DWELLING SATISFACTION OF DISABLED HOUSEHOLDS IN ONTARIO

EVALUATING THE DWELLING SATISFACTION OF
HOUSEHOLDS WITH DISABLED MEMBERS IN ONTARIO,
CANADA

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LAY ABSTRACT

For disabled households in Ontario, the most common method of making their home more accessible is through the installation of a dwelling adaptation. Measuring the positive impacts these adaptations have on dwelling satisfaction is important for informing federal and provincial housing and disability policy.

Using the 2018 Canadian Housing Survey dataset collected by Statistics Canada, various dwelling satisfaction measures of Ontario households were compared based on whether they needed an adaptation and whether they had one. This was done using descriptive statistics and logistic regression. Households that had the adaptations they needed were found to have comparable satisfaction rates to non-disabled households, but they were much more likely to be living in Core Housing Need. Households without the necessary adaptations were much more dissatisfied with their housing, felt unsafe in their home, and were more likely to be led by women and/or a younger adult compared to adapted households.

ABSTRACT

Housing stock remains overwhelmingly inaccessible to disabled people in Ontario. The primary method by which accessibility in the home is improved is through the installation of dwelling adaptations, which modify the layout or structure of parts of the home. Measuring the impact these adaptations have on various measures of a household's dwelling satisfaction will help inform disability and housing legislation, two policy arenas that have seen renewed interest by both provincial and federal governments in recent years after decades of cutbacks to social supports for disabled people.

Using the 2018 Canadian Housing Survey dataset collected by Statistics Canada, Ontario households were split up into three groups; households that need no adaptations, households that need and have adaptations, and households that need but do not have adaptations. Demographic profiles of each group were built and compared. Various measures of dwelling satisfaction were also compared. This was done using descriptive statistics, t-tests, and logistic regression. All households that require a dwelling adaptation had much higher rates of Core Housing Need, rent subsidy, and lived in non-market rental housing compared to non-disabled households. Only half of households requiring adaptations had them. Households that had the adaptations they required had statistically comparable rates of dwelling satisfaction measures to non-disabled households. Households without the adaptations they required were more likely to be women-led, more likely to be led by a young adult, and were more likely to feel unsafe in their home. Adaptations were found to significantly alleviate dissatisfaction with the condition, safety, and accessibility of the home, but adapted households remain in more precarious and substandard housing compared to non-disabled households.

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ABBREVIATION	DEFINITION
ACA	Accessible Canada Act
AODA	Accessibility for Ontarians with Disabilities Act
CHN	Core Housing Need
CHS	Canadian Housing Survey
CMHC	Canadian Mortgage and Housing Corporation
CRA	Canada Revenue Agency
CSD	Canadian Survey on Disability
LTH	Lifetime Homes
NHS	National Housing Strategy
ODSP	Ontario Disability Support Program
OHRC	Ontario Human Rights Commission
RDC	Research Data Centre
RRSP	Registered Retirement Savings Plan
UD	Universal Design

Chapter 1 – Introduction

1.1 CONTEXT AND RESEARCH RATIONALE

Much of the current disability legislation in Canada is a recent phenomenon, even more so than the civil rights gains made in the 1960s and 1970s, with disabled people only achieving full enfranchisement in Canada in 1992 (Prince, 2011). As a consequence, disability remains a marginal policy issue in Canada, despite disabled people making up 22 percent of the population aged 15 and over (Morris, Fawcett, Brisebois & Hughes, 2018), 44 percent of whom live in its most populous province, Ontario (Razi, 2019). Existing research demonstrates that, as a group, disabled people confront significant cultural, material, and political disadvantages, positioning them as what Prince (2011) terms "absent citizens."

At the same time enfranchisement was being realized, the neoliberal turn of the 1990s was in full swing, retrenching much of the social policies that disabled people disproportionately depended upon. Nowhere else was this retrenchment felt more harshly than the social housing sector – its gutting by both federal and provincial governments was one of the most brutal of any Western nation, ending all subsidies for new development and placing the cost burden of social housing onto municipalities (Suttor, 2014). In response, co-operatives and non-profits have risen to prominence to fill the gaps left behind, creating a decentralized patchwork of housing supports that lead to unequal accessibility standards and outcomes (Leviten-Reid, Matthew, & Mowbray, 2019; Suttor, 2016). Outside this meagre patchwork of social supports, housing remains both physically

and financially inaccessible to disabled people in Canada (Gibson, Secker, Rolfe, Wagner, Parke, & Mistry, 2012; Smirl, 2019).

Disabled people in Canada constitute a diverse population, encompassing a wide range of housing experiences and needs. The current remedies that exist for inaccessible housing stock are provided on an individual, as-needed basis, coming most commonly in the form of physical modifications, or adaptations, to the home. These adaptations include things like widening doorways, installing ramps and handrails, adjusting the heights of counters and cupboards, and many others. Government grants for these adaptations can be applied for, though most people pay out-of-pocket for them (Giesbrecht, Smith, Mortenson, & Miller, 2017). These adaptations, when done correctly, can have a significant and positive impact on disabled peoples' lives (Ewart & Harty, 2015). Very recent legislative developments seek to provide Canadians with more already-accessible housing, such as the Canadian National Housing Strategy's target to make 20% of all housing stock accessible (Government of Canada, n.d.), but the dominant avenue through which people in Ontario receive accessible housing is through the adaptation of existing housing stock.

Therefore, it is useful to look at adaptations as a general measure of accessibility in households with a disabled member. While qualitative research has been done to capture the experiences of disabled people and housing adaptations, disability and housing in Canada have historically been studied as separate topics (Canadian Mortgage and Housing Corporation & Novac, 2002; McCormick, Schwartz, & Passerini, 2019), and large-scale quantitative analyses of housing adaptations in Canada have not been done.

1.2 RESEARCH QUESTIONS & OBJECTIVES

The Canadian Housing Survey, one of Statistics Canada's many household surveys, provides a unique opportunity to fill the existing research gap. Through the use of descriptive statistics and logistic regression, the following research questions will be addressed:

1. How many households in Ontario need a disability-related dwelling adaptation? How many people in Ontario *have* them?

2. Does the tenure status (i.e., renter vs homeowner) and type of housing (i.e., private vs social) impact your ability to get an adaptation?

3. What impact do demographic factors, such as age, gender, income, and race have on dwelling adaptation outcomes?

4. How does the presence of a dwelling adaptation in a household with a disabled member impact their satisfaction with their dwelling, and their neighbourhood?

5. What are the dimensions of their (dis)satisfaction with their dwelling? Is it affordable? Is it in good condition? Is it accessible?

6. Does the presence or absence of an adaptation influence the perception of safety and security within a dwelling?

Consolidating the answers to each of these questions into a single research project allows for an exploration of the exact role that adaptations play in households with disabled members. What do adaptations do for them? Do they achieve what they are meant to do, which is to make the home accessible? Do they alleviate the marginalizing impacts of the inaccessibility of current hosing stock? Are they a viable solution to this inaccessibility?

While positioning housing adaptations as a central focus of analysis, this research takes a critical approach to their existence – housing accessibility being couched in terms of individual modification accepts the normative view that housing is for the able-bodied and must be adapted away from that norm in order to "be for" disabled people. With an aging population and the chronic effects of the recent COVID-19 pandemic still yet to be fully realized, disabled people are a growing minority in Canada. Measuring the effectiveness of the current federal and provincial responses to disability as a marginalizing force in Canadian life is important, and will inform future legislative and legal responses to come.

1.3 STRUCTURE OF THIS THESIS

This thesis is broken up into five chapters. Following this introductory chapter, Chapter 2 will provide a review of the disability and housing literature. It will introduce and then justify the theoretical model of disability used in this research, that being the social model. It will then lay out the exact scope and nature of the challenges disabled people face with housing in Canada. Finally, the current state of disability and housing policy will be discussed in order to understand how these policies shape the problem this research is attempting to address.

Chapter 3 will provide an overview of the research methodology, the dataset being used, the limitations of the analysis, and outline what survey variables will be included. Chapter 4 states the result of the statistical analysis, and finally, Chapter 5 discusses the broader implications of these results and the academic and policy significance of this research,

concluding with what future research can be done and what questions are still left to

address.

Chapter 2 - Literature Review

2.1 INTRODUCTION

It is difficult to apply a consistent definition of disability in the Canadian context. The very recent federal Accessible Canada Act defines disability as "any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person's full and equal participation in society" (Canada Minister of Justice, 2019). This act, however, is only applicable to federally regulated sectors, and what constitutes "a disabled person" varies provincially (McColl, Jaiswal, Jones, Roberts, & Murphy, 2017). The most common and enduring definition is the conventional, bio-medical definition given by the United Nations and historically recognized by the federal Canadian government—which is that of a person who has a mental, physical, or otherwise health-related condition that prevents them from fully participating in society (Prince, 2011; Giesbrecht et al, 2017). This research will recognize this definition and accept it as a political reality in Canada— not as an endorsement, but rather because it has been the dominant framework through which disability is often discussed in Canada, notwithstanding regional variations (Jongbloed, 2003; McColl et al, 2017).

This research will, however, approach the topic of disability and frame the shortcomings of various policies and political realities via the social model of disability. This epistemological framework posits that disability is the product of an inaccessible society rather than an innate individual condition of the human body (Prince, 2011). The social

model takes a structural approach to disability, which is useful when examining the ways in which the housing sector and disability policy reinforce one another to produce and reproduce a disabling environment for those who interact with them. Policy and legislation have inherent ideological assumptions built into them that they seek to reproduce (Jongbloed, 2003), and for decades, the dominant ideological assumption in the disability policy arena has been that disabled people are biologically inadequate and fail to contribute productively in society, usually understood as a lack of participation in the labour force (Jongbloed, 2003; Prince, 2011; Smith-Carrier, Kerr, Wang, Tam, & Ming Kwok, 2017). There has been much scholarship criticizing this bio-essentialist framework, which this research will draw upon when reviewing the literature and history of disability policy in Canada.

Of particular interest to this research is the intersection of disability and housing. Housing is a sphere of life that poses unique challenges to disabled people, in large part due to existing housing stock being overwhelmingly inaccessible (Hemingway, 2011; Gibson, Secker, Rolfe, Wagner, Parke, & Mistry, 2012; Mackie, 2012). Focusing on the intersection of disability and housing highlights how destructive the neoliberal turn was for disabled people in the middle of the 1990s; decades of neoliberal rollbacks and devolution of social housing programs and subsidies (Suttor, 2016)—a sector where disabled people are over-represented (Razi, 2019)—has left the current housing stock insufficient, unaffordable, and inaccessible, and these realities are felt even more harshly for people with disabilities. Coupled with an aging population, disabled people will become an expanding subset of Canadian citizens (Hemingway, 2011; Giesbrecht et al,

2017; Razi, 2019), a reality that policy has failed to adequately respond to (Jongbloed, 2003; Razi, 2019).

While this chapter examines Canadian disability and housing policy, Ontario will be the primary unit of analysis. (For a breakdown of disability legislative history in Canada by province, see McColl et al, 2017.) Literature will also be drawn from comparable Western nations, such as the United States, United Kingdom, and Australia, as well as other provinces in Canada. Suttor positions Canadian social policy broadly as having "small differences that matter" (2016, p. 7) with its peer nations. For example, our housing and disability policy reflect the more collectivist history of Canada as a counter-revolutionary colony that is ideologically closer to that of Western Europe than the United States (Jongbloed, 2003). This means that our welfare programs were more consistently universal, such as the institution of universal social healthcare and the Canadian Pension Plan in the 1950s-60s (both of which greatly benefited our disabled population), and the subsequent retrenchment of those programs was slower to manifest than it did in the United States (Jongbloed, 2003; Suttor, 2016). At the same time, it is appropriate and necessary to use research conducted in the United States, United Kingdom, and Australia, as the realities of people with disabilities in those nations are largely reflective of our own. Canada's federalism also means that each province and territory has its own unique disability and housing policy histories that cannot be generalized at the federal level, but comparisons between them are still valuable. Additionally, there has been a general historic disconnect between the academic fields of housing and disability (McCormick,

Schwartz, & Passerini, 2019), something this paper hopes to address by making connections wherever and whenever possible.

To begin, the social model of disability will be discussed in greater detail in order to establish a conceptual framework through which policy and scholarship will be interpreted. Then, an overview of the disabled population in Canada will give a general profile of disabled Canadians, as well as an overview of the housing landscape for disabled people in Canada. The various constraints disabled people face within the housing sector will be outlined. Then, a review the respective policy histories of disability and housing at both the federal and provincial level will be given, ending with a reiteration of general policy recommendations from various academic and non-profit papers on the subject.

2.2 THE SOCIAL MODEL OF DISABILITY

Disability has historically been defined in ways that marginalize those who fall under its banner. In Canada, disability was originally conceived as a law-and-order problem, identifying disabled people as a group who threatened public safety and were treated as an inherently criminal population (Jongbloed, 2003). Even as Canada moved towards less retributive—though still problematic—definitions of disability, such as individual biological deficits that are deserving of pity and charity, or as a group of people who cannot participate in the labour market (ibid.), the rights and humanity of disabled people as a group were not a consideration, either ideologically or on a policy level.

This research will use the social model of disability as its central analytical framework, which is a direct response to and criticism of these other definitions (Oliver, 1990; Shakespeare, 2006). This model of disability has been present in disability activism and scholarship for decades, and argues that disability is not an individual, medical, and ontological element of certain human beings, but rather that disability is socially produced through institutional discrimination, the exclusionary architecture of the built environment, and prevailing social attitudes about disability. The social model centres the social, material, and historical forces that shape popular perceptions of disability, leveraging this perspective as an alternative to the long-prevailing societal attitudes that disability is marginal, aberrant, bio-medical, dangerous, and other. It also emphasizes how these forces influence and shape people's lives, often in ways that are beyond their control and depend on far more than individual ability. Jongbloed (2003) argues that policy programs presuppose an ideological framework, and therefore policies that focus on individual "fixes" to disability do not accommodate for the reality that disabled people face systemic barriers that require structural, not individual, solutions (solutions which will be explored later in this research). For example, using the social model as a framework, the housing needs of disabled people are not considered exceptions to "normal" housing stock that require individual adaptation; the housing stock itself is insufficient in serving a diverse public and must undergo mass alteration to address this. Policy prescriptions that flow from this may include scrapping the distinction between "accessible" and "general" housing, and mandating standards like universal design (the exact contours of which will be discussed later in this chapter) as a requirement for

housing developers and landlords. In the context of the UK, Hemingway (2011) points out that the "general" housing stock is only truly accessible to 18% of the population (Chapter 2, p. 2). Though this is not a Canadian example, we can see how popular assumptions about what is considered "normal" housing, or housing intended for the general public, caters to dominant ideas about who the "average person" is, and how this becomes reproduced in the physical environment and social policy.

The social model is also not without limitations. Mackie (2012) gives a brief overview of these criticisms, chief among them being that the social model ignores individual agency, positioning disabled people as helpless victims of broad institutional forces who have no control over their own lives. Social constructionist models have arisen in response to this criticism, acknowledging the relationship between individual agency and structure, although these models, too, have faced various criticisms (ibid.).

The purpose and scope of this research does not involve determining which of the many models of disability is "best", if such a thing is even possible to determine. Bearing in mind the limitations of the social model, I still maintain its usefulness for two reasons: one, this research is concerned primarily with how the existing housing stock in Ontario, and provincial housing policy, both affect the satisfaction and accessibility outcomes of households with a disabled member, so a structural approach is appropriate; and two, Statistics Canada household survey data is used as the basis of analysis, meaning that individual, qualitative experiences of housing have not been captured as they may otherwise be in one-on-one interviews or focus group discussions. For the purposes of this research, the author remains agnostic on the impact of individual choice and agency

vis a vis a disabled person's housing outcomes. Structural barriers will be privileged as the primary mode of explanation for disability, both as a response to prevailing societal and institutional attitudes of disability being an individual biological defect, and because the nature and scope of the data do not permit for any proper commentary on the diverse individual experiences of disabled people and their housing. Qualitative research that does focus on the subjective experiences of disabled people with their housing will be highlighted throughout the course of this chapter.

2.3 HOUSING & DISABLED PEOPLE

2.3.1 Disabled People in Canada

The disabled population in Canada is incredibly diverse, not only in terms of sociodemographic variability, but also in the kinds of disabilities that people live with and experience. As mentioned previously, around 22 percent of the Canadian population aged 15 and over are disabled. A report from Statistics Canada by Morris et al (2018) gives the following summary of the disabled population in Canada:

- Disability prevalence increases with age, from 13% for those aged 15 - 24 to 47% for those aged 75 and over.

- Women (24%) are more likely to have a disability than men (20%).

- Disabilities related to pain, flexibility, mobility, and mental health are the most common disability types across all age groups.

- Mental health-related disabilities were the most prevalent type of disability among youth (aged 15 – 24).

- For the core working population (those aged 25 - 64), persons with disabilities are less likely to be employed (59%) than those without disabilities (80%).

- The severity of disability influences levels of employment. For those aged 25 - 64, 76% of people with mild disabilities are employed, contrasted with only 31% of people with very severe disabilities.

- Among those with disabilities aged 25 - 64 who are unemployed and not in school, two in five (39%) have the potential to work – which is roughly 645,000 people.

- Persons with more severe disabilities aged 25 - 64 are more likely to be living in poverty (28%) than their counterparts without disabilities (10%) or those with milder disabilities (14%).

- Among those with disabilities aged 15 - 64, lone parents and those living alone were the most likely to be living in poverty. Since eight in ten lone parents were women, the high risk of living in poverty in this group disproportionately affected women.

Not only does the type of disability factor into life outcomes such as employment, income, and housing tenure, but so does the severity of disability. Identifying the specific needs of disabled people as a whole is therefore challenging, as different types and degrees of disability require different forms of support (e.g., aids and accommodations) that may be enabling for certain groups and disabling for others (Heywood, 2005; Schwartz, 2020).

Another concern is the link between disability and aging. Canada has an aging

population, and many disabilities, especially those related to mobility and chronic pain,

are acquired later in life (Razi, 2019). For this reason, the housing stock must be updated

and expanded in order to reflect this growing need (Ewart & Harty, 2015). However,

there is a relative lack of literature on the experiences of young disabled people (Mackie,

2012), and framing disability as only an elderly issue ignores how age-diverse the

disabled population actually is. The synthesis is this; as the population ages, so too does

the disabled population, but the needs of all disabled people across the life course must be

taken into account when addressing their needs.

2.3.2 The Housing Landscape for Disabled People

Any discussion about the challenges disabled people face vis a vis housing must first be

contextualized by the broader historical trend in Canada of neoliberal rollbacks in social

welfare policies, as well as the offloading of federal responsibility of social housing

provision onto regional and local governments. Aside from the very recent federal

development of the National Housing Strategy (NHS) in 2019 (Government of Canada,

n.d.), housing policy in Canada has been the domain of provincial governments since the

mid-1990s (Suttor, 2014), when the federal Liberal government did away with virtually

all federal housing subsidies and downloaded that responsibility onto the provinces,

followed almost immediately with the Ontario Progressive Conservative government

gutting their own provincial subsidies to affordable housing units (Hackworth, 2008). The

current national trend in housing is one of increased marketization and decreased public

funding (Leviten-Reid et al, 2019), leading to the responsibility of housing provision

falling almost exclusively to local and regional governments that are financially

unequipped to handle that burden (Suttor, 2014). In the wake of the mass-devolution of

the 1990s, non-governmental organizations, non-profits, and other charities have filled in

some of the gaps through the provision of non-profit and cooperative housing, but these

remain largely patchwork band-aid solutions to an endemic problem (Suttor, 2016).

Additionally, this decentralized patchwork of non-market housing providers produces

uneven housing outcomes (Leviten-Reid et al, 2019), are largely inaccessible (Gibson et

al, 2012), and waitlists for social housing can be as long as seven years for disabled

people in Ontario (Razi, 2019).

Disability policy, while a much more recent horizon on the Canadian political agenda, has

been likewise swept up in this neoliberal turn. Prince (2011) argues that beyond any

specific cutbacks or devolutions, neoliberalism informs our understanding of disability as

a "personal misfortune rooted in biological impairments and functional limitations" (p

41). This means that any specific policy prescriptions aimed at improving the lives of

disabled people are framed in this way—as a personal, individual problem that can

likewise be remedied through personal, individual changes in behaviour, mostly by

"rehabilitating" the disabled until they can sufficiently participate in the workforce. This

is echoed by Jongbloed (2003) in their review on the history of disability policy in

Canada. Neoliberalism then is not just a set of policies or legislative endeavours, but an

ideological, bi-partisan consensus within the Canadian government and its provinces that

defines the boundaries of what is politically possible (Suttor, 2014). This inevitably

informs how disability policy, housing policy, and the intersection of the two are written,

put into practice, and experienced by people. It is no surprise then that adaptations have become the dominant solution to inaccessible housing.

Social housing suffers from the same ideological baggage, being viewed by the general public as being not only substandard, but morally inferior to private rental or home ownership, further contributing to the historic decrease in affordable housing units across Canada (Suttor, 2016; Leviten-Reid et al, 2019). The reason social housing in particular is so central to the discussion of disabled people's experiences with housing is twofold; one, housing is one of the largest cost burdens for those with disabilities in Ontario, where the majority of the disabled population in Canada resides (Razi, 2019), and two, disabled people are disproportionately represented in the social housing market (Canadian Mortgage and Housing Corporation, 2018; Aplin, Canagasuriam, Petersen, & Gustafsson, 2020). In Toronto, Ontario's largest city, 30 percent of subsidized housing units are occupied by a person with a disability, a trend that is representative of many regions in Ontario (Razi, 2019).

Additionally, social housing is often a more expedient avenue for securing housing adaptations that make the dwellings of disabled people more accessible and suitable to their needs, although a study conducted by Leviten-Reid, Matthew & Mowbray (2019) found that non-profit cooperative housing was more accessible than public rental housing stock, so the rates of accessibility in social housing are not uniform and are at least partially influenced by what type of entity is providing it. Disabled people are also often forced out of the private market through discriminatory screening processes from landlords, restricting their access to housing even in the application stage (Hemingway,

2011; Inclusion Canada, 2017). Combined with lower levels of income, higher rates of

mortgage delinquency (Bian, 2020) and unemployment (Inclusion Canada, 2017), as well

as the need for specialized disability aids and/or housing adaptations that are often paid

for out of pocket (Giesbrecht et al, 2017), disabled people are particularly vulnerable

when it comes to securing safe, accessible, stable, and adequate housing. This means that

social housing may be their only option, especially as housing costs continue to rise

(Smirl, 2019). These compounding factors also lead to higher rates of homelessness in the

disabled population—45 percent of homeless people in Canada are estimated to be

disabled or have a mental health condition (Inclusion Canada, 2017).

Even when disabled people have access to housing, that housing is often quite poor.

Disabled people face much higher incidences of Core Housing Need compared to the

non-disabled population, especially disabled women (Government of Canada, n.d.). Core

Housing Need is a non-actionable—meaning it does not qualify you for any relief aid or

support—academic definition used by the Canadian government and Statistics Canada to

measure the basic standards of housing in the country (Canada Mortgage and Housing

Corporation, 2019). It has three criteria: adequacy (dwelling is not in need of any major

repairs), suitability (dwelling is an appropriate size for the number of residents living

there, measured in number of bedrooms), and affordability (dwelling costs are less than

30% of before-tax household income). Currently, 15.3 percent of Canadians with

disabilities have been identified as living in households with a core housing need, which

is 1.7 times more than non-disabled Canadians (CMHC, 2018). However, this definition

of Core Housing Need is itself problematic, as it does not include accessibility as a "core"

requirement of housing. This means a person can live in housing that is defined as adequate, suitable, and affordable, but is still inaccessible.

While the social housing sector provides an important source of housing for some disabled people, it can also produce and reinforce disability in its tenants through a lack of community and mental health supports, as well as the physical buildings themselves being disabling, either through inaccessible environments or hostile, drab, or otherwise rundown infrastructure (Marshall, Tjörnstrand, Downs, Devries, & Drake, 2020). Schwartz (2020) also points out that in big urban centres such as Toronto, new housing construction is geared mainly towards expensive condominium buyers, meaning that social and affordable housing stock is located in older buildings that can potentially be more difficult to retrofit, adapt, or otherwise make accessible. This compounds other issues that produce and reproduce disability, such as access to food (ibid.).

The current state of housing for those with disabilities in Canada is deeply insufficient, and as the population continues to age, more Canadians will require accessible housing. The following sections will go into more detail about the various challenges disabled people face vis a vis housing, grouped together as different "constraints." This research is concerned with four types of constraints: physical constraints, social constraints, economic constraints, and neighbourhood constraints.

2.3.3 Physical Constraints

The physical inaccessibility of housing stock is the most immediate and most common barrier for disabled people when accessing adequate housing. Physical barriers are things

like heavy doors, sets of stairs leading up to an entrance, curbs or doorsills that need to be stepped over to enter a home, narrow doorways, rooms that are too small to accommodate mobility devices, elevators that are out of order or too narrow, light switches and thermostats being placed too high on walls, and other structural designs that limit the range of mobility and motion for people with disabilities. It is well-established that housing itself has a significant and tangible impact on the occupants' physical and mental health (Heywood, 2005; Hemingway, 2011; Research & Training Centre on Disability in Rural Communities, 2018; Marshall et al, 2020), and so not only does inaccessible housing have the capability to produce disablement within the home, it can also worsen a person's overall health by forcing them to live in a space that is not built for them (Schwartz, 2020).

Currently, the existing housing stock in Canada is largely inaccessible (Razi, 2019), with only 19 percent of people with disabilities in low-income households having all of their disability-related housing needs met (Inclusion Canada, 2017). Even with recent advancements in accessibility policy, only 10 percent of newly built housing units are required to be accessible in Ontario (Razi, 2019), and the National Housing Strategy is only planning for 20 percent of newly built and renovated housing stock to meet federal accessibility standards (Government of Canada, n.d.). This is a problem, not only because it drastically reduces the housing options for those with disabilities (Inclusion Canada, 2017), but it also means that disabled people are not able to participate fully in their community, such as visiting friends' homes (R&TC, 2018). It also signals that disabled people are, on a policy level, still considered exceptional to the general population;

people who must be accommodated in a world that is purposefully not "built" for them. It also assumes that disabled people do not visit the homes of non-disabled people or go to places not "built" for them, and therefore accessibility is only the concern of their immediate physical environment.

Of the existing housing stock that *is* deemed accessible, it is disproportionately older housing units (Schwartz, 2020) that are specifically public or cooperative social housing (Inclusion Canada, 2017) and are energy-inefficient or more difficult to renovate for additional accessibility adaptations (Government of Canada, n.d.). Additionally, while the Canadian government has recently pushed universal design as an accessibility standard, which is broadly defined as barrier-free housing (Government of Canada, n.d.), what is accessible for one tenant may be disabling for another (Heywood, 2005), such as raised or lower kitchen counters, or home layouts specifically designed for people with audio/visual related disabilities (Hemingway, 2011). Waitlists for such accessible units are usually years-long (Inclusion Canada, 2017), and often disabled people on these waitlists are unable to turn down units offered to them, even if they do not meet the full scope of their needs (Hemingway, 2011; Government of Ontario, 2021). The result is longer stays in long-term care facilities, hospitals, and community shelters (Razi, 2019), even when those facilities can be better used by others. This can then lead to second-order problems, such as feeling a lack of control over one's environment and life, something that Aplin et al (2020) call a threat to "ontological security"; a trust in the world as it appears to be. This also impacts the meaning of home (Heywood, 2005); disabled people may be housed, but they are still without a home.

Another issue is that needs evolve over time, especially as people age in place and their relationship to a dwelling changes (Government of Canada, n.d.). This means that a single adaptation, even if it fully meets the current needs of the tenant, may eventually become outdated or even disabling in the future (Thordardottir et al, 2020). There have been some responses to this problem, such as the concept of Lifetime Homes (LTH); these are homes that are designed for people of varying abilities and stages in their life, enabling visitability and encouraging independence (Andrews, 2008). However, Imrie (2006) argues that even with LTH, it reduces disability to a singular 'problem' to 'solve' by way of technical adjustments to standard building plans. Accessibility then is not a single event or solution, but an active and ongoing practice that requires regular evaluation and monitoring, even across the lifetime of a single tenant, not to mention adaptation upgrades in the event of unit or dwelling turnover.

These housing challenges are compounded when adaptations are made to tenants' dwellings without sufficient consultation, resulting in unnecessary adaptations that either do not solve existing accessibility concerns or actively worsen the accessibility of the unit overall (Fänge and Iwarsson, 2005)—a problem that has been on the rise in recent years (Heywood, 2005; Hemingway, 2011; Ewart & Harty, 2015).

This leads into another arena in which disabled people confront significant challenges—social constraints.

2.3.4 Social Constraints

In the context of this research, social constraints constitute marginalizing and harmful assumptions about disabled people that are systemic in nature, and significantly interfere with disabled peoples' ability to access adequate housing. These assumptions are both held by individual actors, such as landlords and social workers, as well as baked into policy frameworks that support disabled people, which work in concert to act as a disabling force. Prince (2011) reviews a number of surveys conducted by the Canadian government in his book on disability and found that the general public's attitudes on disabled people are mixed; a majority of Canadians claim they are compassionate towards disabled people, but often treat them with disgust, fear, and mistrust when interacting with them. Additionally, as previously mentioned, Prince argues that policy frameworks often operate on an individualistic, bio-medical conception of disability, with a focus on recuperating individual disabled people in order to (re-)introduce them into the labour force. These are then both set within a broader neoliberal policy consensus that seeks to rollback social welfare programs and ration support, often involving lengthy wait times and complicated forms to fill out, which only serves to accentuate these social barriers (Giesbrecht et al, 2017; Power & Gaete-Reyes, 2019; Marshall et al, 2020).

For example, Marshall et al (2020) found that one of the major challenges faced by women with mental and intellectual disabilities in social housing is the social environment itself—the physical building they live in is run down and often filthy, with fellow tenants engaging in anti-social behaviour (such as allowing pets to urinate in stairwells and being physically aggressive to other tenants) that further marginalizes and

even endangers the women living in these housing blocks. Other issues compounding this was the lack of on-site mental health supports, leading to an increase in suicidal ideation and exacerbating pre-existing mental health conditions. They stressed that this was a recent development—rather than the building itself being inaccessible or otherwise insufficient, it was the lack of care being paid to the tenants by landlords and other staff (e.g., social workers) that fostered a disabling environment.

Lack of worker training around how to treat disabled people with respect and dignity is also an ongoing issue. Disabled people are often mistreated, patronized, or outright ignored by workers in both public and private settings due to a lack of adequate training and pre-existing assumptions about disabled people (Hemingway, 2011). While legislation such as the Accessibility for Ontarians with Disabilities Act (AODA) seeks to break down attitudinal barriers with customer service and other frontline workers, these marginalizing assumptions and attitudes still persist and are difficult to change (Inclusion Canada, 2017). Notably, the AODA does not have any current provisions for improving housing, aside from upholding basic human rights codes that forbid discrimination on the basis of disability (Kovac, 2020).

These harmful attitudes are not only held by individual bad actors within a system; they also exist at all levels of both public and private organizations. Prince (2011) found that discrimination on the basis of disability is the most common type of complaint to reach the Canada Human Rights Commission, and that violence and abuse of disabled people (especially Indigenous disabled people and disabled women) "are among the highest for any group in Canadian society" (p 208). The intersection of disability with other social

identities such as gender, race, class, religion, and sexual orientation further marginalizes people (Morris et al, 2018). Mackie (2012) also notes that even in more progressive conceptions of disability, such as the social model, intersecting identities such as race and gender are not factored into considerations of how disabled people interact with society, even though evidence demonstrates that disability has clear gendered and racial dimensions to it.

These marginalizing circumstances often lead to unstable employment and housing, exacerbating existing unmet needs and leading to drastically increased rates of poverty and homelessness (Inclusion Canada, 2017; Razi 2019). The financial constraints faced by disabled people are discussed in the following section.

2.3.5 Financial Constraints

Disabled people are at a unique intersection of disadvantages that constrain and constrict their access to income. Challenges such as employment discrimination and reduced employment opportunities (Inclusion Canada, 2017; Bian, 2020), additional medical costs to manage their disability (Schwartz, 2020), the shortage of accessible housing and lack of government funding for adaptations imposing additional financial burdens (Giesbrecht et al, 2017), and other factors all lead to an over-representation of disabled people in low-income brackets and social housing in Canada (Razi, 2019). This means that, in addition to accessible housing itself being difficult to obtain, it is also difficult for disabled people to hold onto these accessible units due to economic insecurities (Inclusion Canada, 2017; Razi, 2019).

For example, Giesbrecht and colleagues (2017) recently reviewed the 2012 Canadian Survey on Disability (CSD) to understand the met and unmet needs of disabled people. They found that the most common reason for an unmet need (whether that be a housing adaptation or the purchasing of an assistive mobility device) was due to cost. This is because public programs to pay for such accommodations are thin on the ground, and often have long wait times and stringent requirements in order to be granted (Schwartz, 2020). Disabled people are often forced to pay out-of-pocket for necessary housing adaptations, exacerbated by the largely inaccessible housing stock in Canada (Gibson et al, 2012).

While disabled people are more likely to live in rental and social housing (Razi, 2019), those who own their homes have their own suite of housing problems. Bian (2020) looked at the mortgage delinquency rates for disabled people in the United States and found that, even after controlling for all relevant socio-economic factors (such as employment status, education, and various demographic variables), disabled households have a significantly higher likelihood of mortgage delinquency than non-disabled households. This is concerning, because three-quarters of the Canadian population are homeowners (Suttor, 2016), and a rapidly aging population—which necessarily means an increasing number of people experiencing disability —means that this problem will only grow in magnitude.

There are certain financial supports for disabled people offered by the provincial government, such as the Ontario Disability Support Program (ODSP), but they have been subject to the same social retrenchment and neoliberal rationing as other social policies. This makes it increasingly more difficult to both qualify for and live off of ODSP (Smith-

Carrier et al, 2017). People with episodic disabilities—i.e., those whose level of disability fluctuates over time—are at a particular disadvantage when trying to access ODSP for financial support, being "not disabled enough" to qualify but "too disabled" to work, leaving them with very limited sources of income (Lightman, Vick, Herd, & Mitchell, 2009). Inadequate financial supports that are becoming increasingly difficult to access, coupled with systemic barriers to employment, leaves disabled people in a cycle of poverty that is incredibly difficult to escape (Smith-Carrier et al, 2017).

As discussed previously, many housing units are inaccessible, and adaptations are often paid for out-of-pocket. On top of these existing financial concerns, increased rates of unemployment, unstable employment, and poverty exacerbate the financial precarity of disabled people living in rental housing, leading to a widespread problem of homelessness amongst disabled people (Inclusion Canada, 2017). General welfare and disability benefits programs are often insufficient, as they fail to keep up with inflation (Schwartz, 2020), and do not bring people out of core housing need. Lack of economic mobility translates into higher order problems, such as issues accessing transportation to work or the grocery store (Schwartz, 2020). Marshall et al (2020) noted that some intellectually disabled women expressed a desire to forgo purchasing groceries if it meant they could pay for more adequate housing.

Disabled people are therefore faced with difficult financial decisions—to subsist on the meagre rations of disability support and remain unemployed even if they can work in order to qualify for disability benefits, or submit to the demands of full-time employment despite their disability. Mackie (2012) argues that money itself should be qualified as a

disability issue, since it is a gatekeeper to so many basic unmet needs for the disabled population.

This cycle of economic instability leading to further disablement which then leads to greater economic instability reinforces disability as a marginal class in society, not just within the home but the surrounding community, which will be explored in the next section.

2.3.6 Neighbourhood Constraints

Recently, more literature has been attending to the ways in which the neighbourhood and broader built environment surrounding the homes of disabled people can also be experienced as inaccessible and disabling (Imrie, 2012; R&TC, 2018; McCormick, Schwartz, & Passerini, 2019; Schwartz, 2020). Public space is often contested space for disabled people, not just because it can be physically inaccessible, but also because disabled people are at risk of being victims of assault and abuse (Hemingway, 2011; Hall & Bates, 2019). Combined with the other factors affecting housing choices that were previously discussed, disabled people are often forced to choose between a safe and accessible home versus a safe and accessible neighbourhood environment (Hemingway, 2011).

Inaccessible environments not only limit the ability of disabled people to access things like grocery stores, employment, and transportation (Schwartz, 2020), but also basic social activities such as community gatherings and visiting friends (R&TC, 2018). Public

space is therefore an expression of prevailing and historical social attitudes, excluding certain groups as a function of its design.

Pushes for universal design, defined as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Imrie, 2012, p. 873), as well as "walkable" urban environments, are a partial policy response to this. The challenge with making the built environment accessible to more people is that, again, disability is a broad and diverse experience— certain designs that are enabling for some are disabling for others. Certain ideas, such as VisitAble Housing, seek to expand accessibility at the neighbourhood level, pushing for housing design standards such as no-step entries, doors and entryways wide enough to accommodate assistive devices, and bathrooms that can be used while operating an assistive device (CMHC, 2017). However, there is a broad confusion about what accessibility and "visitability" means, as well as general cultural/social resistance to accessibility, being viewed by the able-bodied public as being linked with physical infirmity and age (Ewart & Harty, 2015). This is true of disabled people as well, some of whom fear both the implication that they are "giving in" to their disability by accepting adaptations, and that visible adaptations to their home may invite ableist abuse into their lives (ibid.).

Imrie, too, argues that universal design has several limitations, summarized briefly as being market-oriented (delivering accessible products to consumers as a means to facilitate social inclusion), positivist (there is an objective truth to the concept of accessibility that can be discovered and operationalized), and overly technical to the point

of bio-medicalizing disability (individual physical or cognitive disabilities being overcome with the use of technology) (2012).

In short, neighbourhood constraints are both pervasive as well as difficult to ameliorate. The following section will go into the various ways policy has nonetheless attempted to address this.

2.4 POLICY DEVELOPMENTS

2.4.1 Scope and Focus

There have been a number of recent developments in both housing policy and disability policy in Canada. While these two policy arenas are distinct from one another and each have their own history, this review will focus on how these policies intersect with each other. Most of these developments have happened in the last few decades, especially with respect to disability policy, and the impacts of these policies are even more recent and ongoing.

Canada's federalist approach to social policy encourages a provincial-level analysis. Currently, only three provinces in the country have accessibility legislation: Ontario, Nova Scotia, and Manitoba (Lau, Nirmalanathan, Khan, Gauthier, Maisel, & Novak, 2020). I will be focusing on Ontario and its policies, but federal policy will also be discussed wherever relevant.

In addition, while the focus of this literature review is concerned with policy, policy is not the only arena that matters in improving the material conditions of disabled people, nor are these policies necessarily sufficient in safeguarding against structural barriers in

housing. Indeed, Prince (2011) notes the various limitations of policy in addressing the needs and struggles of the disabled population. This review is being placed in the context of the broader social model of disability outlined above, and to give a "bird's eye view" of the institutional landscape for disabled people with respect to housing.

2.4.2 Disability Policy

Disability policy in Canada has several unique features that distinguish it from other Western nations. It is one of the few Western countries that, up until 2019, had no explicit federal disability legislation (Kovacs Burns & Gordon, 2010; Canada Minister of Justice, 2019), and it is also the only country to have disability rights enshrined in its constitution (McColl et al, 2017). Broadly speaking, disability policy in Canada has been described as piecemeal, lagging, ideologically conflicted, and insufficient (Jongbloed, 2003; Kovacs Burns & Gordon, 2010; Prince, 2011), with the most enduring aim being that of economic recuperation; i.e., bringing disabled people into the workforce. This is even reflected in data collection; the Canadian Survey on Disability, which is conducted by Statistics Canada every five years with the explicit goal of using the dataset to inform policy, is primarily concerned with employment. In the newest version of the survey, set to be conducted in 2022, 14 of the 29 listed variables ask about employment, and 3 variables ask about income, meaning that over half of all variables in a national dataset about disability are related to labour and income (Statistics Canada, 2022).

However, certain narrow advancements have been made. As mentioned, in 2019 the Canadian government introduced the Accessible Canada Act (ACA), whose goal is to produce a "Canada without barriers" by January 1st, 2040 (Canada Minister of Justice,

2019). The act identifies several areas where barriers can be removed or prevented from manifesting, including the built environment as it relates to transportation. Troublingly, housing is not listed as one of these spheres, and is only tangentially mentioned in the act itself. The act is further limited by its scope, as it only applies to federally regulated sectors, and housing is largely the domain of the provinces (McColl et al, 2017).

Disability law and policy in Ontario is more widely applicable as it governs both public and private accessibility standards within the province. The Ontario Human Rights Code, first enacted in 1962, prohibits discrimination against disabled people in a wide array of contexts, including employment, social services, facilities, and housing (Ontario Human Rights Commission, n.d.). Focusing on the intersection of disability and housing specifically, there is a mandated duty to accommodate on the part of landlords, such as altering the physical environment of the building to be more accessible for tenants, or modifying modes of communication and information distribution. The right to accomodation was also explicitly extended to disabled students living in student housing in 2018. Legal action must be taken on the part of the individual if they believe their landlord has violated the Ontario Human Rights Code (OHRC, n.d.).

Other gains, such as the Accessibility for Ontarians with Disabilities Act (AODA) was established in 2005, with the goal of making Ontario "more accessible and inclusive by 2025" (Government of Ontario, 2021). It is the first piece of provincial legislation of its kind in Canada, and establishes accessibility standards that corporations and organizations must adhere to, including training frontline service workers, updating information and communication delivery systems, transportation, the design of public

spaces, and employment opportunities. There is no mention of housing in this act beyond reiterating that discrimination on the basis of disability in the housing sector is illegal.

2.4.3 Housing Policy

Social housing policy in Canada has gone from a national, universal, and comprehensive agenda in the 1950s and 60s to the exceptional, decentralized, fractured shell that it is now, and its incredibly marginal presence in the total Canadian housing stock is reflective of this (Suttor, 2016). While social housing is only one form of housing, its retrenchment over the past few decades signals an ideological resistance on the part of governments to conceptualize housing as a public good. Canada recognizes housing as a human right by way of the UN's International Covenant on Economic, Social, and Cultural Rights, though that right is not present in the Canadian Charter of Rights and Freedoms or the Constitution (Tuttle, 2020).

Recently, however, Canada has made strides on implementing a rights-based framework for housing by way of introducing its first-ever federal plan on housing – the National Housing Strategy (NHS) was launched in 2017, which will span the next 10 years and seek to drastically reduce core housing needs and chronic homelessness (Government of Canada, n.d.). While the aim of this project is to address the overall ongoing housing crisis in Canada, people with disabilities are identified as a vulnerable group with specialized housing needs, and the National Housing Co-Investment Fund has promised a minimum of 2,400 new affordable housing units for those with developmental disabilities (Government of Canada, n.d.). Additionally, 20 percent of new units must meet accessibility standards, as well as 20 percent of existing housing stock that is undergoing

renovations and repairs. Other factors, such as proximity to transit and accessible workplaces, are mentioned in the strategy, though no concrete goals have been set for these considerations. Finally, women with disabilities in particular have been identified as the group who will most benefit from these provisions.

Provincial policy in Ontario is less comprehensive, and tied heavily to funding from the NHS (Government of Ontario, 2020). The Community Housing Renewal Strategy is focused on increasing the amount of community (used interchangeably with social/public) housing, though specific numbers and dates are largely not given (ibid.). There is passing mention of disabled people in this strategy, with a housing benefit being offered to vulnerable groups (disabled people identified as one such group) to help pay for their housing costs. A troubling development in the strategy is the approach taken to cut down on community housing waitlists, which includes forcing people to take the first unit offered to them when on a waitlist (and though exceptions can be made, these are left to the discretion of individual service managers). Imrie (2012) and Schwartz (2020) have both noted the neighbourhood component of disability, and that disabled people are often forced to choose between accessible housing and accessible neighbourhoods.

The policy framework here is clear—accessible housing is not the norm but the exception, and avenues for expanding available accessible housing stock are done at least in part with partnerships from non-profits and private corporations. While the federal government has specifically identified universal design and visitability as a priority for accessible units, these practices themselves are far from universal (Government of Canada, n.d.).

2.4.4 Adaptations & Financial Relief

Financial relief for renovating one's home or rental unit to improve accessibility is very thin on the ground. These programs are administered in a decentralized fashion, even when they receive provincial funding; they are geared primarily towards the most economically vulnerable people (Giesbrecht et al, 2017); they favour homeowners; and they are overwhelming forgivable loans, not grants, meaning that there are instances where successful applicants must pay the funds back (Government of Ontario, 2022).

At the provincial level, Ontario Renovates is a provincially funded and municipally administered program that provides forgivable loans to people to make repairs and accessibility renovations to their home. Because the loans are administered at the municipal level, eligibility for this loan varies from municipality to municipality. The only two baseline criteria provided by the provincial government are: low to moderate income homeowners, and landlords who rent out affordable units. If you do not own your home, you must obtain permission from your landlord in order to renovate. A number of tax relief programs also exist, most of which are administered at the local level and therefore eligibility varies by municipality (Government of Ontario, 2022).

The charity March of Dimes has the Home & Vehicle Modification Program for disability-related adaptations in Ontario. Eligibility for this funding is complex and narrow, requiring applicants to first apply for provincial programs (such as Ontario Renovates), attempt to move to an accessible home first, and that the applicant be a homeowner or live in cooperative housing (March of Dimes Canada, 2020).

At the federal level, programs such as the Residential Rehabilitation Assistance Program for Persons with Disabilities provides forgivable loans for disabled, on-reserve First Nations people who are below minimum income thresholds for their area (CMHC, 2018). The Canada Revenue Agency (CRA) also allows people to withdraw up to 35,000 dollars from their Registered Retirement Savings Plan (RRSP) in order to purchase or build a home for them or a family member with a disability (Government of Canada, 2022). A number of disability-related tax credits are also offered to disabled residents looking to improve the accessibility of their home.

Other various programs and relief funds are provided at the municipal level, but they are too numerous to go into here. There are no universal grants or programs offered to disabled people in Canada or Ontario.

2.4.5 General Trends

The overall trend in both housing and disability policy over the last several decades has been one of rollbacks, retrenchment, and devolution (Hackworth, 2008; Suttor, 2014), with disability policy specifically seeing little in the way of progress, being mostly the responsibility of provinces and municipalities (Burns & Gordon, 2010). Disabled people face particularly difficult challenges with housing: increased economic insecurity, broadly inaccessible housing stock, discriminatory housing practices, high costs associated with housing adaptations, meagre financial support, and severely limited social housing availability means that disabled people are severely limited in their choice of housing. Existing policy is often particularised to the elderly (Gibson et al, 2012) and the most severely disabled (Fänge and Iwarsson, 2005), which is reflective of the overall trend of

retrenchment of broad social programs into highly targeted, means-tested policy programmes (Suttor, 2016). These factors, as well as others, make for an incredibly complex social problem, involving multiple spheres of Canadian life and all levels of government.

On the other hand, there has been increased attention on disability issues in recent years (Prince, 2011). Accessibility has become a common policy talking point, with pushes towards universal design (Imrie, 2012), mandatory accessibility training for workers, the concept of VisitAble Housing (CMHC, 2017), and an ideological commitment to full social inclusion and participation, emphasising a rights-based approach to disability (Prince, 2011; Government of Canada, n.d.). Policy recommendations to address the issues outlined above are fairly straightforward, such as increasing the amount of already accessible housing stock (Razi, 2019) or making dwelling adaptations more affordable (Giesbrecht et al, 2017). However, properly implementing these recommendations require significant financial commitments from provincial and federal governments—funding that has been in sharp decline since the 1990s (Suttor, 2016).

Overall, the policy landscape is at once promising and insufficient—large gains have been made in recent years, such as the creation of the AODA and the NHS, which promise future improvements in accessibility and inclusion. We are, however, far from the broad social welfare programs of the post-war era (Suttor, 2016), which would, if adopted again, go a long way in ameliorating the currently starved social support systems that are vital to improving the material conditions of disabled people.

2.5 RESEARCH GAPS

In Ontario, data on the inaccessibility of the current housing stock, the financial constraints imposed on disabled people because of this inaccessibility, and the overrepresentation of disabled people in social housing is available. Smaller qualitative studies about disabled people and their housing experiences have been conducted (Heywood, 2005; Hemingway, 2011; Marshall et al, 2020; Aplin et al, 2020), and policy reviews have explored government responses to disability and housing (CMHC & Novac, 2002; Jongbloed, 2003; Hackworth, 2008; Burns & Gordon, 2010; Suttor, 2014; Suttor, 2016), but analysis of large-scale datasets, such as surveys conducted by Statistics Canada, to capture the intersection of housing and disability at the population level are limited (see Giesbrecht et al, 2017; CMHC, 2018). This is in part because large datasets about this intersection are themselves limited; the Canadian Housing Survey is the only nationwide survey that collects information about the housing experiences of disabled people. Even the Canadian Survey on Disability does not have any questions about housing.

This presents a unique opportunity to fill this research gap—how do the experiences of disabled people vis a vis housing look on a provincial scale? What statistically significant relationships exist between housing and disability? Is it possible to identify gaps between policy aims and the actual rates of housing adaptation and accessibility? What can we learn from this? The following analysis seeks to understand these questions.

Chapter 3 – Methodology & Research Design

3.1 RESEARCH SCOPE

As mentioned in the previous chapter, limited research has been done with large scale datasets on housing and disability in Canada. Informed by the literature, and sensitive to the various limitations of using secondary data, this research is concerned with answering the following question: how does the presence—or absence—of disability-related dwelling adaptations (hereby simply referred to as adaptations) in Ontario households influence their satisfaction with their homes?

To answer this, a detailed profile of households in Ontario must be built. First, households must be separated on the basis of whether or not they *need* adaptations, and then further separated based on whether or not they *have* them. What are the differences between these household groups? Does the tenure status (i.e., renter vs homeowner) and type of housing (i.e., private vs social) vary across groups? What demographic factors, such as age, gender, income, and race, influence dwelling adaptation and satisfaction outcomes?

Furthermore, this research is concerned with understanding why some households with a disabled member have adaptations while others do not. What are the reasons for these missing adaptations? What impact does the presence or absence of adaptations have on things like dwelling satisfaction, or neighbourhood satisfaction? Does the presence or absence of an adaptation in the home impact feelings of safety and security?

Reflecting the findings of existing small-scale studies, it is hypothesized that households that need, but do not have, adaptations are less satisfied with their dwelling and their neighbourhood; they are more likely to be women-led, older adult-led, and/or non-white; they are more likely to be renters and to live in private market rental housing; they have lower household incomes; and they are less satisfied with their dwelling. To determine whether these hypotheses hold true, descriptive statistics and logistic regression will be conducted on the dataset.

3.2 DATASET

The Ontario subset of the 2018 version of the Canadian Housing Survey (CHS) is the sole dataset being used in this analysis. The Canadian Housing Survey is a Statistics Canada survey that "collects information about housing needs and experiences from a sample of Canadian households" (Statistics Canada, 2021). The Canadian government is explicit about its intention to use these data to inform housing policy and address housing concerns, especially with respect to affordability and inadequate housing conditions. Compared to other datasets such as the Canadian Survey on Disability (CSD), this survey was selected because it is the most relevant for the current research, given that it captures data about dwelling and neighbourhood satisfaction, dwelling adaptations related to disability, the status of the household's housing tenure (renter vs homeowner, type of landlord, presence of rent subsidies, etc.), along with a number of important demographic variables, such as age, gender, and race. In comparison, the CSD does not include any questions about the housing of disabled respondents, neighbourhood/dwelling

satisfaction, or tenure status. No other Statistics Canada surveys met the criteria for this research.

Data for the CHS were collected by Statistics Canada from November 2018 to March 2019. Several populations were excluded from the survey: Canadian Armed Forces members living on military bases; people living on Indigenous reserves; people living in institutions, dependent senior facilities, permanent school residencies or work camps; and people living in communal colonies (such as religious colonies). Data collection methods varied slightly over the provinces and territories due to travel and technological restrictions in remote areas. For Ontario, two collection methods were employed – self-response Electronic Questionnaires and Computer Assisted Telephone Interviewing. Whenever possible, the survey questions were answered by a household member who was the most knowledgeable of the household's housing situation. In all cases, these respondents were at least 15 years of age or older. They are coded as PERSON 1 in the survey data. For individual demographic questions about members of the household, proxy responses were accepted from PERSON 1 on behalf of the other people in their household.

The survey had approximately 300 questions. Certain questions were only asked of a subset of respondents based on their responses to previous questions. For example, all questions pertaining to rent were only asked to respondents who indicated that they did not own the dwelling they lived in. All other respondents (in this example, homeowners) would be coded as a 'Valid Skip' for these questions. Valid skips are differentiated in the survey data from invalid non-responses, where survey respondents chose not to answer

certain questions despite being eligible to answer. Non-responses were filtered out and excluded from data analysis; Valid Skips were retained where relevant.

Data collection for this survey happened at both the household and personal level. This research primarily uses the household-level survey data, meaning the unit of analysis will be households in Ontario. Exceptions to this will be explicitly stated. The Ontario subset of this national dataset includes 12,066 households, representing approximately 20 percent of households surveyed in the CHS. When the data are appropriately weighted, they account for 5.5 million households in Ontario.

A household's need for an adaptation is being used in this analysis to measure disability indirectly. Measuring the relationship between disability and things like dwelling satisfaction or housing tenure directly were not possible given the nature of the dataset, the limitations of which will be discussed below. The working assumption is that households with a disabled resident that require an adaptation will reflect (but not wholly represent) the struggles disabled people in general face vis a vis housing in Ontario.

3.3 THEORETICAL FRAMEWORK

As stated in Chapter 2, this research approaches disability using the social model. This informs the perspective on the data, which are limited in scope and reflect the mainstream perspective that disability is an individual medical condition that negatively affects participation in the labour market. It also informs the variables that are included in the analysis, such as housing tenure status, gender, age, income, and other socio-economic and demographic variables that are not concerned with addressing disability as only a

chronic medical condition. The social model also structures the discussion of the results and potential policy prescriptions—the current neoliberal policy focus on (re-)introducing disabled people into the workforce does not adequately address the need to improve the housing conditions for disabled people in Ontario.

3.4 LIMITATIONS WITH THE USE OF SECONDARY DATA

While the 2018 CHS captures data about disabled people and how it affects their housing, the questions that capture disability are limited and problematic. First, there are no variables that ask about the specific nature of a person's of disability directly. Instead, survey respondents are asked to identify whether someone in their household requires a disability-related dwelling adaptation (variable DAA_05), and whether the household has those required adaptations (DAA_10). A series of sub-questions are then asked about why dwelling adaptations may not have been made. This only captures disability as something that physically impacts housing—given that the CHS is a housing survey, this is not surprising, but it means that we are only looking at people whose disability is such that it requires physical modifications to their home. This is not synonymous with all forms of accessibility, nor does it capture data about all disabled residents in Ontario.

There is a single dwelling satisfaction question directly related to disability (DWS_10F), but it only asks how satisfied the residents of the household are with the accessibility of the dwelling for people using a wheelchair, not disabled people in general. Additionally, there are no questions about the accessibility of the surrounding neighbourhood, nor are there questions related to the perceived safety of disabled residents when they are out in

the community (variables addressing neighbourhood safety only relate to perceived safety from racial or ethnic violence).

Another variable, ACT_05, asks what the main activity was of each person in the household over the past year, and one of the responses are "Long term illness or disability." The framing of this question assumes a totalizing view of disability – something that is only worth capturing if it is completely incapacitating and prevents the person from doing anything else. Similarly, EMP_15 asks respondents about whether any recent absences of from their place of work were due to illness or disability. There are no other questions related to disability in the survey.

Disability is also paired with long term illness or conditions in each of these questions. This frames disability as a medical condition, and something that is only worth documenting when it negatively impacts employment, activity, and housing. Disabled respondents may be capable of working full- or part-time, can do infrequent or occasional activities, and may have special housing needs not related to physical modifications of their dwelling, none of which are captured by this survey. As such, the results of this survey cannot be generalized to the housing conditions of all disabled people in Ontario, but rather only a subset who require specific physical modifications to their home.

Despite these limitations, the CHS is still the most relevant Statistics Canada dataset available. It has the unique advantage of addressing both housing and disability and offers insight into how the two interact. There has been a historical lack of addressing both disability and housing in the literature (CMHC & Novac, 2002), perhaps partially

informed by the lack of large-scale datasets that capture both of these subjects. This research seeks to rectify this.

3.5 DEPENDENT VARIABLES

To begin, the survey population was divided up into three groups based on their responses to two variables – DAA_05 and DAA_10. The first one, DAA_05, asks if the household requires a dwelling adaptation due to a disability. For the households that answered YES to this question, they are further divided based on their response to the follow up question, DAA_10 – does the household have all the required disability-related dwelling adaptations? Table 3.1 gives a breakdown of the number of households who responded yes or no to these two questions.

For the purposes of clarity, the three groups will be referred to in the following way – households that do not require adaptations (Group A), households that need and have adaptations (Group B), and households that need, but do not have, adaptations (Group C).

Table 3.1. Household Survey Groups (Weighted)

	Total Households	% Households	Description
Group A (don't need adaptations)	5,046,784	91%	Households that **do not** need any dwelling adaptations due to a disability
Group B (need & have adaptations)	262,473	4.7%	Households that need at least one dwelling adaptation due to a disability and **do** have it
Group C (need & don't have adaptations)	236,793	4.3%	Households that need at least one dwelling adaptation due to a disability and **do not** have it

Looking at Table 3.1, Group A – households that do not need adaptations – constitute a majority of the survey population (91%). Households that need and have adaptations make up the next largest group at 4.7%, followed closely by households that need, but do not have, dwelling adaptations at 4.3%.

While Groups B and C (those who require adaptations) only make up 9% of survey respondents, it is important to note that they represent half a million households in Ontario; or, one in every ten households in the province. This is, again, a conservative estimate of the disabled population in the province, looking only at disabled households who require adaptations to their dwelling. Additionally, Group B (households that have adaptations), make up just over half (53%) of all disabled households in Ontario captured by this survey. This means that just under half of all households with disabled members in this survey have unmet housing needs related to disability.

In the analysis that follows, these three groups will be compared to one another based on their responses to various questions about their housing status, their dwelling and neighbourhood satisfaction, their income, their demographic make-up, and others. The intent is to build a meaningful profile of each group of households, with Group A (those who do not require adaptations in the home) being used as the benchmark to contrast Groups B and C (those who require adaptations) against. As well, Groups B and C will be compared to one another in order to get a better understanding of the role that the presence (or absence) of an adaptation in the home plays on things like satisfaction outcomes, income, demographics, and others.

3.6 INDEPENDENT VARIABLES

The CHS has over 300 questions in its survey. A relevant subset of these survey questions was selected for the analysis. Determining which variables were necessary to address the research question was done by consulting the literature; variables were chosen based on a prior demonstrated relationship to disability (such as housing tenure) and hypothesized relationships to disability (such as demographic and income variables).

All variable descriptions are taken from the CHS 2018 survey codebook, and slightly edited when necessary for the sake of clarity.

Table 3.2. Independent variables list

VARIABLE	DESCRIPTION
HHSIZE	Household size (i.e., the number of people living in the dwelling)
DCT_05	Is this dwelling owned by a member of this household?
SCR_10	Is the rent for your dwelling subsidized?
SCR_25	Who is your landlord?
POPCTRSZ	What is the size of the population centre that you live in?
DV_SAH	Does this household live in social affordable housing?
STIR_GRP	Shelter-to-income cost ratio by percentage groups
HTTINC	Total household income
CHN	Does this household live in Core Housing Need?
DWS_05	How satisfied are you with your dwelling?
DWS_10C	How satisfied are you with the affordability of your dwelling?
DWS_10D	How satisfied are you with the condition of your dwelling?
DWS_10F	How satisfied are you with your dwelling being accessible to someone using a wheelchair?
DWS_10G	How satisfied are you with feeling safe and secure within your dwelling?
NES_05	How satisfied are you with your neighbourhood?
DAA_15A-H	(Asked only of Group C) Why does your dwelling not have all the adaptations your household needs?
GENDER	What is this person's gender?
AGEG	What is this person's age?
DV_VMIN	What is this person's race?

It was important to capture as much information as possible about the make-up and tenure status of the household. Demographic variables (household size, age, race, gender, income, size of population centre) and variables related to the status of the household's tenure (homeowner versus renter, type of landlord, presence of rent subsidies, designation of Social Affordable Housing and Core Housing Need) were included in the anlaysis. Shelter-to-income cost ratios were collapsed into a bivariate representation – under 30% and over 30%. This is an important division from a policy perspective, as Statistics Canada defines housing that costs more than 30% of a household's income to be unaffordable (CMHC, 2019). It is also different from the Social and Affordable Housing variable, which only identifies people living in non-market housing and/or those who receive specific types of rent subsidies. Rent subsidy is also a separate variable from SAH, which is only concerned with specific types of rent subsidies, though the two are closely related.

The other class of variables that are of interest have to do with satisfaction of the dwelling and the neighbourhood. Specific follow-up questions related to dwelling satisfaction were also selected, which are concerned with documenting the level of satisfaction with wheelchair accessibility, affordability, condition, and perceived safety and security of the home. These were chosen on the basis of their relationship to disability-related housing adaptations – the hypothesis being that un-adapted households would report lower rates of satisfaction with wheelchair accessibility, affordability, physical condition, and perceived safety and security of the home. Other more specific neighbourhood satisfaction variables

were considered but ultimately not chosen, as none of them sufficiently tied back to questions of neighbourhood accessibility or disability-related concerns around safety.

Three variables in this research are person-level variables – age, gender, and race. For these variables, the responses of PERSON 1 in the household have been ascribed to the entire household. As previously stated, PERSON 1 is "the household member with the most knowledge of the household's housing situation." The goal of this is to capture information about the "head" of the household, with the understanding that PERSON 1 does not constitute a perfect proxy.

3.7 RESEARCH DESIGN

Analysis of this dataset consists of two primary components: descriptive statistics and logistic regression. First, the selected variables from the dataset will be discussed in broad terms so that a general understanding of each group of Ontario households can be established. A series of t-tests will also be run on these variables to demonstrate basic statistical relationships. Then, logistic regression will be conducted to understand the statistical relationship between dwelling satisfaction, the need for and presence of housing adaptations, and various relevant socio-economic and demographic characteristics. All analyses have been conducted in SPSS and Microsoft Excel.

Four logistic regression models were run on this dataset. All models used the same list of variables (with one exception, discussed below). Wherever possible, variables were converted into a bivariate form for both ease of analysis and confidentiality concerns.

Three dependent variables were used:

1. Dwelling Satisfaction (DWS_05)

2. Does the household require a disability-related dwelling adaptation? (DAA_05)

3. Does the household have all necessary disability-related dwelling adaptations? (DAA_10)

The purpose of this was to investigate how various socio-economic and demographic traits influence Ontario households' overall experience of housing, as well as their need for, and access to, dwelling adaptations. Dwelling Satisfaction (DWS_05) was originally captured by a five-point Likert scale, from Very Satisfied to Very Dissatisfied. This was converted into a bivariate for the regression model, with Very Satisfied and Satisfied being coded as 1 (Satisfied), and Very Dissatisfied, Dissatisfied, and Neither Satisfied nor Dissatisfied being coded as 0 (Dissatisfied).

The first two models were run for all Ontario households (n=12,066, weighted to 5,546,049). Model 1 used the bivariate version of the Dwelling Satisfaction variable as the dependent variable, and Model 2 used the variable DAA_05, do you need a dwelling adaptation, as the dependent variable. The second set of models were run only for Groups B and C (n=1,184, weighted to 499,265). Model 3 again used the bivariate version of Dwelling Satisfaction as its dependent variable; this was done to assess how exactly the presence of a dwelling adaptation among disabled households influenced dwelling satisfaction. Finally, Model 4 used the variable DAA_10, do you have all necessary

disability-related dwelling adaptations, as the dependent variable, in order to determine what factors influenced how households responded to this question.

For Models 3 and 4, the gender category "other gender" was excluded, as the number of households who fell into that category were too low to use in the logistic regression model.

3.8 CONFIDENTIALITY & DATA PROTECTION

This research was conducted on the master file of the 2018 CHS inside the Statistics Canada Research Data Centre (RDC) at McMaster University. Access to these data were granted after submitting a formal application and research proposal that was reviewed and approved by the RDC (see Appendix A). All data releases from the RDC abided by Statistics Canada's confidentiality rules. Any response categories with less than 10 unique responses have either been omitted or collapsed into other categories (for example, all households reporting 5 or more persons in their dwelling were collapsed into a single "5+" category). Income variables that report dollar amounts have been converted into income groups and reported as frequencies. The race variable was collapsed into a white/non-white bivariate variable; the age variable was collapsed into an older-adult (65+) /non-older-adult (15-64) bivariate variable; and the population centre size variable was collapsed into an urban/rural bivariate representation. This was done to meet the 10 unique response minimums and abide by confidentiality standards. Data released from the RDC have been weighted using Statistics Canada's standardized weight, and all reported percentages and raw totals use this standard weight. A normalized weight was used for the t-tests and logistic regression models.

3.9 T-TESTS

T-tests were run to capture a baseline of statistical difference (or not) between groups.

This allowed for a more meaningful discussion of the descriptive statistics, and informed

which variables would go into the regression analysis. The results of the t-tests will be

indicated in the descriptive statistic results tables and graphs presented in Chapter 4. For

the full table of all t-tests conducted, see Appendix B.

3.10 REGRESSION MODEL VARIABLES

As mentioned above, t-tests were first conducted to make sure there was sufficient

statistical variations between groups. For the regression models, all variables were

converted into bivariate relationships (i.e., collapsing the race variable, DV_VMIN, into

white vs non-white). For variables where capturing more than one category was desirable

(such as landlord type), the variable was broken into a series of bivariate variables, each

having a value of either 0 or 1. So, for example, if someone lived in rental housing and

had a private market landlord, they would be coded 1 for Private Landlord and 0 for all

other landlord types. For all housing tenure questions, homeowner was used as the

reference category.

Variables in the regression fall into one of 3 groups – sociodemographic variables (age,

race, gender, income, urban centre size), housing variables (renter versus homeowner,

landlord type, core housing need, dwelling adaptations) and satisfaction variables

(dwelling satisfaction, neighbourhood satisfaction).

The following table is a list of all the variables in the regression models.

Table 3.3 Regression Model Variables

VARIABLE CODE	VARIABLE NAME	CODING NOTES	REGRESSION NOTES
AGE_G	Age	Converted to bivariate – Older Adult or Non-Older Adult	Reference category is Non-Older Adult (16-64)
GENDER	Gender	Male, Female, Other Gender	Reference category is Male. Other Gender was excluded from Models 3 & 4 to abide by minimum 10 cell count
DV_VMIN	Race	Converted to bivariate - White or Non-White	Reference category is White
SCR_25	Landlord Type	Collapsed into 4 groups - Private, Non-Profit, Government, and Homeowner	Reference category is Homeowner
HTTINC (Converted to INC_GRP)	Total Household Income (Converted to Income Group)	Raw income totals were converted into the following groups. Those reporting a negative total household income were converted to 0s. 0-19,999k 20,000-39,999k 40,000-59,999k 60,000-79,999k 80,000-99,999k 100,000k+	Reference category is 100,000k+ income group
CHN	Core Housing Need (CHN)	Possible responses are: Yes in CHN, Not in CHN, Not Assessed for CHN* *Those not assessed for CHN were households on reserves, farm dwellings or household with a zero or negative household total income before-tax or a shelter-cost-to-income ratio greater or equal to 100%.*	Reference category is Not in CHN
DWS_05	Dwelling Satisfaction	5-point Likert scale converted to bivariate - Satisfied or Dissatisfied. The "neutral" option is coded as dissatisfied	Reference category is Dissatisfied

NES_05	Neighbour-hood Satisfaction	5-point Likert scale converted to bivariate - Satisfied or Dissatisfied. The "neutral" option is coded as dissatisfied	Reference category is Dissatisfied
DAA_10	Disability-Related Dwelling Adaptations	Possible responses are: Yes I have all disability-related DAs, no I do not have all necessary DAs, I do not need any DAs.	Reference category is I do not need any disability-related dwelling adaptations
POPCTRSZ	Urban Status	Original question asked what the population size of the area of residence was. Converted to bivariate - urban or rural	Reference category is Urban

Variables that were used in descriptive statistics but excluded from the regression analysis were:

- HHSIZE (household size)
- SCR_10 (rent subsidy)
- DCT_05 (homeownership)
- DV_SAH (living in social affordable housing)
- DWS_10C (satisfaction with dwelling affordability)
- DWS_10D (satisfaction with dwelling condition)
- DWS_10F (satisfaction with dwelling wheelchair accessibility)
- DWS_10G (satisfaction with dwelling security and safety)

These were excluded either because another variable was already directly capturing that

information (for example, SCR_25, who is your landlord, captures homeowners,

DCT_05, by coding them as Valid Skips), or they were too similar to other variables and

interacted poorly with one another in the model (SCR_10, DV_SAH, DWS_10C-G). In

the latter case, landlord type (SCR_25) and income (INC_GRP) were chosen over rent

subsidy (SCR_10) and Social Affordable Housing (DV_SAH). This decision was

informed by the disability literature and previous findings in the dataset. Disabled people

have differential experiences of housing accessibility based on who their landlord is

(Ewart & Harty, 2015; Leviten-Reid, Matthew, & Mowbray, 2019), and the number one

reason cited by those who do not have all necessary disability-related dwelling adaptations is due to cost, something that is also echoed in the literature (Giesbrecht et al, 2017). Additionally, "Social Affordable Housing" is an imprecise designation with no consistent definition (Statistics Canada, 2021), though it commonly overlaps with other measures, such as households living in non-market rental housing, or having certain rent subsidies, which are already captured by other variables in this survey. It was therefore determined that landlord type (SCR_25) and income (INC_GRP) were superior measures compared to social affordable housing (DV_SAH) and rent subsidy (SCR_10).

Additionally, this research was most interested in understanding dwelling and neighbourhood satisfaction *in general* in the model, especially how they related to one another, and therefore the four more specific dwelling satisfaction variables were excluded from the regression analysis.

Chapter 4 – Results

4.1 DESCRIPTIVE STATISTICS

4.1.1 Household Characteristics

The following table, Table 4.1, lays out the basic "profile" of each household group, including both demographic and household characteristics. Significant statistical differences between groups are indicated next to each relevant variable.

The average household size of all three groups is slightly greater than 2. Groups A (households that do not need adaptations) and B (households that need and have adaptations) are comparable in their proportions of women-led households, with women representing approximately 50% of household heads in each group. In Group C (households that need but do not have adaptations), 59.2% are women-led, which is statistically significantly higher than Groups A or B. There are no statistical differences across groups with respect to the number of non-white households, with all of them hovering around a quarter of all sampled households. The proportion of older adults vary drastically across groups, with the highest rates of older adults in Group B, where 43.3% of all households are older adult led. Group C has a somewhat lower share of older adults (36.9%) compared to Group B, but still much higher than Group A (24.1%).

Table 4.1. Descriptive Statistics Results

	GROUP A (Do not need adaptations)	GROUP B (Need & have adaptations)	GROUP C (Need & don't have adaptations)
Average Household Size (n)	2.07	2.14	2.23
% Women-Led Households	49.1^C	50.7^C	59.2^{AB}

% Older Adults	24.1[BC]	43.3[AC]	36.9[AB]
% Non-White	25.8	27.5	25.6
% Homeowners	69.8[B]	64.5[AC]	70.4[B]
% Households with Subsidized Rent*	12.2[BC]	32.4[A]	31.0[A]
Landlord Type* **Private** **Non-Profit** **Government**	83.0% Private[BC] 10.9% Non-Profit[BC] 6.1% Government[BC]	68.7% Private[A] 16.7% Non-Profit[A] 14.6% Government[A]	70.4% Private[A] 13.8% Non-Profit[A] 15.8% Government[A]
% Urban	87.2%	89.0%	86.1%
% Households living in Social Affordable Housing (SAH)	13.2%[BC]	34.3%[A]	32.3%[A]
% Households that spend over 30% of their income on shelter	26.2%[B]	32.0%[AC]	26.6%[B]
% Households in Core Housing Need (CHN)	12.8%[BC]	23.2%[A]	25.0%[A]
% Income Groups **0-20k** **20-40k** **40-60k** **60-80k** **80-100k** **100k+**	5.5%[BC] 13.5%[BC] 15.1%[B] 13.6%[B] 11.4%[B] 40.8%[BC]	11.1%[AC] 22.2%[A] 13.3%[AC] 18.1%[AC] 8.6%[AC] 26.7%[A]	8.2%[AB] 23.9%[A] 16.5%[B] 14.2%[B] 11.0%[B] 26.3%[A]

Question only asked to households who indicated that they do not own their dwelling – representing ~30% of all households across groups. Homeowners were coded as a Valid Skip for this question, and are excluded from percentage calculations.

A   Indicates statistically significant difference ($|t| \geq 1.96$) from Group A
B   Indicates statistically significant difference ($|t| \geq 1.96$) from Group B
C   Indicates statistically significant difference ($|t| \geq 1.96$) from Group C

Rates of living in an urban area are consistent across all household groups.

Homeownership rates vary slightly. Groups A and C have statistically comparable

homeownership rates to one another (69.8% and 70.4%, respectively), but Group B has

statistically lower ownership rates (64.5%) than either household group.

When it comes to shelter-cost-to-income ratios, the outcomes are similar: roughly a quarter of the households in Groups A (26.2%) and C (26.6%) spend 30 percent or more of their income on shelter. Group B is slightly more likely (32.0%) than either group to spend more than 30% of their income on housing.

Across all three household groups, private landlords make up the majority of landlords. However, for household Groups B and C, they are both statistically less likely to have a private landlord (68.7% and 70.4% percent, respectively) than Group A (83.0%), and more likely to live in either non-profit or government-owned rental housing. The rates for government rental housing in particular are more than double for Groups B (14.6%) and C (15.8%) compared to Group A (6.1%).

The most striking differences appear in rates of rent subsidy, Core Housing Need (CHN), and Social Affordable Housing (SAH). Households that require an adaptation (B and C) are more than twice as likely to have their rent subsidized (32.4% and 31.0%) and to live in SAH (34.3% and 32.3%) compared to Group A, whose rent subsidy rates are 12.2% and rates of SAH are at 13.2%. Groups B and C are also almost twice as likely to be in Core Housing Need compared to Group A, with Group B being 1.81 times more likely and Group C being 1.95 times more likely.

4.1.2 Reasons for lack of dwelling adaptations

An additional variable, asked only of those who do not have all necessary dwelling adaptations (Group C), asks why these adaptations were not made. Respondents were

allowed to indicate more than one reason. Table 4.2 provides a summary of these responses below.

Overwhelmingly, the most common reason why households do not have all necessary adaptations to their home is due to cost, representing almost half (49.3%) of households in Group C. The next two most common reasons are "Don't know how" at 18.7%, and "Other reason" at 14.0%. The survey did not allow for additional context to be provided for households who indicated "Other reason".

Additionally, while only 10% of households indicated "not allowed to do it" as a reason for not having the adaptations they require, that means 1 in 10 disabled households needing an adaptation are being prevented by someone from accessing the adaptations they need, whether by a landlord (which is illegal) or by a family member.

Table 4.2. Needs but does not have dwelling adaptation (%)

Why does your dwelling not have all the adaptations your household need?**	GROUP C
Can't afford it	49.3%
Don't know how	18.7%
Other reason	14.0%
Not enough time yet	11.5%
Not allowed to do it	10.0%
Planning to move	9.0%
Not worth doing	8.7%
Can't find someone to do it	6.8%

***Totals add up to more than 100% because households were allowed to indicate more than one reason for not having an adaptation.*

4.1.3 General Dwelling and Neighbourhood Satisfaction

Finally, dwelling satisfaction and neighbourhood satisfaction were looked at across groups. The first two variables, overall dwelling satisfaction and overall neighbourhood

satisfaction, are represented as bivariate responses in order to be consistent with the

regression models discussed later in this chapter. Figure 4.1 displays the distribution of

responses to the question "How satisfied are you with your dwelling?" for all three

household groups. While the most common response for each group is "Satisfied", there

are differences, with Groups A and B having roughly comparable dwelling satisfaction

rates (82.0% and 79.2%, respectively), though Group B is statistically slightly more likely

to report being dissatisfied (20.8%) with their dwelling than Group A (18.0%).

Group C is much more likely to report being dissatisfied with their dwelling (35.0%)

compared to Groups A or B, and they are the household group that is least satisfied with

their dwelling overall. In particular, Group C is almost twice as likely (1.94 times) to be

dissatisfied with their dwelling than Group A. Put another way, 1 in 3 households that

need but do not have adaptations (Group C) reported some level of dissatisfaction with

their dwelling, compared to 1 in 5 households for Groups A and B.

Figure 4.1. Overall Dwelling Satisfaction
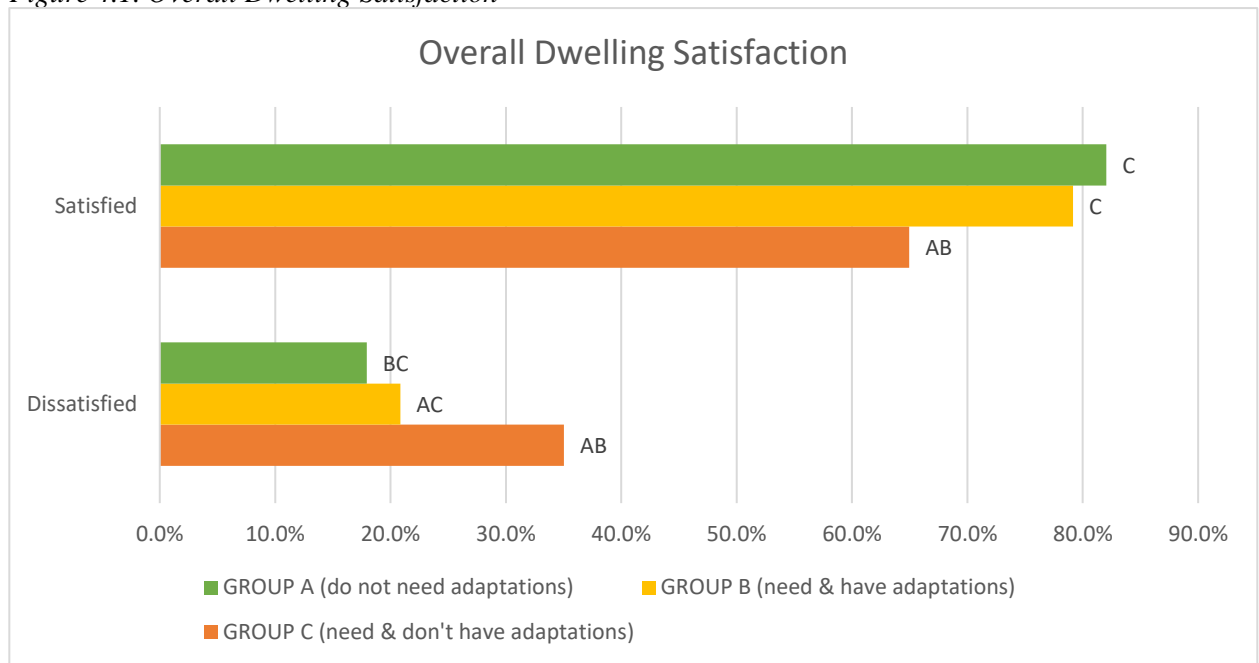
A   Indicates statistically significant difference (|t| ≥ 1.96) from Group A
B   Indicates statistically significant difference (|t| ≥ 1.96) from Group B
C   Indicates statistically significant difference (|t| ≥ 1.96) from Group C

Figure 4.2 highlights overall neighbourhood satisfaction. The responses share a similar spread to dwelling satisfaction, though the differences are somewhat weaker. Group B has similar rates of neighbourhood satisfaction (82.0%) to both Groups A (84.4%) and C (75.1%), although it is more likely to be dissatisfied with their neighbourhood (18.0%) than Group A (15.6%). Much like dwelling satisfaction, Group C has the overall lowest neighbourhood satisfaction outcomes, being the most likely to be dissatisfied with their neighbourhood (24.9%). In particular, Group C is 1.6 times more likely to report being dissatisfied with their neighbourhood than Group A.

Figure 4.2. Overall Neighbourhood Satisfaction
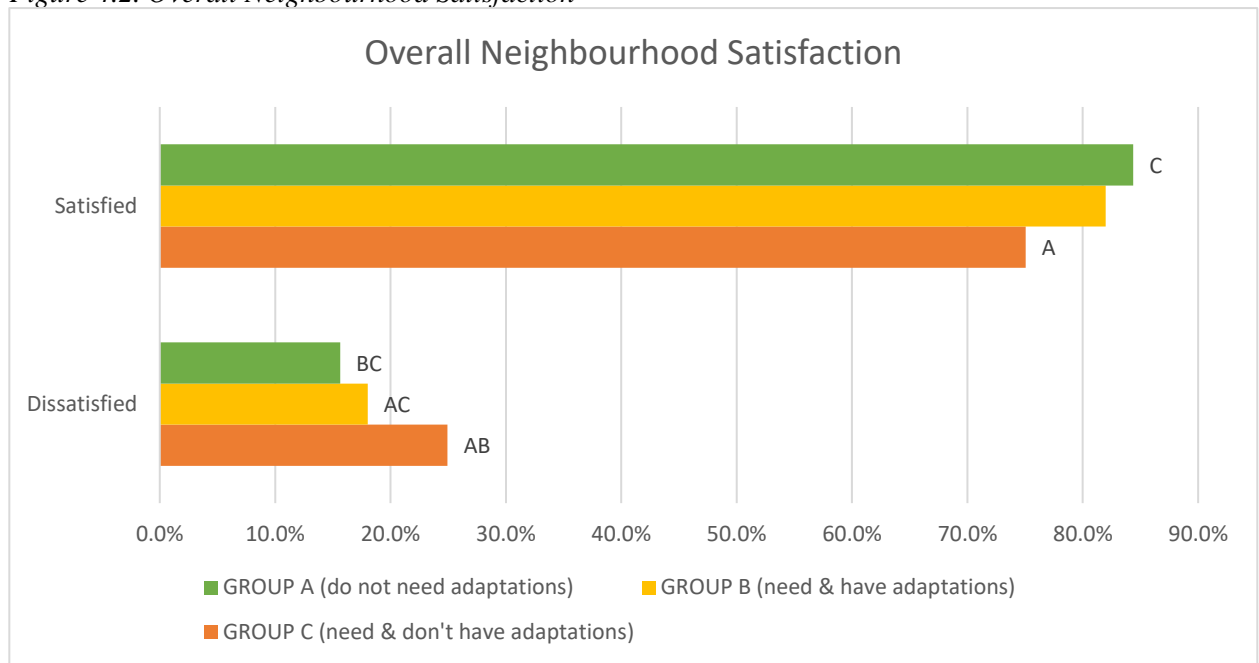
A   *Indicates statistically significant difference (|t| ≥ 1.96) from Group A*
B   *Indicates statistically significant difference (|t| ≥ 1.96) from Group B*
C   *Indicates statistically significant difference (|t| ≥ 1.96) from Group C*

Neighborhood satisfaction and dwelling satisfaction appear to be linked – being satisfied

with your dwelling means you are more likely to be satisfied with your neighbourhood,

and/or vice versa. This relationship is likely multi-directional, though likely not causal.

Given the vagueness of the question, and the limitations of a single measure of overall

"satisfaction", it is difficult to tell what exactly is being captured by this variable. The

four follow-up dwelling satisfaction variables below provide further detail.

4.1.4 Specific Dwelling Satisfaction Variables

Figure 4.3 captures the relationship between satisfaction and dwelling affordability.

Groups A and B report similar rates of satisfaction with the affordability of their dwelling

(68.1% and 72.7%). Group C is statistically significantly different from both groups, with

nearly half of households reporting some level of dissatisfaction (43.8%), compared with

Groups A and B (31.9% and 27.3%), and Group C is much less likely to be satisfied

(56.2%) than either group.

Figure 4.3. Satisfaction with Dwelling Affordability
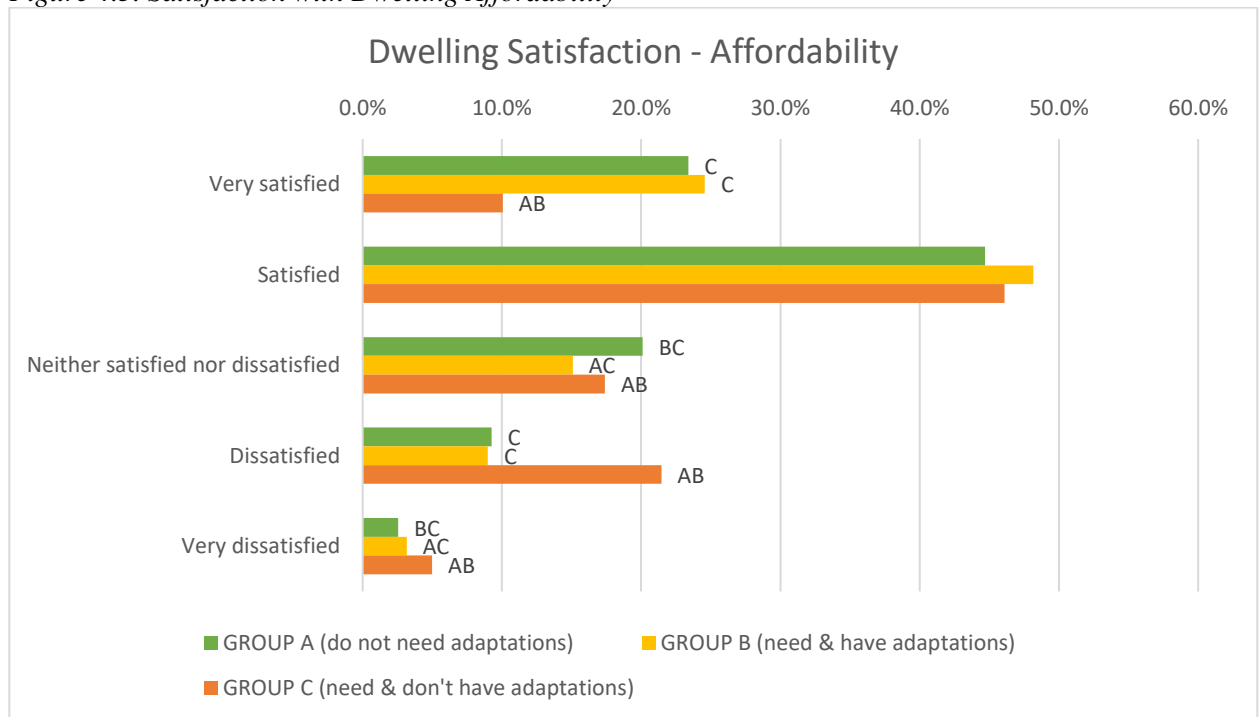
A   *Indicates statistically significant difference (|t| ≥ 1.96) from Group A*
B   *Indicates statistically significant difference (|t| ≥ 1.96) from Group B*
C   *Indicates statistically significant difference (|t| ≥ 1.96) from Group C*

Figure 4.4 shows satisfaction with dwelling condition, referring to the overall physical

condition of the dwelling. A very similar pattern emerges; Group A and B have

statistically comparable rates of satisfaction (75.8% and 76.4%, respectively), though

Group B is more likely to report being very dissatisfied (3.7%) than Group A (1.7%).

Group C is statistically different from both groups, with half (49.7%) being dissatisfied in

some way. This is especially stark compared to Group A's (24.2%) and B's (23.6%)

overall dissatisfaction responses.

Figure 4.4. Satisfaction with Dwelling Condition
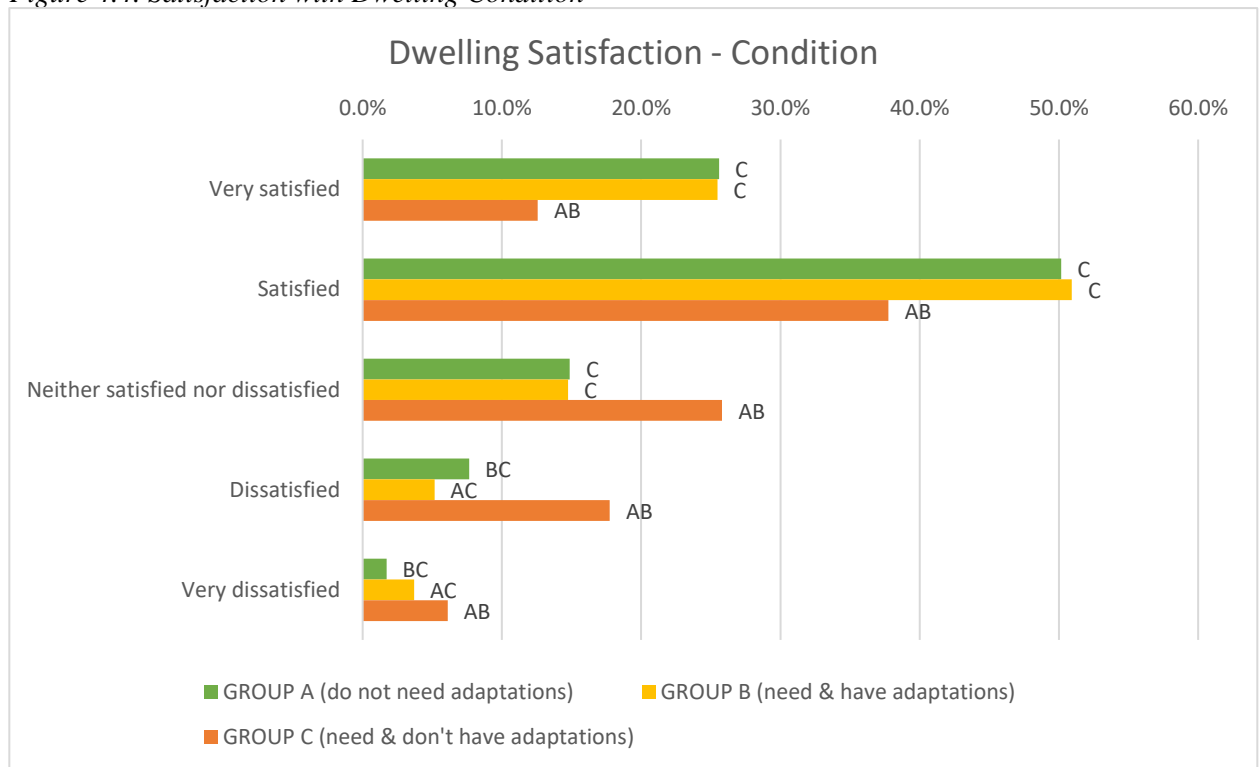
A   Indicates statistically significant difference (|t| ≥ 1.96) from Group A
B   Indicates statistically significant difference (|t| ≥ 1.96) from Group B
C   Indicates statistically significant difference (|t| ≥ 1.96) from Group C

Figure 4.5 captures satisfaction with wheelchair accessibility within the dwelling. All three household groups are statistically different from one another. Group B reports the highest levels of satisfaction with wheelchair accessibility, split more or less evenly between satisfied (51.3%) and dissatisfied (48.7%). Group A is the next highest, though only 32.4% of households reported that they were satisfied with the accessibility of their dwelling. Finally, Group C reports the lowest levels of satisfaction (20.8%). Unsurprisingly, 79.2% of households in Group C report some level of dissatisfaction with the accessibility of their dwelling, and 23.2% fell into the Very Dissatisfied category.

Despite Groups A and C both not having any disability-related dwelling adaptations in their home, Group C reports far lower satisfaction outcomes when it comes to the accessibility of their dwelling. It's not clear whether this is due to perception, with able-bodied households (i.e., Group A) being more optimistic about—or less concerned with—the accessibility of their home, or if Group C actually lives in less accessible housing due to other factors, such as higher rates of Core Housing Need.

Figure 4.5. Satisfaction with Wheelchair Accessibility within the Dwelling
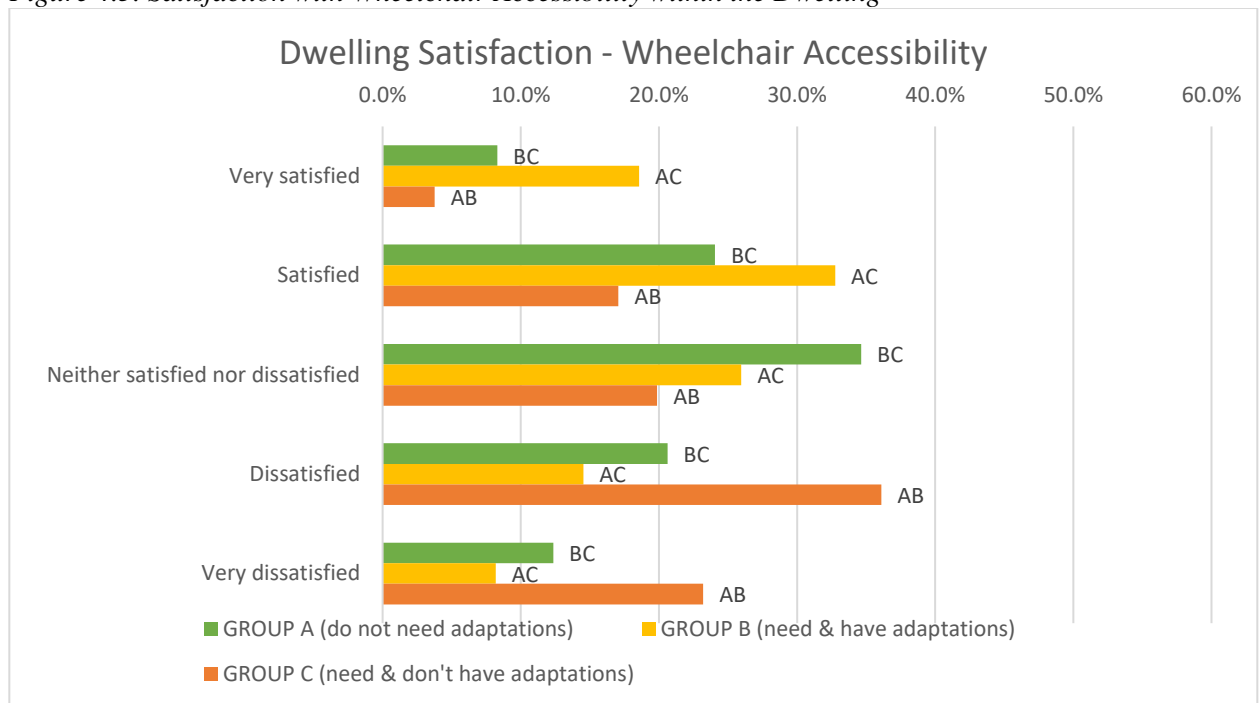
A   Indicates statistically significant difference (|t| ≥ 1.96) from Group A
B   Indicates statistically significant difference (|t| ≥ 1.96) from Group B
C   Indicates statistically significant difference (|t| ≥ 1.96) from Group C

Finally, the last variable of interest is ranking the household's satisfaction levels with the perceived safety and security of their dwelling (Figure 4.6). The distribution of responses is similar to the first two – affordability and condition – with Groups A and B being generally similar in satisfaction rates (87.9% and 91.0%, respectively), though Group B

be is less likely to report the neutral option ("neither satisfied nor dissatisfied") than

Group A. Group C is statistically different from both groups, being both less likely to

report being satisfied (69.2%) and more likely to report being dissatisfied (30.8%). This is

in contrast to Group A's (12.1%) and Group B's (9.0%) levels of dissatisfaction.

Figure 4.6. Satisfaction with Perceived Safety & Security within the Dwelling
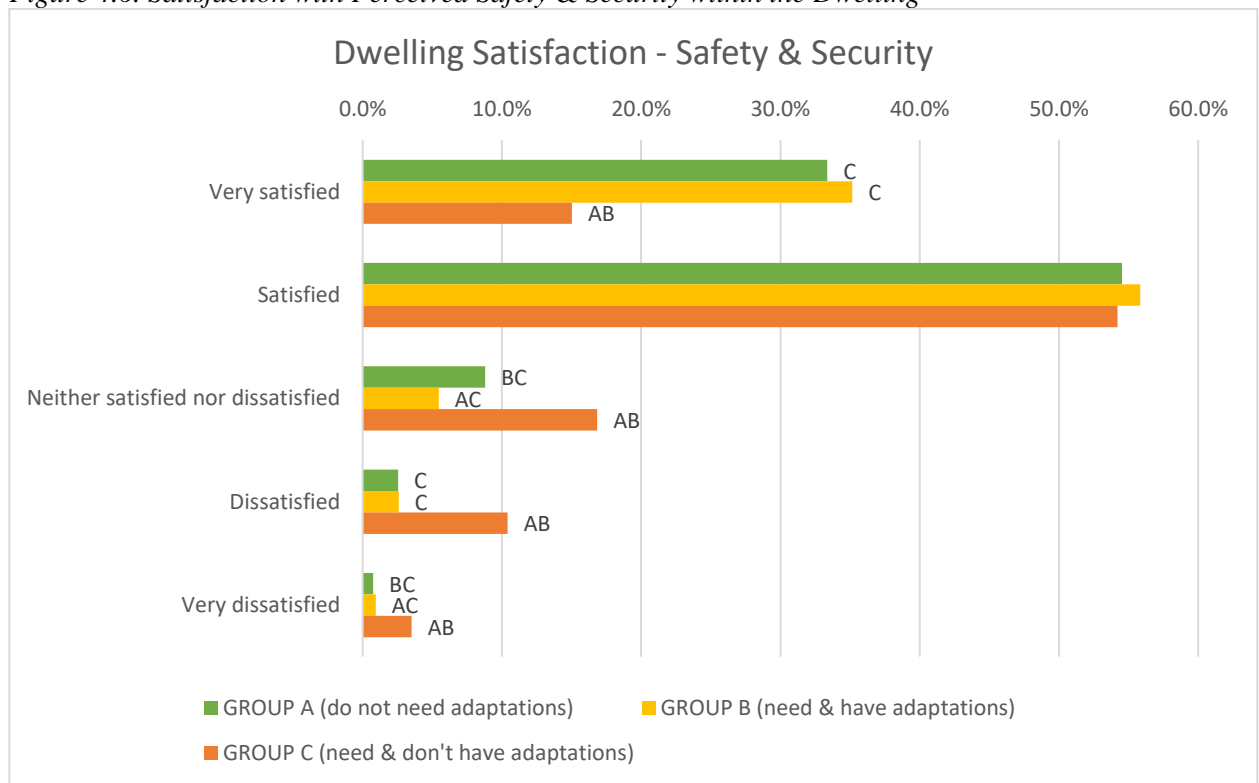
A   Indicates statistically significant difference (|t| ≥ 1.96) from Group A
B   Indicates statistically significant difference (|t| ≥ 1.96) from Group B
C   Indicates statistically significant difference (|t| ≥ 1.96) from Group C

4.1.5 Discussion of Descriptive Statistics

From these results, it is possible to build meaningful profiles of each household group.

All three household groups are similar when it comes to race and living in an urban area,

and the majority of all renter households are likely to have a private landlord.

Looking at Groups B and C in particular (households who need adaptations), they have statistically comparable rates of Core Housing Need and rent subsidy, as well as similar instances of living in non-market housing—which is a surprise, as it was originally assumed based on the literature that households that do not have the adaptations they need would be more likely to have a private landlord. This indicates that while disabled households are disproportionately represented in non-market housing, living in a government or non-profit rental unit does not guarantee access to dwelling adaptations, and those who do not have the necessary adaptations report cost as the most common reason why. Women-led households, especially younger ones, appear to be particularly underserved when it comes to provisions of disability-related dwelling adaptations.

These two household groups are also different in many ways. Households that have all necessary disability-related dwelling adaptations (Group B) are older, less likely to be homeowners, more satisfied with their dwelling and neighbourhood, 2.5 times more likely to report that their dwelling is wheelchair accessible, are less likely to live in a rural area, and spend more of their income on housing. Households that do not have the adaptations they need (Group C) are younger, more likely to be women-led, overwhelmingly likely to report that their dwelling is wheelchair inaccessible, and are less satisfied with their dwelling and neighbourhood.

Group B represents a complicated "middle" point between those who do not have all necessary adaptations (Group C) and those who do not need any (Group A). They are statistically comparable to Group A when it comes to measures of dwelling and neighbourhood satisfaction, as well as rates of women-led households. They are

statistically comparable to Group C on measures of rent subsidy, landlord type, living in SAH, and incidences of CHN.

This could be for a variety of reasons. Group B has the highest rate of older adult-led households, meaning that some of them could be accessing certain disability-related social programs geared towards older adults, especially those provided to tenants in government and non-profit rental housing. Moreover, because Group B skews older, they could also represent households with sufficient financial capacity to pay for these adaptations out of pocket. Group B is likely composed of multiple sub-groups; some of them being particularly vulnerable people being served by social programs, and some of them being wealthier older adults who have the financial means to adapt their dwelling themselves. This would hold true when comparing them with Group C (those who need but do not have adaptations), who skews slightly younger, slightly more female, and who report that the most common reason why they do not have the adaptations they need is because they are too expensive. Group B is also more likely to spend over 30% of their income on shelter, which may suggest that Group B would be uniquely vulnerable to inaccessible housing due to the high cost of dwelling adaptations.

4.1.5.1 Dwelling Satisfaction

The subject of dwelling satisfaction is a complex one. The preceding results do not present a single straightforward answer to what "dwelling satisfaction" is measuring. Does it have to do with the aesthetics or functionality of the home? Is it a reflection of social conditions? Is it a function of your economic position? How does the presence, or absence, of disability-related dwelling adaptations influence this?

Furthermore, drawing direct causal links between adaptations and dwelling satisfaction are difficult. The presence of an adaptation is positively associated with dwelling satisfaction, and the inverse of this is also true – a lack of needed adaptations leads to worse dwelling satisfaction outcomes. Comparable rates of dwelling satisfaction are reported between Groups A and B, though Group B is still statistically more likely to report being dissatisfied (Figure 4.1). Given the vague and subjective nature of "satisfaction" with one's dwelling, multiple sources of (dis)satisfaction are likely. Group B's higher rates of overall dwelling dissatisfaction demonstrates that, while adaptations play a meaningful role in dwelling satisfaction outcomes, their presence does not solve or eliminate other sources of dissatisfaction within the home. Looking at affordability, physical condition, wheelchair accessibility, and security and safety, it's possible to refine the exact relationship between these two things.

Groups A and B are statistically similar to one another in three of the four specific dwelling satisfaction variables—affordability, condition, and safety and security. For wheelchair accessibility, however, Group B is 1.6 times more likely to report being satisfied with the wheelchair accessibility of their dwelling than Group A. This is significant, because only 32% of Group A households report their homes being wheelchair accessible, which is higher than Group C (20.8%) but much lower than Group B (51.3%). Given the general invisibility of disability issues to the able-bodied public, 'accessibility' is likely absent from non-disabled households' definition of dwelling satisfaction – i.e., households that do not need adaptations would not cite the (in-)accessibility of their home to be a significant influence on whether or not they are

satisfied with their housing. Access to adaptations and the physical accessibility of the home appear to play a significant role in how disabled households measure their dwelling satisfaction, but the same is not necessarily true for non-disabled households.

However, there are still other aspects of the dwelling that could be influencing satisfaction. Compared to Group A, households that have the adaptations they need (Group B) are still disproportionately more likely to live in Core Housing Need, have their rent subsidized, spend more of their income on shelter, and are much more likely to have a non-market landlord, meaning that their housing situation is on average more tenuous than non-disabled households. The high proportion of older adults in Group B also speaks to the specific nature of welfare provisions in Canada (Suttor, 2016), which focuses more heavily on older adults. The disproportionate number of women-led households in Group C also suggests that, while women in Canada are more likely to have a disability than men, this discrepancy is not being addressed by current disability legislation. Gender inequality, therefore, could be influencing satisfaction outcomes within the home.

4.1.5.2 Neighbourhood Satisfaction

It is more difficult to understand how disability relates to neighbourhood satisfaction with this dataset. The main take away is that neighbourhood satisfaction is linked to dwelling satisfaction, and this relationship is likely multi-directional. Referring back to Figure 4.2, those who have the necessary adaptations (Group B) have similar neighbourhood satisfaction rates (82.0%) to households that do not require adaptations (Group A) (84.4%), while households that do not have the necessary adaptations (Group C) report

overall lower neighbourhood satisfaction rates (75.1%). The presence of an adaptation could therefore have an influence on how people view their community, despite the adaptation only modifying their immediate dwelling.

This could be for several reasons. Adaptations could make it easier for people to leave their homes and therefore engage with the surrounding community, or the positive effects of an enabling environment in the home may be externalized to perceptions of the neighbourhood. Although a number of more specific follow-up questions in the CHS were asked about various amenities in the community when investigating the particulars of neighbourhood satisfaction, none of them pertained to disability or accessibility. Establishing how the accessibility of the neighbourhood informs perceptions of home (or vice versa) are therefore not possible, meaning only one direction of a likely multi-directional relationship between dwelling and neighbourhood satisfaction is observable.

4.1.5.3 Safety & Security, and Conditions of the Home

A lack of housing adaptations can also threaten people's ontological security within their home. While the question "how satisfied are you with feeling safe and secure within your home?" is subjective, the difference in responses across groups reflects this threat. Households that do not have the necessary adaptations to their home (Group C) are 2.5 times more likely to report feeling unsafe in their home compared to households that do have adaptations (Group B), and 3.4 times more likely to report feeling unsafe compared to households that require no adaptations (Group A). Groups A and B report similar rates of satisfaction with perceived safety and security of the dwelling, though Group B is slightly more likely to fall into the Very Dissatisfied category.

The lack of perceived safety and security for Group C is likely heavily linked with the lack of adaptations in the home as opposed to other reasons, such as their high rates of Core Housing Need or the condition of their dwelling. Groups B and C have very similar housing profiles, but Group B's satisfaction rates with the safety of their home is statistically comparable to Group A. This could also explain why, despite those similar instances of CHN in Groups B and C, Group C is 2.1 times more likely to report being dissatisfied with the condition of their dwelling than Group B. Again, given the subjective and vague nature of "condition", things like dwelling adaptations are likely being taken into consideration when answering this question. However, more in-depth explorations of how these groups conceptualize safety within the home need to be done in order to understand this difference, especially in relation to the surrounding neighbourhood.

We can also use these variables to understand the positive impacts that dwelling adaptations have on the home. Households that have all the necessary adaptations they need (Group B) are overwhelmingly likely (91%) to report feeling safe and secure within their home, which is statistically comparable to Group A. Safety and security, therefore, are linked with dwelling accessibility for those who are disabled, and only incidental to those who are not – not because able bodied people tolerate inaccessibility for themselves more, but because housing is by default accessible to them.

4.2 LOGISTIC REGRESSION

4.2.1 Model 1 – Dwelling Satisfaction, All Ontario Households

Table 4.3 presents the first of the four regression models. It uses a bivariate version of the Dwelling Satisfaction variable for the dependent variable, and this regression model uses

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all three household groups. This was done to provide a general understanding of how dwelling satisfaction is related to these variables.

Variables positively correlated with being satisfied with your dwelling include being an older adult, being in lower income groups (specifically 0-20k & 20-40k) and being satisfied with your neighbourhood.

Variables negatively correlated with being satisfied with your dwelling include being non-white, living in any type of rental housing (private, non-profit, or government), being in the 40-60k income group, being in Core Housing Need (CHN) or not being assessed for CHN, and needing but not having all necessary disability-related dwelling adaptations.

Table 4.3: Model 1 – Logistic Regression: Are you satisfied with your dwelling? All Ontario households

	Variable	**B**	**Significance**	**Exp(B)**
AGE	Older Adult	**0.489**	**0.000**	**1.631**
GENDER	Female	0.039	0.456	1.040
	Other Gender	-0.988	0.203	0.372
RACE	Non-White	**-0.489**	**0.000**	**0.613**
LANDLORD TYPE	Non-Profit Landlord	**-0.885**	**0.000**	**0.413**
	Government Landlord	**-0.575**	**0.001**	**0.563**
	Private Landlord	**-1.072**	**0.000**	**0.342**
INCOME	0-20k Income Group	**0.297**	**0.028**	**1.346**
	20-40k Income Group	**0.281**	**0.007**	**1.324**
	40-60k Income Group	**-0.190**	**0.021**	**0.827**
	60-80k Income Group	-0.050	0.549	0.951
	80-100k Income Group	0.043	0.640	1.044
CORE HOUSING NEED	In Core Housing Need	**-0.476**	**0.000**	**0.621**
	Not Assessed for CHN	**-0.571**	**0.000**	**0.565**
NEIGH'HOOD SATISFACTION	Satisfied with Neighbourhood	**1.754**	**0.000**	**5.777**
DWELLING ADAPTATIONS	Need & Has DA(s)	-0.165	0.178	0.848

	Variable	B	Significance	Exp(B)
	Need but don't have DA(s)	**-0.984**	**0.000**	**0.374**
URBAN STATUS	Rural	-0.028	0.760	0.973
	Constant	**0.676**	**0.000**	**1.966**

Positive correlation	
Negative correlation	
OBSERVATIONS	11938
PERCENTAGE CORRECT	83.3%
-2 LOG LIKELIHOOD	9621.077
COX & SNELL R SQUARED	0.146

4.2.2 Model 2 – Needing a Dwelling Adaptation, All Ontario Households

Table 4.4 presents the results of the second regression model. Still using all three household groups, the dependent variable this time is "Do you need any disability-related dwelling adaptations?" This model was run to better understand the factors influencing household's need for dwelling adaptations.

Variables positively associated with needing a disability-related dwelling adaptation include being an older adult, living in a woman-led household, living in government rental housing, every income group except for the 40-60k income group, and being in CHN.

Variables negatively associated with needing a disability-related dwelling adaptation include living in private rental housing, not being assessed for CHN, and being satisfied with your dwelling.

Table 4.4: Model 2 – Logistic Regression: Do you need an adaptation? All Ontario households

	Variable	B	Significance	Exp(B)
AGE	Older Adult	**0.699**	**0.000**	**2.012**
GENDER	Female	**0.174**	**0.009**	**1.190**

	Other Gender	0.350	0.737	1.419
RACE	Non-White	0.106	0.181	1.112
LANDLORD TYPE	Non-Profit Landlord	-0.020	0.899	0.980
	Government Landlord	**0.495**	**0.004**	**1.641**
	Private Landlord	**-0.358**	**0.000**	**0.699**
INCOME	0-20k Income Group	**0.966**	**0.000**	**2.626**
	20-40k Income Group	**0.513**	**0.000**	**1.670**
	40-60k Income Group	0.199	0.070	1.220
	60-80k Income Group	**0.502**	**0.000**	**1.652**
	80-100k Income Group	**0.267**	**0.026**	**1.306**
CORE HOUSING NEED	In Core Housing Need	**0.349**	**0.001**	**1.418**
	Not Assessed for CHN	**-0.737**	**0.000**	**0.479**
DWELLING SATISFACTION	Satisfied with Dwelling	**-0.597**	**0.000**	**0.550**
NEIGH'HOOD SATISFACTION	Satisfied with Neighbourhood	-0.153	0.083	0.858
URBAN STATUS	Rural	0.039	0.704	1.040
	Constant	**-2.332**	**0.000**	**0.097**

Positive correlation	
Negative correlation	
OBSERVATIONS	11938
PERCENTAGE CORRECT	91.0%
-2 LOG LIKELIHOOD	6857.092
COX & SNELL R SQUARED	0.030

4.2.3 Model 3 – Dwelling Satisfaction, Households Requiring an Adaptation

The third model uses the bivariate version of the dwelling satisfaction variable as its

dependent variable again, but this time only Groups B and C (households that need an

adaptation) were included in the model. This model was designed to determine the degree

to which dwelling adaptations influenced dwelling satisfaction for households that needed

them.

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Variables positively correlated with being satisfied with your dwelling include being in the 0-20k income group, being satisfied with your neighbourhood, and living in a rural area.

Variables negatively correlated with being satisfied with your dwelling include being non-white, having a non-profit or private landlord, being in CHN or not being assessed for CHN, and needing but not having all necessary disability-related dwelling adaptations.

Table 4.5: Model 3 – Logistic Regression: Are you satisfied with your dwelling? Households requiring an adaptation

	Variable	B	Significance	Exp(B)
AGE	Older Adult	0.148	0.405	1.160
GENDER	Female	-0.278	0.090	0.757
RACE	Non-White	**-0.834**	**0.000**	**0.434**
LANDLORD TYPE	Non-Profit Landlord	**-1.079**	**0.002**	**0.340**
	Government Landlord	-0.603	0.103	0.547
	Private Landlord	**-1.383**	**0.000**	**0.251**
INCOME	0-20k Income Group	**0.691**	**0.051**	**1.995**
	20-40k Income Group	0.525	0.082	1.691
	40-60k Income Group	0.376	0.179	1.456
	60-80k Income Group	0.219	0.407	1.244
	80-100k Income Group	-0.339	0.249	0.712
CORE HOUSING NEED	In Core Housing Need	**-0.597**	**0.009**	**0.551**
	Not Assessed for CHN	**-1.883**	**0.000**	**0.152**
NEIGH'HOOD SATISFACTION	Satisfied with Neighbourhood	**1.917**	**0.000**	**6.800**
DWELLING ADAPTATIONS	Need but don't have DA(s)	**-0.917**	**0.000**	**0.400**
URBAN STATUS	Rural	**0.689**	**0.042**	**1.992**
	Constant	**0.790**	**0.003**	**2.203**
Positive correlation				
Negative correlation				
OBSERVATIONS	1171			
PERCENTAGE CORRECT	79.4%			

-2 LOG LIKELIHOOD	1038.380
COX & SNELL R SQUARED	0.255

4.2.4 Model 4 – Having All Necessary Adaptations, Households Requiring an Adaptation

Finally, Model 4 uses the variable "Does your dwelling have all the adaptations that your household needs?" as the dependent variable, and only Groups B and C are included in the model. This was done to determine which factors influenced a household's access to disability-related dwelling adaptations.

Variables positively correlated with having all necessary disability-related dwelling adaptations include being an older adult, living in non-profit or private rental housing, and being satisfied with your dwelling.

Variables negatively correlated with having all necessary disability-related dwelling adaptations include being in a woman-led household.

Table 4.6: Model 4 – Logistic Regression: Do you have all required adaptations? Households requiring an adaptation

	Variable	B	Significance	Exp(B)
AGE	Older Adult	**0.409**	**0.003**	**1.505**
GENDER	Female	**-0.272**	**0.031**	**0.762**
RACE	Non-White	0.238	0.124	1.269
LANDLORD TYPE	Non-Profit Landlord	**0.706**	**0.020**	**2.026**
	Government Landlord	0.432	0.157	1.540
	Private Landlord	**0.694**	**0.000**	**2.003**
INCOME	0-20k Income Group	0.144	0.605	1.154
	20-40k Income Group	-0.292	0.183	0.747
	40-60k Income Group	-0.399	0.059	0.671
	60-80k Income Group	0.077	0.699	1.080
	80-100k Income Group	-0.256	0.260	0.774
CORE HOUSING NEED	In Core Housing Need	-0.100	0.591	0.905

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	Not Assessed for CHN	0.616	0.120	1.851
DWELLING SATISFACTION	Satisfied with Dwelling	**0.876**	**0.000**	**2.402**
NEIGH'HOOD SATISFACTION	Satisfied with Neighbourhood	0.166	0.323	1.181
URBAN STATUS	Rural	-0.345	0.076	0.708
	Constant	**-0.794**	**0.000**	**0.452**

Positive correlation	
Negative correlation	
OBSERVATIONS	1171
PERCENTAGE CORRECT	60.9%
-2 LOG LIKELIHOOD	1543.797
COX & SNELL R SQUARED	0.064

4.2.5 Discussion of Logistic Regression Models

The most consistent finding is that adaptations have an important influence on dwelling satisfaction outcomes. In all four regression models, dwelling satisfaction and adaptations are strongly correlated. The first two models, Models 1 and 2, look at all three household groups. In the case of Model 1, being satisfied with one's dwelling is strongly negatively correlated ($p < 0.01$) with not having all the necessary adaptations in the home. In Model 2, needing a dwelling adaptation (irrespective of whether you have one) is strongly negatively correlated ($p < 0.01$) with being satisfied with your dwelling. In Model 3, looking just at homes requiring adaptations (Groups B and C), satisfaction with one's dwelling is again strongly negatively correlated ($p < 0.01$) with needing, but not having, adaptations within the home. And in Model 4, having all necessary dwelling adaptations is strongly positively correlated ($p < 0.01$) with being satisfied with one's dwelling.

Interestingly, in Model 1, needing *and* having dwelling adaptations is statistically irrelevant in dwelling satisfaction outcomes, but needing and *not* having them is negatively correlated with dwelling satisfaction. This reinforces the observed trends in the descriptive statistics, which is that households with the adaptations they need (Group B) are statistically comparable to households that need no adaptations (Group A) when measuring satisfaction with one's dwelling. Only when looking at the sub-population of households needing an adaptation (Groups B and C) in Model 4 does the presence of adaptations emerge as a positive indicator of being satisfied with one's dwelling. Additionally, in Model 2, dwelling satisfaction is negatively correlated with needing an adaptation regardless of whether a household has one. This indicates that Group C's dissatisfaction with their dwelling is significant enough that it becomes strongly negatively correlated ($p < 0.01$) with dwelling satisfaction, even when they are grouped with Group B in the dependent variable.

Neighbourhood satisfaction is also statistically linked to dwelling satisfaction; in both Models 1 and 3, which use Dwelling Satisfaction as the dependent variable, being satisfied with one's neighbourhood is strongly positively correlated ($p < 0.01$) with being satisfied with one's dwelling. However, being satisfied with one's neighbourhood is *not* statistically linked with either needing a dwelling adaptation (Model 2) or having all necessary dwelling adaptations (Model 4). This means that, while dwelling satisfaction is strongly correlated with adaptations, and neighbourhood satisfaction is strongly correlated with dwelling satisfaction, adaptations themselves do not appear to directly influence neighbourhood satisfaction.

4.2.6 Demographics

Age has an unsurprising and straightforward link to adaptations. Older adults are both strongly positively correlated ($p < 0.01$) with needing an adaptation, as seen in Model 2, and are statistically more likely to have them ($p = 0.03$), as seen in Model 4. Additionally, while age is strongly positively correlated ($p < 0.01$) with being satisfied with one's dwelling in Model 1, which uses the entire Ontario population, age becomes statistically irrelevant when measuring dwelling satisfaction in just groups who need dwelling adaptations (see Model 3). This is despite the rate of older adults being statistically significantly different between Groups B and C (see Table 4.1), meaning that while age is a good predictor of whether or not a household will have an adaptation, and that adaptations improve dwelling satisfaction rates, being an older adult does not necessarily indicate satisfaction with one's dwelling. This dataset is also limited in the types of older adults being surveyed, as long-term care facilities and retirement homes are excluded, and many disabled older adults live in those facilities (Razi, 2019). This means that the population of older adults being asked about their housing situation and the need for adaptations are those living independently.

Gender is also generally unsurprising. Women-led households are statistically more likely to need a dwelling adaptation, but less likely to have one when compared to men-led households. Gender is statistically insignificant when looking at dwelling satisfaction for both the entire population and the sub-population who requires adaptations. Older adults and women-led households are both positively correlated with requiring household adaptations, but only older adults are positively correlated with *having* them. This

confirms the general trends seen in the descriptive statistics, with older adults being overrepresented in households that have adaptations, and women-led households being overrepresented in *needing*, but not having, them. This is likely because women-led households are more likely to live in poverty (Marshall et al, 2020), and the most commonly reported reason why adaptations to the dwelling have not been made to the home is due to cost (see Table 4.2).

While race does not seem to be a factor in whether households have all necessary adaptations, non-white households are less likely to be satisfied with their dwelling compared to white households. As seen in Table 4.1, non-white households are evenly distributed amongst all three groups, meaning that race is not statistically linked with whether a household needs an adaptation, or if they have one. However, race is strongly negatively correlated ($p < 0.01$) with dwelling satisfaction in the logistic regressions, both when looking at the entire population (Model 1) and the sub-population who requires adaptations (Model 3). Race also appears to have an opposite relationship to dwelling satisfaction and adaptations than gender; while gender is insignificant when looking at dwelling satisfaction, it *is* significant when measuring need for dwelling adaptations. In contrast, race is significant when measuring dwelling satisfaction, but insignificant when measuring need for adaptations to the home. This further complicates how adaptations fit into a household's definition of dwelling satisfaction. It also means that, having established a positive link between adaptations and dwelling satisfaction, women of colour would be disproportionately dissatisfied with the conditions of their housing.

Income has a complicated relationship to dwelling satisfaction. Given the subjective nature of what "dwelling satisfaction" constitutes, this is perhaps not that surprising—the housing expectations of people living poverty are very different from those making over a hundred thousand dollars a year, and yet these expectations are both being captured with a single general question about dwelling satisfaction. More surprising, however, is that income is not a good predictor of whether or not households have all necessary adaptations. While virtually all income groups are positively associated with *needing* a dwelling adaptation compared to the wealthiest income group (100k+) in Model 2, none of the income groups in Model 4 are correlated with having all necessary adaptations or not. Lower income groups were expected to be either negatively correlated with having those adaptations—because they cannot pay to have their home adapted—or positively correlated—because they qualify for adaptation loans from programs like Ontario Renovates. A potential reason for this complexity could be down to the fact that these income categories are just proxy measures for the three household groups. The positive correlation between lower income categories (0-20k and 20-40k) and dwelling satisfaction in Model 1 could be due to the fact that Group B is more likely to fall into those income categories compared to Group A (see Table 4.1), despite the two groups having similar satisfaction outcomes. The same can be said for the positive correlation between income category 0-20k and dwelling satisfaction in Model 3—Group B is more likely to be in the 0-20k income category than Group C (See Table 4.1), and Group B again has higher dwelling satisfaction levels. However, the significance of income to dwelling satisfaction falls away in the higher income categories, despite Groups A and B

being meaningfully different in those categories as well (see Table 4.1). In general, income is not a useful indication of dwelling satisfaction, and where significant relationships between the two variables emerge, they are not particularly informative.

Rental housing, regardless of landlord type, is consistently and strongly ($p < 0.01$) negatively correlated with dwelling satisfaction compared to homeowners in both Models 1 and 3. Core Housing Need is also consistently and strongly ($p < 0.01$) negatively correlated with dwelling satisfaction. These correlations hold true whether or not a household needs/has an adaptation, but the disproportionate number of households needing adaptations (Groups B and C) falling into non-market rental housing and being in CHN mean that disabled households would be more likely in general to be less satisfied with their dwelling. More interesting, both non-profit ($p = 0.02$) and private ($p < 0.01$) landlords are positively associated with having an adaptation compared to homeowners in Model 4. This would seem to contradict prior literature, which establishes that it is more difficult to obtain dwelling adaptations in private rental housing (Leviten-Reid, Matthew, & Mowbray, 2019). However, Group B's lower rates of homeownership compared to the other two household groups (see Table 4.1) could explain why—it is not necessarily that private landlords are more likely to accommodate adaptations, but that disabled households with adaptations are less likely to own the home they live in.

4.2.7 Dwelling Satisfaction

The complexity of the relationship between adaptations and dwelling satisfaction is most strongly reflected in the comparable rates of dwelling satisfaction between Groups A and B. Returning to the descriptive statistics in Figures 4.1 – 4.6, Groups A and B have

statistically similar outcomes for all measures of satisfaction except for wheelchair accessibility. This is despite the fact that Group B is 1.81 times more likely to live in CHN, and 1.84 times more likely to live in non-market rental housing – both of which are strongly negatively correlated ($p < 0.01$) with being satisfied with your dwelling (see Models 1 and 3). This suggests that accessibility is centrally important in the satisfaction outcomes of disabled households, such that things like Core Housing Need are more heavily tolerated than they would be for households that do not require disability-related dwelling adaptations. The complex relationship income has with dwelling satisfaction in the regression models supports this interpretation; income is one of the key determinants of the quality of your housing, but it is not a good predictor of whether or not someone will be satisfied with their housing. "Affordability" is more straightforward, but still seems somewhat contradictory, given that Group B is more likely to spend over 30% of their income on their housing than Group A in the descriptive statistics, despite reporting similar rates of affordability. This could, again, be down to the fact that Groups A and B have different housing profiles in terms of landlord type, homeownership rates, and rent subsidies, and therefore have different expectations around what "affordable housing" means for them.

Chapter 5 – Discussion & Conclusion

5.1 SUMMARY

Households that have the adaptations they need (Group B) represent a complicated middle ground between households that need no adaptations (Group A) and households that need but do not have them (Group C). The presence of adaptations in the home has such a significant influence on dwelling satisfaction that Groups A and B have comparable dwelling and neighbourhood satisfaction rates, despite Group B living in much more tenuous housing conditions—most notably having double the rate of Core Housing Need, living in social or government housing, and incidences of rent subsidy; all of which are negatively correlated with dwelling satisfaction. Using the presence of an adaptation in the home as a function of dwelling satisfaction becomes especially significant when comparing Groups B and C, who live in very similar housing conditions. Again, while adaptations do not have a causal relationship to dwelling satisfaction, their presence has a significant impact on how disabled households rate their satisfaction levels with their home—and to some degree, their neighbourhood—to the extent that it seems to function as the primary determining factor in whether or not they are satisfied with their dwelling.

This research set out to understand how adaptations influence various satisfaction measures with the home for households with a disabled member. The answer is that, on the one hand, the presence of adaptations mitigates disabling elements within the home, raising dwelling satisfaction rates to a level comparable with that of non-disabled households; and on the other hand, this research reinforces that physical inaccessibility is

not the only barrier disabled people face with housing, and making a dwelling accessible does not resolve those other problems, such as high rates of Core Housing Need.

5.1.1 Ontological (in)Security

The concept of ontological security was briefly introduced in Chapter 2 and will be discussed in further detail here. As previously defined, ontological security is a confidence that the world exists as it appears to be. In the context of housing and disability, this means that one's home can be used for the purpose for which it was built, which is to be lived in. Trusting that one's home functions in this way allows people to form routines within the home and build a sense of self, part of which is attached to the space they live in. This sense of self creates a sense of home, senses which mutually reinforce one another (Aplin et al, 2020). Inaccessible housing diminishes or robs disabled people of this security—their housing is not built *for them;* it does not operate the way it is "supposed" to. Basic facets of the home, from entrances to stairways to furniture to the heights of counters, act as barriers and sites of personal struggle or frustration.

This ontological insecurity is reflected in the results in Chapter 4 with households that do not have the adaptations they require (Group C). Households in this group are 3.4 times more likely to report feeling unsafe in their home compared to households that require no adaptations (Group A); this is in contrast to households that do have the adaptations they need (Group B), who report similarly high rates of safety and security to Group A (see Table 4.1). This is, again, even though Groups B and C have very similar housing

conditions, meaning that the basis for their (in)security appears to be the accessibility of their home.

However, this ontological (in)security only exists because normative, able-bodied expectations of housing are imposed onto disabled people. Currently in Canada, disability is not a relevant consideration in housing designs or layouts, but disabled people are still expected to live in them, and their sense of self and security are still tied to the place they live. This again can be seen in the descriptive statistics—in Figure 4.5, Group A is 1.6 times more likely to report that their home is wheelchair accessible compared to Group C, despite identifying that they do not need or have any disability-related dwelling adaptations in their home. Coupling this with the fact that Group A reports similar instances of both dwelling satisfaction and feelings of safety and security within the home with Group B, who *do* have adaptations, inaccessibility is not part of the normative expectation of what sufficient or safe housing looks like for able-bodied households. And given the scarcity of accessible housing in Canada, Group A is very likely not inhabiting substantially more accessible housing than disabled households—the differences in reporting come down to perception.

It is therefore not the case that disabled people are *inherently* ontologically insecure, nor that the built environment is inherently inaccessible, but rather the expectations of how disabled people use and navigate their home is being dictated by the ideological considerations that go into building housing. This is where the adaptation is introduced. It retrofits, modifies, alters what is "normal" to alleviate the harm of living in a home that is not built "for you." The individual nature of the housing adaptation does not challenge

this able-bodied ontology but can reinforce it; inaccessibility exists only where disabled people do, and all that remains to be done about it is to modify the immediate quarters in which they live.

5.1.2 The Logic of Adaptations

The preceding eighty pages have discussed at length disability-related dwelling adaptations; their function, scope, and provision within the homes of disabled Canadians. They also form the basis of this research, which reinforces the central claim made by the social model of disability, which is that disability exists at the level of the physical and social environment as opposed to the individual. The conclusions drawn from this dataset paint a clear picture: when adaptations are provided to disabled households, their housing satisfaction levels reach that of the non-disabled population by removing the disabling elements of their immediate built environment. However, disabled people often have unique and unaddressed housing needs that interlock with one another, and individual adaptation provisions do not guarantee relief from all or even most of these needs—such as Core Housing Need or rent subsidies—especially when the principal barrier to dwelling adaptations is cost. The current model for measuring what "accessible housing" means does not also mean *good* housing, or secure housing. Disabled households are not "made whole" by the presence of dwelling adaptations within the home. Housing that is made accessible does not solve the issue of increased economic insecurity for disabled people; it does not solve the issue ableism within housing. So why centre adaptations in this research?

The first reason is practical. The nature of secondary data means accepting the framing of the questions being asked in order to learn from them. In the case of the Canadian Housing Survey, this requires a focus on adaptations, and any discovery flowing from it must also therefore consider adaptations as the "unit" by which the issue of accessibility is measured – its presence is good, its absence bad. Solutions beyond this are not to be found within the data, because they are not considered. And as limited as the CHS is, it is the only Statistics Canada dataset that collects information on both housing and disability. This is despite the fact that VisitAble homes and universal design are a legislative concern for the federal and provincial governments. The lack of interest in collecting these sorts of data reflects the historic individualistic, bio-medical view of disability taken by the Canadian government. Disability is something that only concerns individuals and families; it is something to be rectified primarily through individual household adaptation. This lack of data collected about disabled experiences of housing reflects the epistemological incuriosity on the part of the Canadian government, especially because surveys like the CHS are collected with the goal of informing legislation. Disabled people are considered only when they can be defined by their own exceptionality, quantified through the retrofitting of their immediate built environment to be "for them" instead of "everyone else." Additionally, it is not a contradiction that data about household accessibility are captured—limited thought it may be—but neighbourhood accessibility is not; adaptations themselves reinforce this individual approach, aiming to "solve" disability through technological means within the confines of the private home (Imrie, 2012).

The second reason is ideological. The ableism that pervades the housing sector is reinforced by the continual devolution of the state and social policy through neoliberal processes. Solutions such as universal design, lifetime homes, and adaptations are technological in nature, and reproduce the bio-medical model of disability by reducing disability down to a lack of accessibility devices or products to buy (Imrie, 2006; Imrie, 2012). If policy frameworks indeed have inherent ideological prescriptions built into them (Jongbloed, 2003), then measuring disability by individual dwelling modifications in a policy-driven survey like the CHS prescribe neoliberalism as the solution (Prince, 2011).

5.1.3 Moving Forward

Despite these criticisms, the conclusion is not that the concept of dwelling adaptations should be eliminated. Echoing much of the pre-existing literature, Chapter 4 demonstrates that adaptations have a measurable, positive impact on people who need them, reflected both in overall dwelling satisfaction and in perceptions of safety and security. The built environment has a durability to it that resists large-scale change, and adapting existing housing stock is a necessary first step towards increasing accessibility. Additionally, the relative absence of accessible housing stock in Canada (see Section 2.4) means that adaptations remain the primary method by which housing inaccessibility is ameliorated.

However, the current model of adaptations as something that must be individually bought and sold is not a sufficient solution to inaccessible housing. This framework accepts that the ideal housing subject is an able-bodied one, and that modification to this framework is the burden of the individual, even if that burden is mediated by the state in the case of social housing, or social programs that provide financial relief for adaptations, or even

accessibility regulations that legally enforce housing accommodations. The bio-medical model of disability is not being challenged when the primary solution being presented is the sale of individual adaptations to the home or unit.

Adaptations should not be offered as a product after the fact; the problem they aim to solve should be eliminated at the beginning. The focus needs to shift to an earlier stage in the process of building housing "for" people, imagining housing as being for more than one type of person, one type of body. Introducing a new "floor" to the ontological security of the home means incorporating accessibility into its structure. While it is not possible to build housing that can account for every single type of disability, nor even housing that will remain uniformly accessible to a single person across their entire life, the goal is not to design a building that must never be modified. Programs such as universal design prescribe best practices for barrier-free architecture; there are accessibility standards in place in Ontario already that make current public buildings more accessible, such as wide doorways and hallways, no-step entrances, automatic doors, signage with large text, and many others. At the same time, provincial disability policy like the AODA do not enforce these same standards onto the housing sector. The accessibility of the home should not be dictated by the discretion of individual housing developers or left up to the disabled person to take care of after moving in, nor should built-in accessibility only be found in non-market rental housing. Scaling up the benefits of individual adaptation means reproducing what those adaptations constitute— accessibility—as a standard practice. It means reconceptualizing the definition of housing standards like "Core Housing Need" to include accessibility.

5.2 RESEARCH SIGNIFICANCE

5.2.1 Policy Significance

There is an inherent tension at play with the dual goals of the National Housing Strategy—universal design and VisitAble housing cannot meaningfully coexist with the target of only making 20% of the Canadian housing stock accessible, nor can universal accessibility standards be implemented when each municipality administering financial aid for disabled households have their own separate disability criteria. Similarly, "an accessible Ontario for all" as the goal for the Accessibility for Ontarians with Disabilities Act cannot be realized without properly reckoning with housing as a core part of everyday life in Ontario, as the AODA still does not have any housing accessibility standards in place (Kovac, 2020).

The policy recommendations that flow from this research are basic. Expanding access to adaptations in the form of financial assistance is a start, as the primary barrier to receiving an adaptation is cost, but the results in Chapter 4 show that 1 in 4 disabled households are still in Core Housing Need even when they have all the necessary adaptations. Existing research also shows that disabled people are more likely to be financially insecure (Bian, 2020); that social and government housing often causes second-order problems such as psychological distress related to the poor physical and social conditions within those buildings (Marshall et al, 2020); that housing remains a significant cost burden for disabled households (Razi, 2019); and that families can be on waitlists for accessible units for many years (Inclusion Canada, 2017). Additionally, households without adaptations skew younger than those that do have them, and they are more likely to be women-led

(see Table 4.1). Policies aiming to improve the housing conditions of disabled people should take younger disabled people and disabled women into special consideration, groups which have historically been ignored (Mackie, 2012). However, the group without adaptations still skew older than non-disabled households, meaning there are older adults who are also not getting the supports they need.

Historically, disability policy in Ontario has been focused on making workplaces more accessible for disabled employees (Prince, 2011), and even with recent policy advancements, accessibility as a standard is only being imposed on private businesses and public spaces (Kovac, 2020). Additionally, financial supports for disabled people, such as ODSP, have harsh restrictions on the amount that disabled people can work if they want to continue receiving financial support (Smith-Carrier et al, 2017). This leaves disabled people in a difficult position, having to choose between full-time employment that they do not have the capacity for, or total unemployment in order to receive financial assistance, despite being able to work part time (Lightman et el, 2009). Rates of rent subsidy in households that need dwelling adaptation are more than twice as high as those that do not, and they also report higher rates of housing unaffordability. Financial supports aimed at disabled people should be more robust, universal, and less restrictive in order to address this.

Increased provisions of adaptations and accessible housing, therefore, must be part of a larger redistributive social policy framework. Reversing the damage neoliberalism has caused on state management of social policy, centralizing the administration of things like grants and financial assistance, and expanding social/government housing are all a

necessary step in the right direction. Financial stability should be considered a disability issue (Mackie, 2012), and the goal of achieving true "accessibility" must include robust welfare programs.

5.2.2 Academic Significance

To date, no research has been done (that the author is aware of) on the intersection of disability and housing using the Canadian Housing Survey, and use of other Statistics Canada datasets in academic research addressing this intersection has been limited to the Canadian Survey of Disability (see Giesbrecht et al, 2017; CMHC, 2018), a survey which does not include any questions about housing. Housing and disability have also been historically studied as separate subjects, regardless of methodology or academic discipline (McCormick, Schwartz, & Passerini, 2019).

This research addresses both of these gaps; it uses a large-scale dataset (collected for the purposes of informing policy) to reinforce what has been observed in smaller-scale qualitative research, particularly those studying how adaptations influence the meaning of home (Heywood, 2005; Hemingway, 2011; Schwartz, 2020). It builds connective tissue between Canadian housing literature (Hackworth, 2008; Suttor, 2016; Leviten-Reid, Matthew, & Mowbray, 2019) and Canadian disability literature (Jongbloed, 2003; Kovacs Burns & Gordon, 2010; Prince, 2011; McColl et al, 2017). It also adds to the body of literature that examines housing and disability as a single topic in the Canadian context, as prior literature has largely been from other countries (Heywood, 2005; Hemingway, 2011; Ewart & Harty, 2015; Power & Gaete-Reyes, 2019; Aplin et al, 2020; Bian, 2020; Thordardottir et al, 2020).

This research also highlights the limitations of focusing on adaptations as the primary concern of disabled households. While they are centrally important in improving the accessibility of housing, they are insufficient in addressing other needs of disabled households—those being high rates of Core Housing Need, rent subsidy, and housing unaffordability. The measure of "accessibility" by the presence/absence of an adaptation is narrow and specific, pertaining only to the physical, mechanical accessibility of the dwelling itself, and without regard to the accessibility of the surrounding community. It speaks to the inadequacy of accessibility as a singular policy goal, unattached to the deeper problems of economic insecurity and poor housing conditions that are exacerbated by ableism.

Finally, this research highlights the most vulnerable of disabled households—nearly half (47%) of all households who identified needing a dwelling adaptation did not have one. They are younger than the households that have accessed adaptations, more likely to be women-led, and reported the highest rates of dissatisfaction out of all three groups in all observed satisfaction measures—general dwelling and neighbourhood satisfaction, dwelling condition, dwelling affordability, dwelling wheelchair accessibility, and dwelling safety and security.

5.3 LIMITATIONS

A significant limitation of this research was the lack of attention to neighbourhood satisfaction. Disabled people must often choose between accessible housing and accessible neighbourhoods (Hemingway, 2011); they are at an increased risk for assault and violence within their communities (Hall & Bates, 2019); and visible adaptations on

the exterior of the home can sometimes be unwelcome even if they are helpful, as disabled people are afraid that the visibility of their disability could invite abuse from others (Ewart & Harty, 2015).

There is a clear link between dwelling and neighbourhood satisfaction in the results of this research, but understanding how disabled people feel about their communities—and how things like the presence or absence dwelling adaptations influence those feelings— was not possible with this dataset. It was also not possible to measure how accessible their neighbourhoods were compared to their dwellings.

The 2021 version of the CHS is being updated to add additional questions about disability and housing. However, there are still no questions about neighbourhood accessibility or threats of ableist harassment (Statistics Canada, 2021). Capturing these data at the level of national datasets is important for informing disability and housing policy; while there is an existing body of literature on the challenges disabled people face with their surrounding communities and neighbourhoods, they are, again, largely qualitative in nature.

Other limitations with this dataset have to do with sample sizes. While the Ontario subset of the CHS is large (n = 12,066), looking at subcategories of households who require a dwelling adaptation means dealing with small subsets of the data, where confidentiality and privacy concerns can prohibit more in-depth analysis. For example, race did not emerge as a relevant factor in the analysis, despite it being well established that disability has racial dimensions to it, particularly when looking at disabled Indigenous people

(Prince, 2011; Inclusion Canada, 2017). Collapsing the race category into white/non-white was done for confidentiality concerns, but differences in adaptation outcomes amongst racial groups could be possibly illuminating. Therefore, using the entire national dataset of the CHS could offer new insights.

The primary limitation is at the level of the dataset. Expanding the types of data collected by these surveys to make sure that disability and housing are captured adequately and simultaneously would be useful for research and would signal a renewed policy interest in addressing these things at provincial and federal levels.

5.4 FUTURE RESEARCH

Further research using newer versions of this dataset (such as the 2021 version of the CHS) would be useful, as updated versions include more questions about different types of disability. The updated version of the CHS also separates physical, intellectual, and mental disabilities from one another. This would allow for measuring differing rates of dwelling satisfaction and neighbourhood satisfaction by type of disability. The 2021 version of the CHS also includes a number of questions related to COVID-19, meaning it would be possible to incorporate the social and health effects of the pandemic into future research. However, this dataset would pose different limitations—the 2021 version of the CHS no longer includes questions about whether the household's dwelling has been adapted due to a disability, relying instead on a general question about how accessible the dwelling is. Regardless, duplicating this research with newer versions of the CHS would be helpful in filling in the gaps left unaddressed by this research. Additionally, using the

entirety of the CHS—as opposed to just the Ontario subset—would allow for a greater exploration of the demographic dimensions of disability and housing in Canada.

5.5 CONCLUDING REMARKS

Disability is a complex political and social category that manifests in virtually every sphere of a person's life. Even when discussing one such sphere—in this case, housing—we see how disability is produced and reproduced in the physical, social, cultural, and economic realities that disabled people navigate and live under. While the focus of analysis for this thesis has been housing adaptations, this is done to demonstrate that adaptations alone are insufficient; they may reduce or remove the disabling aspects of a person's housing, but they are not the solution to the problem of ableism in Canadian life.

Therefore, the political response to disability must also be comprehensive, including adapting physical infrastructure, building more accessible housing, providing economic security, and reshaping broad cultural attitudes the public holds about disabled people. Recent developments in federal and provincial policy are promising, shifting towards rights-based frameworks, universal design and inclusion, and moves to make our built environment more accessible. They are not, however, an unalloyed good, harkening still to the neoliberal consensus of the 1990s—they are exceptional, rationed, and still mostly decentralized, which have proven thus far to be insufficient in addressing the complex needs of disabled people.

Far from a marginal issue, disability will continue to affect a greater proportion of Canadians as our population ages. This reality intersects with our ongoing and worsening

housing crisis, whose policy prescriptions are similarly insufficient. The future trajectory

of disability and housing policy in Canada is an unknown, in large part due to the ongoing

COVID-19 pandemic disrupting all aspects of Canadian life, and more work must be

done to enhance our understanding of—and response to—this complex issue.

REFERENCES

Andrews, B. (2008). Lifetime homes, lifetime neighbourhoods–developing a housing strategy for our ageing population. *Policy and Politics*, *36*(4), 605.

Aplin, T., Canagasuriam, S., Petersen, M., & Gustafsson, L. (2020). The experience of home for social housing tenants with a disability: security and connection but limited control. *Housing and Society*, *47*(1), 63-79.

Bian, X. (2020). Disability and mortgage delinquency. *Housing Studies*, 1-29.

Canadian Mortgage and Housing Corporation. (2017). *Barriers and enablers to the uptake of Visitable housing in Canada: Stakeholder perceptions.* Retrieved from https://publications.gc.ca/collections/collection_2018/schl-cmhc/nh18-33/NH18-33-2-2018-eng.pdf

Canadian Mortgage and Housing Corporation. (2018, March). *Residential rehabilitation assistance program for persons with disabilities (RRAP-D).* Retrieved from https://www.cmhc-schl.gc.ca/en/professionals/project-funding-and-mortgage-financing/funding-programs/all-funding-programs/residential-rehabilitation-assistance-program/home-modifications-for-persons-with-disabilities

Canadian Mortgage and Housing Corporation. (2018, August). *Research insight: Housing conditions of persons with disabilities.* Retrieved from https://www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-research/research-reports/housing-needs/research-insight-housing-conditions-persons-disabilities

Canada Mortgage and Housing Corporation, & Novac, S. (2002). *Housing discrimination in Canada: The state of knowledge*. Ottawa: Canada Mortgage and Housing Corporation.

Canada Minister of Justice. (2019). *Accessible Canada Act.* Retrieved from https://laws-lois.justice.gc.ca/eng/acts/A-0.6/page-1.html#h-1153395

Ewart, I. J., & Harty, C. (2015). Provision of disability adaptations to the home: Analysis of household survey data. *Housing Studies*, *30*(6), 901-923.

Fänge, A., & Iwarsson, S. (2005). Changes in accessibility and usability in housing: an exploration of the housing adaptation process. *Occupational therapy international*, *12*(1), 44-59.

Gibson, B. E., Secker, B., Rolfe, D., Wagner, F., Parke, B., & Mistry, B. (2012). Disability and dignity-enabling home environments. *Social Science & Medicine*, *74*(2), 211-219.

Giesbrecht, E. M., Smith, E. M., Mortenson, W. B., & Miller, W. C. (2017). Needs for mobility devices, home modifications and personal assistance among Canadians with disabilities. *Health reports*, *28*(8), 9.

Government of Canada (n.d.). *Canada's National Housing Strategy.* Retrieved from https://assets.cmhc-schl.gc.ca/sf/project/placetocallhome/pdfs/canada-national-housing-strategy.pdf?rev=7d7a4713-2f37-4cf0-a13e-68d278867630

Government of Canada (2022, January). *What is the Home Buyer's Plan (HBP)?* Retrieved from https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/rrsps-related-plans/what-home-buyers-plan.html

Government of Ontario. (2021, May). *About accessibility laws.* Retrieved from https://www.ontario.ca/page/about-accessibility-laws

Government of Ontario (2022, June). *Housing | A guide to programs and services for seniors.* Retrieved from https://www.ontario.ca/document/guide-programs-and-services-seniors/housing

Hackworth, J. (2008). The durability of roll-out neoliberalism under centre-left governance: The case of Ontario's social housing sector. *Studies in Political Economy*, *81*(1), 7-26.

Hall, E., & Bates, E. (2019). Hatescape? A relational geography of disability hate crime, exclusion and belonging in the city. *Geoforum*, *101*, 100-110.

Hemingway, L. (2011). *Disabled people and housing: choices, opportunities and barriers*. Policy Press.

Heywood, F. (2005). Adaptation: Altering the house to restore the home. *Housing Studies, 20*(4), 531-547.

Imrie, R. (2006). Independent lives and the relevance of lifetime homes. *Disability & Society*, *21*(4), 359-374.

Imrie, R. (2012). Universalism, universal design and equitable access to the built environment. *Disability and rehabilitation*, *34*(10), 873-882.

Inclusion Canada. (2017). *Meeting Canada's obligations to affordable housing and supports for people disabilities living independently in the community.* Retrieved from https://inclusioncanada.ca/wp-content/uploads/2018/05/Canada-Right-to-Housing-for-Persons-with-Disabilities-May-15-2017.pdf

Jongbloed, L. (2003). Disability policy in Canada: An overview. *Journal of Disability Policy Studies*, *13*(4), 203-209.

Kovac, L. (2020). *Incentives for housing accessibility.* Retrieved from https://aoda.ca/incentives-for-housing-accessibility/

Kovacs Burns, K., & Gordon, G. L. (2010). Analyzing the impact of disability legislation in Canada and the United States. *Journal of Disability Policy Studies*, *20*(4), 205-218.

Lau, S-T., Nirmalanathan, K., Khan, M., Gauthier, C., Maisel, J., Novak, A. (2020). A Canadian Roadmap for Accessibility Standards, Canadian Standards Association, Toronto, ON.

Leviten-Reid, C., Matthew, R., & Mowbray, O. (2019). Distinctions Between Non-profit, For-profit, and Public Providers: The Case of Multi-sector Rental Housing. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *30*(3), 578-592.

Lightman, E., Vick, A., Herd, D., & Mitchell, A. (2009). 'Not disabled enough': Episodic disabilities and the Ontario disability support program. *Disability Studies Quarterly*, *29*(3).

March of Dimes Canada. (2020). *MODC's Home & Vehicle Modification® Program.* Retrieved from https://www.marchofdimes.ca/en-ca/programs/am/hvmp/Pages/modchvmp.aspx

Marshall, C. A., Tjörnstrand, C., Downs, E., Devries, R., & Drake, F. (2020). "Nobody cares about you as a group of people": a mixed methods study of women living in congregate social housing in Ontario, Canada. *Housing and Society*, 1-22.

McColl, M. A., Jaiswal, A., Jones, S., Roberts, L., & Murphy, C. (2017). A review of disability policy in Canada. *Kingston, Ontario: Canadian Disability Policy Alliance*.

McCormick, L., Schwartz, A., & Passerini, C. (2019). Housing for People with Disabilities: A Review of State Olmstead and HUD Consolidated Plans. *Journal of Planning Education and Research*.

Morris, S., Fawcett, G., Brisebois, L., & Hughes, L. (2018). *A demographic, employment and income profile of Canadians with disabilities aged 15 years and over, 2017.* Retrieved from https://www150.statcan.gc.ca/n1/pub/89-654-x/89-654-x2018002-eng.htm

Oliver, M. (1990). The politics of disablement: A sociological approach. New York: St.

Ontario Human Rights Commission. (n.d.). *Disability.* Retrieved from https://www.ohrc.on.ca/en/code_grounds/disability

Ontario Ministry of Municipal Affairs and Housing. (2020). *Community housing renewal strategy.* Retrieved from https://www.ontario.ca/page/community-housing-renewal-strategy#:~:text=Ontario's%20Community%20Housing%20Renewal%20Strategy,for%20the%20people%20it%20serves.

Power, A., & Gaete-Reyes, M. (2019). Neoliberal abandonment in disability housing provision: a look at England and Chile. *Housing Studies*, *34*(5), 741-760.

Prince, M. J. (2009). *Absent citizens: Disability politics and policy in Canada*. University of Toronto Press.

Razi, M. (2019). *Building an affordable and accessible Ontario for all.* Retrieved from https://sciontario.org/wp-content/uploads/2019/01/scio-submisison-on-increasing-housing-supply-in-ontario-2019.pdf

Research & Training Centre on Disability in Rural Communities. (2018). *Life starts at home: Exploring how housing impacts participation for people with disabilities.* University of Montana, Rural Institute for Inclusive Communities.

Schwartz, N. (2020). *Food access and insecurity in adults with mobility disabilities.* University of Toronto.

Shakespeare, T. (2006). The social model of disability. *The disability studies reader*, *2*, 197-204.

Smirl, E. (2019). *Supporting vulnerable tenants in non-profit housing*. Canadian Centre for Policy Alternatives. https://policyalternatives.ca/sites/default/files/uploads/publications/Manitoba%20Office/2019/09/Supporting_Vulnerable_Tenants.pdf

Smith-Carrier, T., Kerr, D., Wang, J., Tam, D. M., & Ming Kwok, S. (2017). Vestiges of the medical model: a critical exploration of the Ontario Disability Support Program in Ontario, Canada. *Disability & Society*, *32*(10), 1570-1591.

Statistics Canada. (2021, May). *Canadian Housing Survey (CHS).* Retrieved from
    https://www.statcan.gc.ca/en/survey/household/5269

Statistics Canada. (2022, June). *Canadian Survey on Disability (CSD).* Retrieved from
    https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvVariableList&Id=13
    29901

Suttor, G. (2014). *Post-Neoliberal or Just Past Social Housing? Affordable Housing
    Policy in Ontario, Canada since Devolution.* Paper for the 2014 ENHR
    conference.

Suttor, G. (2016). *Still renovating: A history of Canadian social housing policy*. McGill-
    Queen's Press-MQUP.

Thordardottir, B., Fänge, A. M., Chiatti, C., & Ekstam, L. (2020). Participation in
    everyday life before and after a housing adaptation. *Journal of Aging and
    Environment, 34*(2), 175-189.

Tuttle, M. E. F. (2020, July). *The Right to Housing as a Human Right.* Retrieved from
    https://www.lawnow.org/the-right-to-housing-as-a-human-right/

APPENDIX

APPENDIX A

Below is the complete application submitted to the Research Data Centre (RDC) at McMaster University. This application was submitted for the purpose of accessing the microdata files of the 2018 release of the Canadian Housing Survey (CHS), which was used to conduct the analysis outlined in Chapters 4 and 5.

RDC Proposal – Nicole Langdon

McMaster University

1. Project Title:

Evaluating the housing satisfaction of persons with physical disabilities in Ontario, Canada through the use of GIS.

Requesting access to the **McMaster University RDC and the Canadian Housing Survey 2018**

2. Rationale and Objectives of the Study:

Disabled people in Canada make up around 14 percent of the population (Giesbrecht et al, 2017), 44 percent of which live in Ontario (Razi, 2019). Existing research demonstrates that, as a group, disabled people confront significant cultural, material and political disadvantages, positioning them as what Prince (2011) terms 'absent citizens'.

With respect to housing, disabled people are overrepresented in the social housing market, which primarily serves the poorest populations in Canada (Razi, 2019). The social housing market has also been disproportionately affected by Canada's growing housing crisis (Suttor, 2014; Marshall et al, 2020), which is only estimated to worsen in the coming years with increasing economic inequality, continued neoliberal rollbacks, and a rapidly aging population (Razi, 2019; Suttor, 2014; Hackworth, 2016). Disabled people may also have unique housing requirements that are often unmet, especially in the private market (Giesbrecht et al, 2017), although accommodations in social housing are also lacking (Marshall et al, 2020). These include physical adaptations to housing, as well as the provision of adequate in-home supports (Hemingway 2011). In general, the housing needs of disabled people differ significantly from non-disabled people, something that has historically not been reflected in the available housing stock in Canada (Razi, 2019) and continues to be a challenge for disabled people today.

In response to this, a growing network of academic institutions, non-government organizations, and non-profits have recognized the need for more research into the intersection of disability and housing in Canada. Giesbrecht et al (2017), for example,

investigated the met and unmet needs of disabled people in their homes using the 2012 Canadian Survey on Disability (CSD), as well as discussing the financial burden placed upon disabled people because of those needs; Marshall et al (2020) discussed the lack of social, psychological, and community supports for women with mental and intellectual disabilities living in Ontario. Others, such Razi (2019), highlight the lack of adequate housing stock for people with physical disabilities in Ontario; Labbé, Jutras & Jutras (2015) discuss the diverse housing needs of people with spinal cord injuries in Canada; and Hemingway (2011) highlights the ongoing financial difficulties disabled people face when trying to find adequate and suitable housing.

This project will contribute to this evolving conversation around the housing needs of disabled people, as well as fill in a gap that has *not* been addressed by the recent literature; namely, an investigation of the geographic patterns of disabled peoples' experiences with housing and with housing adaptation in particular. Our research will provide a geographic analysis of the relationship between need for/access to housing adaptations and dwelling satisfaction among households with disabilities within Ontario.

Census data collected through Statistics Canada is currently the best resource available to conduct this analysis, though there are limitations. Questions pertaining to both housing and disability are limited to the Canadian Housing Survey (CHS), which identifies households with disabled members who require dwelling adaptations, rather than individual persons. Additionally, the only currently available dataset for the CHS does not distinguish between types of disability that other surveys focused on the topic do (such as the Canadian Survey on Disability, or the upcoming 2021 version of the CHS). Regardless, this dataset is expected to shed light on the geographic patterns of dwelling satisfaction, as well as the experiences and needs of disabled people as it relates to housing.

2a. Research Objectives

This project is primarily concerned with the dwelling satisfaction of households with disabled members who require some form of dwelling adaptation. This satisfaction will be compared amongst three groups: households that do not require dwelling adaptations; households that do require dwelling adaptations and have them; and households that do require dwelling adaptations but do not have them. Various socio-demographic and/or socio-economic variables will be used to measure this difference in satisfaction along economic, racial, and other lines. With the use of the Statistics Canada Canadian Housing Survey, the following research questions will be addressed:

> **1.** What is the housing satisfaction of households with disabled members who need dwelling adaptations but do not have them? How does their satisfaction compare to households with disabled members who have made dwelling adaptations, or households that do not require any adaptations at all?

2. Are those variations in satisfaction tied to variables such as geography, economic precarity, race, age, family size, tenure, and other sociodemographic and/or socioeconomic factors?

3. Why have those households who need dwelling adaptations not made the necessary dwelling modifications?

Hypotheses

Hypothesis 1: Households with disabled members who require dwelling adaptations but do not have them are less satisfied with their dwellings compared to those households who have made modifications.

Hypothesis 2: Unmet needs for dwelling adaptation among households with disabled members are statistically linked to socioeconomic factors such as household composition, tenure, age, economic precarity, and race.

Hypothesis 3: Unmet needs for dwelling adaptations will vary by geography.

2b. Research Gap

With our current understanding of the literature, this study will provide the first comprehensive analysis of disabled households in Ontario using data collected from the Canadian Housing Survey (CHS). It will also have an explicit spatial analysis component, which is lacking in Canadian housing and disability literature.

3. Proposed data analysis and software requirements.

First, we will focus on cross-tabulations to explore the data and understand the relationship between dwelling satisfaction and a number of socio-demographic and socio-economic variables (identified in the Research Objective 2). As part of the initial exploration of the data, we will explore the relationship between dwelling satisfaction and other correlates. Ideally, we would like to focus our exploration on geographical variations in dwelling satisfaction across the province by considering geographical variations across CMAs. Recognizing that the CHS may not provide sufficient sample sizes in some situations (i.e., across CMAs), we will explore different definitions of geography beyond CMA variations, including regional analyses (i.e., the Greater Toronto Area vs. rest of province), variations in satisfaction across Metropolitan Influence Zones, or distinctions by urban/rural classification. In the same way, we are also interested in variations in dwelling satisfaction related to key variables such as racial status and the degree of economic hardship faced by households, with the expectation that racialized individuals will have lower satisfaction. In the same way, we hypothesize that economically precarious households will have lower levels of satisfaction. We will explore alternate but theoretically meaningful definitions of each as part of our exploratory analysis. Of course, only results that meet disclosure requirements will be considered for release. All analyses will be weighted according to CHS and Statistics Canada guidelines. Data analysis will be completed using R.

Logistic regression will further the understanding of dwelling satisfaction. The dependent variable for the logistic model will be a bivariate representation of dwelling satisfaction (coded as '1' if the respondent is very satisfied, satisfied or neutral, and '0' for those that are not satisfied with their dwelling. Independent variables selected for inclusion in the model will be based on proposed theoretical relationships derived from the existing literature, including tenure status, need for adaptive changes to the house, geography, economic precarity, race, age, family size, tenure, and other sociodemographic and/or socioeconomic factors. Because income information is not directly collected through the CHS, the variable EHA_Q10 will be used instead, which asks about the presence of economic hardship (i.e., difficulty paying for basic necessities). Other variables, such as age and race, are coded at the level of individual household members rather than the entire household. Therefore, answers provided by the primary respondent of the survey with respect to individual socio-demographic variables such as age and race will be used as representative of the entire household.

Then, provided that the sample sizes are sufficiently large at the CMA level, variables relating to housing satisfaction will be mapped through the use of ArcGIS Pro to better visualize the geographic patterns of housing satisfaction between households that do not need dwelling adaptations, those in need of adaptations that have them, and those that need them but do not have them. If possible, comparisons of these three groups with respect to the socio-economic and socio-demographic variables listed will also be used in this analysis.

4. Data requirements:

We are requesting access to the confidential Master Data File for the Canadian Housing Survey (CHS, 2018) for the province of Ontario. The CHS will be used to compare dwelling satisfaction of households with disabled members who require dwelling adaptations with those households that have made dwelling adaptations, and those that do not require dwelling adaptation in Ontario. The CHS contains relevant questions on whether or not a household has a member with a disability who requires a dwelling adaptation, whether the adaptation has been made, why needed adaptations have not been made, as well as a number of socio-economic variables such as housing tenure status and race. Because the CHS specifically addresses both issues of housing and disability at once, it is a uniquely appropriate dataset that will directly allow us to answer our stated research questions. Further, access to the microdata in the RDC is required given the level of detail and flexibility of the microdata, and our intention to use logistic regression as part of the analysis.

5. Population of Interest:

The population of interest in this research project is CHS respondents across the province of Ontario (2018, n=12,000) (Note: these numbers are not public knowledge and were provided to me by Doctor Peter Kitchen, a staff member at the McMaster RDC). This will provide a sufficiently large population to maintain confidentiality while also providing enough data to map geographic patterns of dwelling satisfaction.

6. Variables:

The following variables have been identified in the CHS as directly relevant to the objectives of this research project. Below, the table lists variables of interest.

Household composition (HHC)	
HHC_Q10C	The age of every person in the respondents' household **Note:** We only require the age of the primary respondent of the survey.
Dwelling characteristics and tenure (DCT)	
DCT_Q05, DCT_Q10, ACT_Q15, DCT_Q20, DCT_Q25, DCT_Q30	The characteristics of the respondents' dwelling, including whether they rent or own.
Shelter costs and subsidy for renters (SCR)	
SCR_Q10	Asks whether the rent of the respondents' dwelling is subsidized
Economic Hardship (EHA)	
EHA_Q10	Identifies how difficult it is for the household to pay for basic necessities such as food, housing, transportation, etc
Dwelling satisfaction (DWS)	
DWS_Q05, DWS_R10 (DWS_Q10A, DWS_Q10B, DWS_Q10C, DWS_Q10D, DWS_Q10E, DWS_Q10F, DWS_Q10G, DWS_Q10H, DWS_Q10I, DWS_Q10J)	The satisfaction the respondents have with their dwelling
Dwelling accessibility Adaptation (DAA)	
DAA_Q05	Identifies whether any member of the respondents' household has a disability who requires a dwelling adaptation.
DAA_Q10, DAA_Q15, DAA_Q20, DAA_Q25, DAA_Q30, DAA_Q35	These questions are about dwelling modifications that were made or will be made as a result of a physical or mental disability, condition or illness, and why they have not been made.
Household characteristics (HOC)	
PG_Q05	Race **Note:** We only require the age of the primary respondent of the survey.
Additional relevant variables	
WSA_Q05	Is the respondent on a waitlist for subsidized housing?

PAC_Q45 & ITM_R05	Asks if the respondent is moving in the future or has moved in the past; relevant answers to this question is 1) having/had to move because the respondent was forced by the government or financial institution and 2) moving for accessibility reason

7. Expected project start and end dates:

This project is expected to start on April 2021 and continue until April 2023.

8. Expected products:

This project will lead to the output of at least one peer reviewed journal paper, which will be used in the completion of my Master's thesis.

APPENDIX B

The following is a complete table of the t-tests conducted for analysis in Chapter 4.

Test for Proportion difference	B:C		C:A		B:A	
	z(DAA10_1:DAA10_2)		z(DAA10_2:DAA05_2)		z(DAA10_1:DAA05_2)	
Household Size	B:C		C:A		B:A	
1	4.28		-3.50		2.32	
2	0.90		1.62		3.23	
3	-3.66		-2.74		-8.69	
4	-6.62		-1.95		-12.21	
5+	-1.71		7.17		5.75	
Do You Own Your Dwelling?	B:C		C:A		B:A	
Yes	-1.50		0.19		-2.03	
No	3.12		-0.44		4.15	
Is Your Rent Subsidized?	B:C		C:A		B:A	
Yes	0.43		11.47		15.28	
No	-0.20		-2.87		-3.95	
Urban vs Rural	B:C		C:A		B:A	
Urban	0.56		-0.26		0.54	
Rural	-4.00		1.70		-3.99	
Who Is Your Landlord?	B:C		C:A		B:A	
Private	-0.22		-1.97		-2.85	
Non-Profit	1.81		2.86		6.50	
Government	-0.79		11.79		13.57	
Do You Live in SAH?	B:C		C:A		B:A	
Yes	0.58		11.00		14.95	
No	-0.29		-2.97		-4.22	
Core Housing Need	B:C		C:A		B:A	
Yes	-1.24		14.74		15.05	

	B:C	C:A	B:A
No	0.40	-3.26	-3.17
Gender	**B:C**	**C:A**	**B:A**
Male	3.20	-4.83	-0.83
Female	-2.62	4.09	0.83
Age	**B:C**	**C:A**	**B:A**
Non-Older Adult	-4.21	-4.04	-11.04
Older Adult	5.42	9.35	19.28
Race	**B:C**	**C:A**	**B:A**
Non-White	1.20	-0.18	1.58
White	-0.43	0.06	-0.57
Income	**B:C**	**C:A**	**B:A**
0-20k	5.16	8.52	17.88
20k-40k	-1.19	12.55	12.74
40k-60k	-3.72	1.89	-3.34
60k-80k	4.18	0.92	7.33
80k-100k	-4.19	-0.74	-7.13
100k+	0.27	-9.69	-10.85
Shelter-to-Income Cost Ratio	**B:C**	**C:A**	**B:A**
30+%	3.16	0.32	5.09
Dwelling Satisfaction Binary	**B:C**	**C:A**	**B:A**
Satisfied	3.36	-5.11	-0.91
Unsatisfied	-8.92	14.88	3.79
Neighbourhood Satisfaction Binary	**B:C**	**C:A**	**B:A**
Satisfied	1.50	-2.55	-0.73
Unsatisfied	-5.54	10.29	3.61
DWS C - Affordable	**B:C**	**C:A**	**B:A**
Very satisfied	15.68	-18.98	1.26
Satisfied	0.75	0.68	1.91
Neither satisfied nor dissatisfied	-2.42	-3.17	-7.32
Dissatisfied	-15.25	18.88	-0.76

Very dissatisfied	-7.77		15.01		5.62
DWS D - Condition	**B:C**		**C:A**		**B:A**
Very satisfied	12.24		-15.84		-0.11
Satisfied	5.11		-6.23		0.38
Neither satisfied nor dissatisfied	-9.65		12.19		-0.23
Dissatisfied	-22.34		18.94		-10.04
Very dissatisfied	-8.65		29.69		19.98
DWS F - Accessibility	**B:C**		**C:A**		**B:A**
Very satisfied	30.14		-17.78		21.00
Satisfied	11.27		-7.54		7.86
Neither satisfied nor dissatisfied	4.55		-12.30		-7.35
Dissatisfied	-16.00		12.37		-8.96
Very dissatisfied	-18.53		14.00		-10.54
DWS G - Safety & Security	**B:C**		**C:A**		**B:A**
Very satisfied	14.88		-17.89		1.33
Satisfied	0.51		-0.13		0.61
Neither satisfied nor dissatisfied	-20.17		14.44		-12.22
Dissatisfied	-25.61		33.42		0.46
Very dissatisfied	-24.00		36.62		5.31