes as they can be associated with reductions in stigma, increased access to a secure supply of recyclables, and fewer perceived health threats. These workers also suggested that their work could be healthier if the public made recyclable materials more accessible to them by cleaning the materials, setting them aside from the rest of their garbage, and by removing the locks from privately-owned bins or giving out keys to binners as part of a partnership.

In addition, a number of binners and key informants that I spoke to recommended that services be provided at the UWC depot, or “where the rubber meets the road” (Outreach director) in order to improve health outcomes for these workers. Several binners suggested that a depot would ideally be a space that provides health interventions like provisioning gloves and first aid supplies (bandages, gauze, tensor bandages); access to sanitation (hand washing facilities, bathrooms, showers); drinking water; or having a nurse or first aid attendant present. The availability and appropriateness of these services would provide the immediacy necessary to access this population who are in need of these types of health services due to the hazards associated with their occupation and living conditions. Having these types of facilities available at a bottle depot would eliminate the barrier of having to work and not having time to wait at a doctor (see Section 3.1.4: Access to services), but also gives them the ability to practice general hygiene and avoid infections
through proper wound care (see Section 3.1.3: Housing and homelessness). Although UWC is a place of business, opportunity, and community, the social enterprise model is limited in its ability to consistently provide these recommended facilities due to restrictions on funding and larger mechanisms of governmental support towards poverty. The depot is currently moving to a new location that will include access to a hand washing station and washroom facilities for binners to use. It will therefore be interesting to follow-up on these new facilities in the future to see if health outcomes improve among these workers with the provisioning of basic sanitation services at the depot site. The suggestions made by informal recyclers indicate the importance of improving their experience of the social determinants of health in the city through improved access to the resources they need to survive. These binner observations directly link to their geographies of survival and the necessity for improved access to resources, the alleviation of stigma, and the avoidance of health threats.

4.7 Summary

Informal recycler health and geographies of survival are connected with urban inequality and exacerbated by neoliberal trends in the governance of Vancouver’s physical, social, and political spaces. These trends can be linked to the rolling back of the welfare state, where users and uses of public space are defined as being disorderly or legitimate, the poor are pushed to the margins of society, and rhetorical urban revitalization and “greening” agendas are prioritized over the needs of the poor in policymaking.

Vancouver’s informal recyclers experience inequity in urban spaces due to their association with “disorder” and the waste that they work with. Dominant understandings of waste and poverty are linked with neoliberal ideologies and have contributed to the
criminalization of binning, vending, and other poverty-related acts and behaviours; the stigmatization of the poor; and the clientization of impoverished residents who require low-barrier services in order to support themselves. These restrictions on informal recycler lifestyles and livelihoods affect the way that these workers access resources and avoid health threats through increasingly restricted geographies of survival. In this way, the experiences of the Vancouver’s informal recyclers exemplify the uneven rollout of even well-intentioned governance mechanisms in the city.

Despite the restrictions noted above, neoliberal trends are inherently contradictory and can change based on local contestation and opposition. Geographies of survival are therefore an important mechanism through which informal recyclers can reclaim city spaces, as they resist restrictions and invent coping strategies that aim to maintain their access to necessary resources. In this way, as “new challenges present themselves in the urban landscape, people in need as well as activists and service providers invent new strategies for coping—strategies that sometimes directly confront the relations of power that structure everyday life, and at other times seek only to make life tolerable within them” (Mitchell & Heynen, 2009: 613).

On a larger scale, Insite, United We Can, and the Pigeon Park Street Market are three examples of cracks that exist in the governance of Vancouver, whereby local activism and opposition to the criminalization of disorder have attempted to bring marginalized residents out of the urban shadows and back into physical, social, and political spaces in the urban sphere. With the contradictory nature of urban neoliberalism in mind, these can be
restricted by more dominant framings of poverty and disorder in the city. It is therefore important that civil society and grassroots organizations push for these local governance mechanisms to be framed as requiring long-term planning and support, rather than being exceptions to the rule with insecure, short-term funding contracts and support schemes. With that being said, voices from the margins must be meaningfully included in the prioritization of local issues and the governance of the city in order to change societal attitudes towards informal recyclers and their work with solid waste. By reframing predominant societal constructions of “disorder” and including marginalized residents in the governance of urban spaces, the uneven rollout of policies that restrict informal recycler geographies of survival can be more effectively contested towards urban pathways that promote health and equality for all residents of the city.

Chapter Five: Conclusion

My research provides an analysis of the social determinants of health as perceived and experienced by Vancouver’s informal recyclers as they navigate a changing urban landscape of survival. This work shows that binners are astute observers of the urban sphere and its changes in physical, social, and political spaces. The commentary binners provide regarding their health, work, and living conditions resonate with wider themes in the literature concerning urban inequality and the governance of poverty, disorder, and urban change. Many of the informal recyclers that I spoke to had recommendations on how to improve the work and health conditions for themselves and for others. These perspectives
reflect the need for improved access to resources that influence the social determinants of health and structural changes in societal understandings of poverty and disorder.

The following chapter will begin with an outline of the key findings of my work. I will then establish links between the individual-level social determinants of health and the governance realm analysis. I will conclude by making suggestions for future research related to this topic.

5.0 Key findings

The findings of this research indicate that Vancouver’s informal recyclers tend to experience poor or worsening health due to several factors related to their work, socioeconomic status, marginal living conditions, and mental health. A key finding reveals that binners’ personal understandings of health are based on functionality such that mobility, ability to work, and access to resources are fundamental to well-being according to participants. The binners that I interviewed indicated that they experience specific health threats associated with their work, including contact with solid waste and hazards in the garbage, musculoskeletal and ergonomic injuries, stigma associated with waste and ‘dirtiness’, and territorialism and violence. This occupation was also found to act as a barrier for some in accessing resources and services, but it was more common that structural or external factors prevented access to these necessities.

The importance of partnerships on binner health emerged as a key finding of this research. Partnerships between binners and residents or businesses have important
implications on the health outcomes of these workers. Those who had established these relationships and felt “known” in their work area tended to feel less stigma and encounter fewer physical hazards associated with their work. These workers tended to see informal recycling as being an opportunity to access a respectable income independent from social supports or criminal activities. This income was seen as helping them to access health resources and avoid health threats in a dignified and independent way, which is important to the mental health of these typically marginalized workers. For those with established *traplines* and partnerships with the public, “by emphasizing their contact with ‘suppliers’…recyclers create a routine of connection with non-homeless people on the basis of mutual respect and reciprocity” (Gowan, 2009: 235). This mutual respect between informal recyclers and the general public, while experienced by only a few of my participants, was a highly important facet of this work for those who had *traplines*, partnerships, and were “known” in their work areas. These binning methods and relationships contributed to improved health outcomes experienced by this group of workers.

This research found that the quality of one’s housing situation was often the strongest indicator of health status identified by this group of participants. Housing was frequently associated with sanitation and hygiene, mental health status, and safety. Relatedly, the lack of low-barrier sanitation facilities was one of the most significant health gaps that emerged from this study. Biners and health service workers identified poor access to sanitation and hygiene as one of the main reasons for poor health outcomes, as many recyclers said that they used alleyways to clean cuts and take care of bodily functions.
This research finds that stigmatization and social exclusion are significant health issues that affect Vancouver’s binning population. Stigma was associated with feeling disrespected or judged based on their “dirtiness” and association with waste, their DTES address, or addictions and affect the way that these workers access (or avoid) health services, and resources like food and shelter. For a majority of my participants, stigma and disrespect from the public, while unpleasant, it is something that they have come to expect.

5.1 Emergent themes: social determinants of health and urban governance

The geographies of survival framework is essential in this thesis because it connects binner understandings of health (functionality, mobility, and access to resources) with geographical phenomena surrounding the governance of urban spaces. A key emergent theme in my work reveals the way in which urban forces such as urban neoliberalism (but also factors like Canada’s welfare state and colonialism) lead to health inequalities by promoting individualism in healthcare and identifying appropriate users and uses of public space based on societal ideas of “public disorder”. The responsibilization of health care has a significant impact on low-income residents like binners because they are likely to lack the familial networks and economic capital that are essential when seeking privatized mental health or addictions services. Additionally, the spatial restrictions that are placed on the waste stream in combination with the increased surveillance of the DTES, result in health inequalities by increasing the levels of stigma and social exclusion that binners experience. As a mediating factor, social exclusion affects the way that informal recyclers access other determinants of health (e.g. housing, food, services), sometimes leading to or exacerbating
addictions that also threaten health and impact the way that individuals access health resources.

The governance of the city as influenced by societal understandings of disorder and the right to be in the city ensconces the poor health status experienced by the city’s informal recyclers as they attempt to access resources where they can and avoid health threats in the context of increasingly restricted geographies of survival. The restrictions on these urban survival networks create tensions in the lives of binners. They are increasingly unable to generate an income without breaking the law and cope by accessing resources in more precarious or risky ways, often putting them at risk for poorer health outcomes.

A key emergent theme in the exploration of the social determinants of health and in the analysis of the governance realm is stigma and societal attitudes. Stigma (identified as social exclusion, disrespect, etc.) was a prevalent physical and mental health issue that my participants and health service workers revealed in the interviews. Stigma affects access to services, mental health, addictions, and access to resources with a great bearing on self-worth for the urban poor. My analysis of Vancouver’s governance context reveals that a majority of my participants thought that their work would be better if 1) societal attitudes towards binners would change and 2) bins were kept open. Stigma is associated with even formal sector solid waste work. However, informal recycling or “scavenging” is prohibited in the city, so binners tend to be disrespected or disregarded because of their work with waste, the illegality associated with their work, and their marginal socioeconomic status.
With the above findings in mind, a final emergent theme from this research is the resilience of binners and the DTES community. From the collective perspective, local recycler organizations like United We Can (UWC) and the Pigeon Park Street Market (PPSM) act as self-governance mechanisms for binners by advocating for their own rights and socioeconomic well-being in urban public spaces. These organizations and individual residents therefore contest the restrictions on binner livelihoods and the experience of poor living conditions in the DTES and have started to influence the way that governance strategies rollout in the urban sphere.

5.2 Future research on informal recycling in Vancouver

As marginalized precarious workers, Vancouver’s informal recyclers experience reduced access to the urban physical, social, and political spaces that comprise their geographies of survival in the city. This restricted access to space has implications on other marginalized populations and precarious workers in the inner city, and their experience of the social determinants of health. Based on my findings, I recommend that future research be undertaken on the following issues and topics:

- Vancouver’s immigrant informal recycling population has been overlooked in academic and policy research. My limited interaction with this population suggests that they work differently from other recyclers, have different health and social concerns, and their experiences of the urban change may be distinct from others. For these reasons, I recommend more in-depth investigations of the experiences of this group of workers.
• Dignified access to an adequate quality and quantity of food was an important health determinant identified by binners in this research. Despite this importance, my findings indicate that a majority of these workers are food-insecure and tend to access food from dumpsters and charitable line-ups. I therefore recommend that a more in-depth investigation of food acquisition be undertaken among informal recyclers and other marginalized DTES residents.

• Addiction and mental illness have material impacts on the way that individuals access services and resources. Many of my participants indicated that they were or are currently addicted, that they suffered from mental illness, and/or experienced stress, anxiety, depression, or had other mental health needs. Further research should therefore investigate the ways that addiction and mental illness act to enable and restrict various urban pathways towards health resources and services.

• The Pigeon Park Street Market (PPSM) is a fairly new organization and little is known (apart from estimates by its project coordinators) about the extent of its reach in the community, neighbourhood perceptions and conflict with local businesses, and the economics of the market for individual vendors and for the market as a whole. For these reasons, I recommend further research on the PPSM to investigate these factors and to measure the impact that the market has both on the community and on the individual vendors. Such a study could additionally aid this organization in
solidifying its credibility to municipal policymakers with concrete numbers about its economic benefits to the DTES community.

• Tremblay’s (2007) analysis of United We Can’s social enterprise model provided valuable insight into the benefits that this organization (started and maintained by binners) has on Vancouver’s binning community. The depot is currently moving to a new location in an industrial area of town in order to expand their services and provide washrooms and hand-washing stations. A follow-up study to the Tremblay investigation could indicate if the new UWC location is still accessible to binners and if the washrooms and hand-washing stations are improving health outcomes for these workers.

• Vancouver’s informal recyclers make a significant contribution to waste diversion rates in the city. In the context of the city’s Greenest City Action Plan and its “Zero Waste” initiative, an assessment of the economic and waste reducing contributions that binners make to the city may be useful in providing the municipality with data on the contributions of recyclers to waste management and poverty reduction in the city.

• My research focused specifically on the socioeconomic determinants of health for Vancouver’s informal recyclers. Future research could expand this study and investigate other physical and/or environmental aspects of health for this group of workers.
Bibliography


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of Health: Canadian Perspectives, 267-280. Toronto: Canadian Scholars Press Inc.


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Appendix A: Key informant informed consent form:

CONSENT TO PARTICIPATE IN RESEARCH

"Witnessing urban change and uneven development from the streets: Insights from informal waste recyclers in Vancouver, BC"

You are asked to participate in a research study conducted by Josie Wittner (MA candidate) and Dr. Kate Parizeau, from the Geography Department at the University of Guelph.

If you have any questions or concerns about the research, please feel free to contact Josie Wittner at (647) 746-8685 (cell), or jwittner@uoguelph.ca or Kate Parizeau at (519)731-5851 (cell), (519)824-4120 ext. 52174 (office), or kate.parizeau@uoguelph.ca.

PURPOSE OF THE STUDY
The purpose of this study is to understand how health, well-being, and urban change are experienced by people who work on the city streets of Vancouver on a daily basis.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:

You will be asked to participate in an individual interview that will take about one hour. The interview will be recorded, and I will share with you the transcripts from these recordings within the next 6 months, and before I release any of the information from our meeting to the public. I will keep the encrypted audio files in a password protected computer in a locked office in perpetuity. You can choose to refuse to answer any questions at any time during the interview or focus groups. I will prepare a website with the main findings of this research next year, and will send you this website information via e-mail once it is set up.

POTENTIAL RISKS AND DISCOMFORTS
You will not be asked to divulge sensitive material in this interview, but will be asked to share information about the day-to-day work of your organization and its operations and experiences in this neighbourhood. However, there is a potential for such information to be political in nature, and the publication of these political opinions and perspectives may cause conflict or discord with other local organizations or with funding agencies. You can choose not to answer any questions that you believe invite risk, and can also choose to keep your name and your organization's name confidential in order to avoid such risks.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
The information collected in this study may enable you to better address the impacts of urban change on marginalized community members in urban Vancouver. There are no other projected benefits to this study.

PAYMENT FOR PARTICIPATION
You will not be paid for your participation in this study.
CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

Your name will not be released in association with this interview, and your organization name can also be kept confidential, if you wish. Interview tapes will be stored in a password protected computer in a locked office or room. I will share the transcripts of our interviews with you within the next 6 months so you can check that the record of our conversation is accurate, and so you can add to and clarify any information that you shared in our original interview.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don’t want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I have read the information provided for the study “Witnessing urban change and uneven development from the streets: Insights from informal waste recyclers in Vancouver, BC” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

______________________________
Name of Participant (please print)

______________________________
Signature of Participant

______________________________
Date

______________________________
SIGNATURE OF WITNESS

______________________________
Name of Witness (please print)

______________________________
Signature of Witness

______________________________
Date
Appendix B: Informal recycler informed consent form:

UNIVERSITY OF GUELPH

COLLEGE OF SOCIAL AND APPLIED HUMAN SCIENCES
Department of Geography

CONSENT TO PARTICIPATE IN RESEARCH

“Witnessing urban change and uneven development from the streets: Insights from informal waste recyclers in Vancouver, BC”

You are asked to participate in a research study conducted by Josie Wittmer (MA Candidate) and Dr. Kate Parizeau, from the Geography Department at the University of Guelph.

If you have any questions or concerns about the research, please feel free to contact Josie Wittmer at (647)746-8685 (cell), or jwittmer@uoguelph.ca, or Kate Parizeau at (519)731-5851 (cell), (519)824-4120 ext. 52174 (office), or kate.parizeau@uoguelph.ca.

PURPOSE OF THE STUDY
The purpose of this study is to understand how health, well-being, and urban change are experienced by people who work on the city streets of Vancouver on a daily basis.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:

You will be asked to participate in an individual interview that will take about 25 minutes. The interviews will be recorded, and I will keep these audio files in a password protected computer in a locked office in perpetuity. You can choose to refuse to answer any questions at any time during the questionnaire. I will prepare a website with the main findings of this research next year, and will give this website information to United We Can; your personal details will not be shared with this community partner.

POTENTIAL RISKS AND DISCOMFORTS
There are minor risks of losing your privacy around your work and your experiences of the city during the interview.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
You may benefit from changes to the way that local organizations and the City government deal with urban change, if the findings from this study are incorporated into their work. Your comments may also help United We Can to better tailor their services to informal recyclers’ needs. There are no other projected benefits to this study.
PAYMENT FOR PARTICIPATION

You will be paid $5 for 25 minutes of your time for participating in this project. You will be informed in advance how much payment you will receive for each task. You will still be paid for the time that you have already contributed if you decide to withdraw from the study at any point.

CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

All interview tapes will be stored separately from your name, initials, or contact information, and I will remove all personal details from your interviews and photos before sharing them with anyone outside of this study. Interview tapes will be stored in an encrypted format on a password protected computer in a locked office or room; hard copies of photos will be stored in a locked filing cabinet in a locked office.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don’t want to answer and still remain in the study. It may be difficult to fully remove all traces of your participation from focus group proceedings, but your individual comments from any such meetings will not be quoted if you choose to withdraw from the study. The investigator may withdraw you from this research if circumstances arise that warrant doing so.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
Telephone: (519) 824-4120, ext. 56606
University of Guelph
E-mail: sauld@uoguelph.ca
437 University Centre
Guelph, ON N1G 2W1
Fax: (519) 821-5236
### Appendix C: Key informant interview questions:

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Position? Number of years in health services in DTES?</td>
</tr>
<tr>
<td>2. What is it like to work at/as a ____________ in the DTES?</td>
</tr>
<tr>
<td>3. What is your understanding/interpretation of the social determinants of health in the DTES? Anything particularly relevant that stands out?</td>
</tr>
<tr>
<td>4. Do you perceive that binners have particular health needs?</td>
</tr>
<tr>
<td>a. In your opinion, are binner health needs being adequately met through current availability of services?</td>
</tr>
<tr>
<td>b. What interventions would improve the health of binners?</td>
</tr>
<tr>
<td>5. Are there any other groups of people in the DTES who have particular health needs?</td>
</tr>
<tr>
<td>6. In your opinion, what are the barriers that prevent binners and other low-income residents from seeking health care? At this facility?</td>
</tr>
<tr>
<td>7. What needs to change in Vancouver/the DTES in order to work towards open access to health care?</td>
</tr>
<tr>
<td>8. In your opinion, what are the necessary characteristics of a ‘perfect’ health system in this neighbourhood?</td>
</tr>
<tr>
<td>9. The Vancouver Agreement (2000-2010) was “triggered by an acute health crisis” in the DTES. Do you think that the VA was successful in its goal of working towards a healthy and safe community in the DTES?</td>
</tr>
<tr>
<td>a. Any notable changes (improvements or detriments) to health care and access to services that you noticed during this time? During your total time working in the neighbourhood?</td>
</tr>
<tr>
<td>10. What role do you think government policy should play in creating change in the DTES in terms of health and well-being?</td>
</tr>
<tr>
<td>11. What actors should be involved in the creation of an open and accepting health services realm in the DTES?</td>
</tr>
<tr>
<td>12. In your opinion, is there a role for healthcare providers/workers in political advocacy or activism for healthcare and social issues in the DTES?</td>
</tr>
</tbody>
</table>
# Appendix D: Informal recycler interview questions:

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your age?</td>
</tr>
<tr>
<td>How long have you been binning?</td>
</tr>
<tr>
<td>How many days per week are you binning? How many hours/day?</td>
</tr>
<tr>
<td>What are your earnings on an average day?</td>
</tr>
<tr>
<td>Do you have other sources of income? (other jobs, government support)</td>
</tr>
<tr>
<td>Are your earnings from binning meeting your basic needs?</td>
</tr>
<tr>
<td>What area(s) of the city do you work in? (How do you travel between these areas and the depot?)</td>
</tr>
<tr>
<td>What kind of hazardous items have you found in the garbage? How often do you find hazardous items?</td>
</tr>
<tr>
<td>What kind of things do you collect? (cans/bottles? Other? Metal?)</td>
</tr>
<tr>
<td>What do you use to collect materials in? (shopping cart, bags...)</td>
</tr>
<tr>
<td>What time of day do you usually work? (morning, afternoon, evening, overnight)</td>
</tr>
<tr>
<td>Where are you living? (own, renting, SRO, shelter, street)</td>
</tr>
<tr>
<td>What is it like living (where you live)?</td>
</tr>
<tr>
<td>Do you think your living situation affects your health? Why/why not?</td>
</tr>
<tr>
<td>Where do you store your cart/recovered materials when you're at home? (etc)</td>
</tr>
<tr>
<td>How frequently do you eat while you are working?</td>
</tr>
<tr>
<td>Where do you get your food?</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Are you able to access drinking water while you are working?</td>
</tr>
<tr>
<td>What is your opinion on the location and availability of public bathrooms in the city? <em>(do you think there are enough? Are they clean? Etc.)</em></td>
</tr>
<tr>
<td>How would you describe your health? <em>(Better/Same/Worse than before starting binning?)</em></td>
</tr>
<tr>
<td>Do you think that binning affects the health of other binners you know/have seen? How?</td>
</tr>
<tr>
<td>What would you say are the most common injuries/illnesses experienced by binners?</td>
</tr>
<tr>
<td>Do you think that these health problems can be prevented?</td>
</tr>
<tr>
<td>Do you use protective equipment while binning? <em>(gloves, boots..)</em> Why/why not?</td>
</tr>
<tr>
<td>Do you see other binners using protective equipment?</td>
</tr>
<tr>
<td>Have you used any health/medical services in the last year? <em>(what kind of services? when/how often?)</em></td>
</tr>
<tr>
<td>What was it like at the facility <em>(clinic, hospital, etc)</em>?</td>
</tr>
<tr>
<td>How do you feel you were treated by the medical staff?</td>
</tr>
<tr>
<td>Would you return to those facilities? <em>(why/why not?)</em></td>
</tr>
<tr>
<td>What kind of health services do you think that binners use most frequently? <em>(Are these services easy/hard to access?)</em></td>
</tr>
<tr>
<td>How can healthcare be made easier to access for binners?</td>
</tr>
<tr>
<td>What does ‘being healthy’ mean to you?</td>
</tr>
<tr>
<td>Do you think that binning is good for the environment? <em>(&quot;Green Job&quot;?)</em></td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Do you think that other people see binning as an environmental service?</td>
</tr>
<tr>
<td>What can be done to improve the working conditions for binners?</td>
</tr>
<tr>
<td><strong>Suggestions for best way to communicate findings?</strong></td>
</tr>
</tbody>
</table>