

TObplay: Child-Friendly Public Open Spaces in Downtown Toronto

by

Vivian Accioly Gomes

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Master of Environmental Studies

in

Planning

Waterloo, Ontario, Canada, 2021

©Vivian Accioly Gomes 2021

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

The study explores which strategies can facilitate children's free play and independent mobility (IM) in the City of Toronto central neighbourhoods' public open spaces (POS). The first part of the study uses interviews to assess caregivers' perception of POS to identify which common issues can challenge families' positive experiences in central Toronto neighbourhoods. Other cities' solutions to promote children's and caregivers' sense of safety, enhance proximity of play, and foster unstructured play are discussed to envision initiatives and strategies to respond to such issues. The study then compares Downtown Toronto's public realm's policies and guidelines to other cities' strategies and initiatives. It explores the challenges and opportunities to respond to the issues concerning parents living in central Toronto neighbourhoods. The final part of the study contains recommendations to address caregivers' concerns and desires about children's environments in central Toronto neighbourhoods. This study demonstrates it is crucial to listen to caregivers' concerns and address child-blind policies that limit children's POS to playgrounds' boundaries to facilitate free play and IM in central neighbourhoods. It also shows that Downtown Toronto's public realm policies and guidelines present more opportunities than challenges to child-friendly POS.

Acknowledgements

I am thoroughly grateful for the large amount of support I have received throughout the years dedicated to this work. First, I would like to thank my supervisors, Dr. Laura Johnson, for her patience and dedication in the first years of my Masters, and Dr. Pierre Filion for the tireless encouragement and support towards completing this thesis. Your passion, humbleness and humanity genuinely inspire me. I am also thankful to Dr. Jennifer Dean for the knowledgeable insights provided as a committee member.

My sincere appreciation to Lori Martin, Sally Yan, Andrea Oppedisano and Julie Bogdanowicz from the City of Toronto. Thank you for the exchange of ideas that led me to this thesis topic. I extend my thanks to The Biglieri Group team for sharing their thoughts, opinions, and knowledge through our daily work. And to the fantastic friends that I have made at the University of Waterloo.

To my family and friends, I will never express with words how grateful I am to have you as unconditional supporters. The obstacles I encountered in this process would have been unbearable without your love. I am also thankful to the caregivers who participated in this work. Thank you for your time and valuable contribution. You broadened my perspective as an urbanist architect, and your children inspired me with their joy. This experience was very transformative because of you.

Dedication

To the children of this world, especially to my niece Elisa.

Table of Contents

Author's Declaration	iii
Abstract	iv
Acknowledgements	v
Dedication	vi
List of Figures.....	ix
List of Tables.....	x
Chapter 1 . Introduction	1
Chapter 2 . Literature Review.....	5
2.1 Children and the Environment	5
2.2 Public Open Spaces and Free Outdoor Play	10
2.3 Barriers to Independent Mobility.....	16
2.4 Child-Friendly Cities Approach.....	20
2.5 Summary of Ideas.....	23
Chapter 3 . Methodology	25
3.1 Research Approach.....	26
3.2 Research Context	27
3.3 Data Collection Methods.....	28
3.3.1 Semi-structured Interviews	28
3.3.2 Document Analysis.....	31
3.4 Data Analysis	33
3.5 Limitations	33
3.6 Research Rigour	34
3.7 Summary	35

Chapter 4 . Results and Discussion	36
4.1 Semi-structured Interviews.....	37
4.1.1 Neighbourhood	38
4.1.2 Streets.....	44
4.1.3 Parks	46
4.1.4 Playgrounds	51
4.1.5 Summary of Issues	56
4.2 Document Analysis: Strategies from other Cities.....	58
4.2.1 Sense of Safety	59
4.2.2 Proximity of Play	64
4.2.3 Unstructured Play	68
4.2.4 Summary of Solutions.....	71
4.3 . Document Review: Downtown’s Public Realm Planning and Design .	72
4.3.1 Official Plan Amendment No. 479	73
4.3.2 Official Plan Amendment No. 406 (the Downtown Plan)	78
4.3.3 GrowingUP: Urban Design Guidelines.....	87
4.3.4 Highlights of Challenges and Opportunities.....	93
Chapter 5 . Recommendations and Final Thoughts.....	98
Bibliography	104
Appendices.....	115
Appendix A.....	115
Appendix B	116
Appendix C.....	117
Appendix D	118

List of Figures

Figure 1. Children environmental needs.

Figure 2. The 10 principles for designing successful play spaces.

Figure 3. Map 6 - Downtown Toronto Urban Growth Centre.

Table 1. Participants' general information.

Table 2. Rotterdam, city with a future.

List of Tables

Table 1. Participants' general information.

Table 2. Rotterdam, city with a future.

Chapter 1. Introduction

In their developmental years, children rely on the environment to learn how to grow and develop the motor, social and emotional skills necessary for healthy development (Seyf, 2000; Memarian, 2005; Day and Midbjer, 2007; Shima Oloumi, 2012). For decades, cities have failed to address children's needs in planning and designing the urban environment. New high-density neighbourhoods like downtown Toronto's have been built essentially for the childless young professionals (Whytzman et al., 2010; Woolcock et al., 2010; Lin, 2018; Krysiak, 2019). The lack of public open spaces (POS) suitable for children to actively and freely explore their neighbourhood environment has mainly been associated with decreased physical activity levels and an increase in overweight and obesity (Karsten and Van Villet, 2006; Ergler et al., 2013).

The design of open spaces where children have unrestricted and free access such as streets, alleys, squares, parks, and playgrounds have been demonstrated to either facilitate or challenge the amount of time they spend engaging in outdoor activities (Floyd et al., 2008; McCracken et al., 2016). Planning for urban childhood is about prioritizing children's health and well-being and their right to participate in public space and discourse (Whytzman et al., 2010). Cities that have attempted to shift their planning and design practices towards a child-friendly approach demonstrate that when POS satisfies children's needs, they will satisfy all urban residents' needs.

Environmental perception of children and their caregivers can be positively influenced by neighbourhood design and determinant to POS's sense of safety (Wikström and Dolmén, 2001; Alparone and Pacilli, 2012). If parents do not feel safe, they may restrict children's access to such spaces. The offer of safe, attractive, and comfortable POS includes providing facilities and services that support children and their family members to spend more time outdoors (Gray, 2011). Poorly maintained and unattractive parks and playgrounds, without comfortable places to sit, access to food and water, and public washrooms can pose a barrier to children's outdoor play (Cradock et al., 2005).

The City of Toronto concentrates the highest population of children than the regional municipalities of Durham, Peel, Halton, and York. Children under the age of 14 comprehend 15 percent of the City of Toronto's total population (Census, 2016). Approximately eight percent of Downtown Toronto's total population comprises children from zero to 14 years of age. Downtown's population continuously increases, and there is a strong demand for sidewalks, parks, and other POS to respond to its current and future residents' needs. The purpose of this research lies in Downtown's regional importance in setting the precedents for high-density planning and design standards and the urgent demand for its POS to address children's and their families' needs. This research investigates which planning, engagement, and urban design strategies can facilitate children's free play and independent mobility (IM) in the City of Toronto central neighbourhoods' POS.

This study employs a multi-method exploratory approach to address the concept of child-friendly POS in Downtown Toronto and adjacent neighbourhoods' context. As primary data collection method, interviews were vital to listen to caregivers' thoughts and opinions about children's environments in central Toronto neighbourhoods', while document analysis provided "real-world" examples of how other cities have been addressing children's and caregivers' needs. The study draws on the outcomes of semi-structured interviews and other cities' documentary analysis to review Downtown's planning documents for POS critically. The underlying goal of this research is to create recommendations derived from real-world settings that can be used by planners and urban designers to guide practice. Its four specific objectives are as follows:

- Assess caregivers' concerns and desires about children in Downtown's POS.
- Examine realized projects from other cities where strategies to promote child-friendly POS were successfully employed.
- Analyze Downtown's municipal policies and guidelines currently in place that potentially addresses children's needs in POS.
- Provide recommendations for planning, engagement, and urban design strategies that help create more child-friendly POS in Downtown.

The thesis is structured into five chapters. Chapter 2 delves into the existing research body on children and the environment, POS's role in children's outdoor

free play, the most common barriers to children IM and the emerging planning concept of child-friendly cities. It looks at children's environmental needs to understand the role of planning and designing in enhancing the experiences that will support children's development years. Chapter 3 describes the research's methodological undertakings by addressing the rationale for semi-structured interviews and document analysis. Chapter 4 consists of the findings from the three data sets – issues identified during interviews with parents, solutions from other cities, and challenges and opportunities for implementation throughout document analysis.

Section 4.1 presents and discusses how caregivers perceive the child-friendliness of POS in central Toronto neighbourhoods and identify which common issues can challenge families' positive experience in outdoor environments for children. Other cities' solutions to promote children's and caregivers' sense of safety, enhance proximity of play, and foster unstructured play are presented in Section 4.2. Section 4.3 compares Downtown Toronto's public realm's policies and guidelines to strategies and initiatives from other cities and explores the challenges and opportunities to respond to issues concerning parents living in central Toronto neighbourhoods. The final chapter, Chapter 5, contains recommendations to address caregivers' concerns and desires about children's environments in central Toronto neighbourhoods, and opportunities and challenges within Downtown's public realm documents to apply solutions from other cities to respond to the issues identified during the interviews with parents.

Chapter 2. Literature Review

Chapter 2 was built on the existing literature body and is divided into five interconnected sections based on relevant research topics: *Children and the Environment*, *Public Open Spaces and Outdoor Free Play*, *Barriers to Independent Mobility*, and *Child-Friendly Cities Approach*. Section 2.1 provides an overview of the transactions between children and the environment in their developmental years. Section 2.2 addresses the relevance of outdoor free play in children's health and well-being and the main factors behind children's restricted access to public open spaces. Section 2.3 delves into these factors and explores the facilitators and barriers to children's ability to move to and through public open spaces. Section 2.4 briefly discusses the emerging concept of child-friendly cities from the planning and urban design perspectives. Lastly, Section 2.5 summarizes the main ideas presented in previous sections and identify research gaps.

2.1 Children and the Environment

The United Nations (UN) *Convention on the Rights of the Child*, adopted in 1989, defines children as persons below 18. From birth to 12 years of age, children undergo what Jean Piaget refers to as the "stages of development". Children in their developmental years are the most vulnerable to the environment. It is from the environment that they learn how to grow. Until the age of two (Sensorimotor stage), children learn the world by their own experiences, movement, and senses. In this stage, they develop a permanent sense of self and learn to think about the environment as separate. Between two and seven years (Preoperational stage), they

begin to understand things, yet they cannot use logical thinking, and their way of thinking is more magical than logical. Piaget separates this stage into two substages: symbolic play and intuitive thought. They only start to develop logical thinking concretely after the age of seven. Children can draw from observation and solve problems more logically from seven to 12 years of age (Concrete operational). After 12 (Formal operation stage), children can quickly think logically and grow their ability to develop abstract thinking and (Singer et al., 1996; Oloumi et al., 2012).

Through environmental psychology, Day and Midbjer (2007) explain the relationship between children and the environment during developing consciousness. As children grow, their intellectual development evolves at a higher speed compared to their emotional development. The transition from the dreaming consciousness to the awakening of their conscious emotional is a slow process that involves understanding themselves and their relationship to others through the environment. Children cannot differentiate themselves from their surroundings in their early years and connect their emotions to things and places. The so-called “terrible two’s” is the first manifestation of consciousness development. Children begin to understand themselves and the environment as separate. They are protecting themselves from this process of alienation from the environment.

Between three and five years old, children begin to distinguish place mood – and meaning – from their own mood. Between four and seven years of age, they become interested in how places can be used; they make ‘places’ with

fabric, furniture and other things we adults assume had other functions.

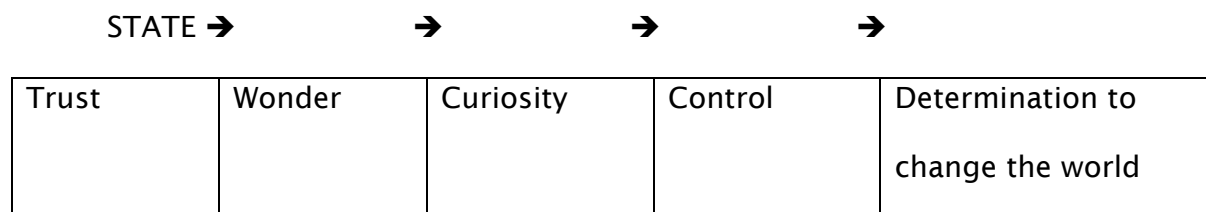
(Day & Midbjer, 2007, p.12).

According to Day and Midbjer, children at the age of seven can fully separate from their environment and consciously develop their emotions. Children develop their sense of space in their eight and nine years of age. A sense of space gives children the ability to imagine, design and make places. By the age of 11, children understand things more actively through words, rules, and principles than with their bodies, senses, and awareness. Between 13 and 15 years of age, they begin to give conscious values to their environment's aesthetics. Unlike adults, the way children observe and understand their environment is through experience (Singer et al., 1996; Seyf, 2000 as cited in Oloumi, 2012; Day & Midbjer, 2007). Their relationship with the environment is topologic, and environmental perception happens by differentiation (Oloumi, 2012). They distinguish spaces by symmetry and centricity, paths by continuity, and intersections by surfaces (Memarian, 2005 as cited in Oloumi, 2012). Children basis on environmental qualities such as uniformity, complexity, mysteriousness, readability, familiarity, crowdedness, and quietness to choose to use specific spaces (Soltani, 2005 as cited in Oloumi, 2012).

To assess children's relationship with the environment, Heft (1988) suggests an approach focused on functionality using the concept of affordances developed by Gibson (1979). It means that instead of a descriptive analysis of the physical characteristics of spaces, it emphasizes what these spaces offer to children (Spencer & Woolley, 2000). Heft demonstrates how Gibson's concept, when applied in studies by Hart (1979) and Moore (1986), confirms that children share common

perceptions of each space's affordances in their environment. Malinowski and Thurber's (1996) study with children from eight to 16 years of age found that places' preferences tend to be based on affordances for the younger, while the older chose places based on their aesthetic or cognitive qualities (Spencer and Woolley, 2000). Other studies about childhood memories (Lukashok & Lynch, 1956; Ladd, 1977; Hester, 1979; Whyman, 1985; Sobel, 1990) and children's use of spaces (Hart, 1979; Moore, 1986) have shown that preferences of places are related to children's emotions (Oloumi et al., 2012).

The transactions between children and the environment evolve as they grow and are related to their specific environmental needs in each stage of development. Children need to have an environment that addresses them, challenges them, and provides something for them to observe, to think about, to make choices, to attract their attention, to engage in their favourite activities and to allow them to meet friends. They also need the freedom to explore and to satisfy their curiosity about the world (Aziz & Said, 2012, p.205). An environment that addresses children's needs from all ages gives them opportunities to interact across the development stages and learn from one another (Frost, 1997).



ENVIRONMENTAL QUALITY NEEDED

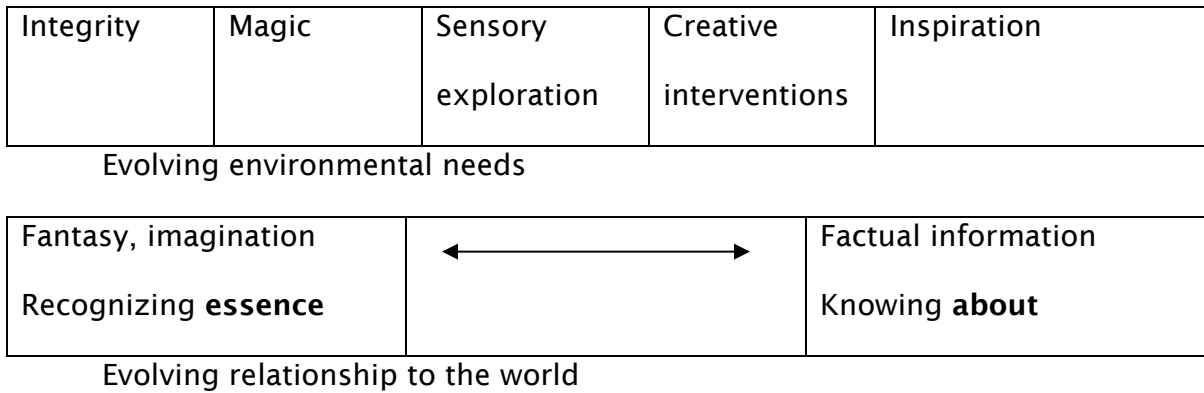


Figure 1. Children environmental needs. Adapted from *Environment and Children* (Day & Midbjer, 2007, p.17).

As children grow, they move and play differently. Infants and toddlers (under two years of age) need an environment that makes them feel protected and safe such as enclosed spaces that allows constant supervision. Simultaneously, they also need space for crawling and obstacles to challenge and develop their motor skills (Frost, 1997). Young children avidly engage in sensorial exploration while preschoolers (age two to five) engage primarily in symbolic (make-believe) play, gross-motor (exercise) play, and construction play (Piaget, 1962 as cited in Frost, 1997). The quality of children's play environments may directly impact their social behaviour during preschool. Children in their school ages (five to 12) continue to engage in symbolic, exercise and construction play. As they evolve from pre-logical to logical thinking, play progressively becomes more practical and structured (e.g. organized games and work/play activities). Frost (1997) highlights that children need an environment that supports their developmental play needs, which includes

social (individual, group) and cognitive play (gross-motor, symbolic, organized games) and work/play (construction, art/creativity, gardening).

2.2 Public Open Spaces and Free Outdoor Play

Public open spaces (POS) are open and publicly accessible areas of the built and natural environment where community-building activities occur (Carr et al., 1992; Carmona et al., 2008; Stanley et al., 2012; Gehl, 2013). Open spaces where children have unrestricted and free access such as streets, alleys, squares, parks, and playgrounds configure the framework where growth and development potentially unfold. POS's dynamic landscapes offer children the opportunities to develop by exploring and trying to manipulate their environment in a physical, social, and emotional way. Through play, children can explore the world and their relationship with the environment, others, and themselves (Hayward et al., 1974; Brown & Burger, 1984). Several studies identified a series of play's social and cognitive categories based on different stages of children's development (Parten, 1933; Piaget, 1962; Smilansky, 1968). Categories of play are primarily cooperative, symbolic, and functional in early childhood, while children in their late childhood progressively incorporate complex forms of play, including games with rules (Babour, 1999). All forms of play allow children to develop collaborative skills, gain a sense of achievement, and learn to watch and respect others and themselves (Day & Midbjer, 2007). Children's environments must include all forms of play that address needs at every development stage (Frost, 1992).

Children are designed to play, mostly outdoor with other children. Without play, they fail to develop the social and emotional skills necessary for healthy psychological development. Gray (2011) argues that there is a strong correlation between the rise of psychopathology in children and the decline in outdoor play. Outdoor play has been continually declining since the mid-20th century. By that time, the positive attitude towards children's outdoor play led to an increase in the number of parks and other play spaces to promote children's outdoor "unstructured play." Chudacoff (2007) refers to "unstructured play" as play activities spontaneously structured by children. The sandpile, for instance, allows children to create their play environment. Although it became increasingly rare to find children playing outdoors with friends, it is still one of the activities that make them happiest (Singer et al., 2009). Through outdoor play, children develop interests and competencies, regulate emotions, make friends, and experience joy, contributing to children's mental health (Gray, 2011).

POS, especially parks, have played a historical and relevant role in providing the settings for children's physical exploration and social development (Loukaitou-Sideris & Sideris, 2010). Neighbourhood parks generally offer various active recreational opportunities that can increase the time adults and children spend in outdoor activities due to proximity to home (Floyd et al., 2008). Research has found a correlation between time spent in POS with large green areas such as parks and improved health and well-being in Scottish schoolchildren (McCracken et al., 2016). Especially to younger children, parks can offer the natural and unstructured outdoor settings essential to enhance their exploratory, imaginative, and social

abilities through independent play (Bee, 1992; Erikson, 1963). One study (Loukaitou-Sideris & Sideris, 2010) in Los Angeles, USA, reported that the lack of children's interest in the park's facilities and activities, children's and parent's available time for recreation activities and parent's concerns about children's safety are some of the reasons publicly accessible neighbourhood parks are underutilized. The study also noted that children who live in high-social-need neighbourhoods in the inner-city utilized parks more often because of the lack of other open spaces for outdoor activities.

Studies have found that children's access to recreation facilities is not equal between high-social-need and low-social-need neighbourhoods. Children living in highest-social-need neighbourhoods had fewer opportunities for formal recreation activities (Macintyre et al., 1993; Giles-Corti et al., 2003). On the contrary, a study conducted in Glasgow, Scotland (Ellaway et al., 2007) and another in Amsterdam, in The Netherlands (Karsten, 2001), noted that playgrounds were more likely to be found in high-social-need areas. When assessing the quality of playgrounds in Edmonton, Canada, a study (Smoyer-Tomic et al., 2004) found that despite the excellent accessibility of playgrounds in high-social-need neighbourhoods, the quality was inferior compared to low-social-need ones. Research in Boston, USA (Cradock et al., 2005), confirmed that despite the proximity of playgrounds in high-social-need neighbourhoods, play structures were found to be more unsafe and poorly maintained.

Research on how American children spent their time in the early 1980s and late 1990s (Hofferth & Sandberg, 2001) shows a decline in children's free time to

self-chosen activities and play and increased the time spent in school and school-related activities, and shopping with parents. The great majority of parents who participated in surveys conducted through the United States and the United Kingdom (Clements, 2004) agreed that their children spent considerably less time playing outdoors than they did at the same age. Many argue that even with the broad impact of technologies on the way children spend their time, the main barrier to children's outdoor free play is parent's safety concerns (O'Brien and Smith, 2002; Clements, 2004; Gray, 2011). Added to that, when they can play freely outdoors, they find little attractive play spaces and barely any children to play with (Gray, 2011). That is partly because of all the rules on how children could play found in most urban playgrounds. Playgrounds became spaces subjected to the "social and political design of others" (Kozlovsky, 2008, p.171). With the hope of controlling children's outdoor play (e.g., places to jump, places hide), playgrounds generally involve prefabricated fixed play structures and environments (Staempfli, 2009; Lange, 2018).

Studies have systematically demonstrated that outdoor play spaces planned and designed by adults have failed to address the opportunities desired by children (Bishop & Peterson, 1971) and "embodied untested assumptions about the users, the nature of the activity and the interaction of the physical environment and children's play" (Hayward et al., 1974). Hayward et al. (1974) identifies three common types of playgrounds: traditional, contemporary, and adventure (p.134). Each type configures different children's outdoor play and its interrelationships with spaces. Traditional playgrounds are the most common playgrounds in urban

settings and consist of traditional equipment play areas with swings, slides, seesaws, and climbing bars. Contemporary playgrounds are visually appealing and designed by architects and landscape architects to create an aesthetically pleasing arrangement of forms and play structures. The so-called adventure or junk playgrounds were developed in Europe as a form of unstructured outdoor play to encourage free play and experimentation through a wide range of play opportunities. These playgrounds allow children to "plan and re-plan the area as their interests evolve" (Hayward et al., 1974, p.137). Each type of playground might have a functional impact on children's play behaviour and places' preferences.

Research has shown that children's preference for adventure playgrounds is primarily related to the freedom to choose how to play (Frost, 1997; Brown, 2008). Children's outdoor play, particularly in an unstructured natural environment, can help children to have a proper understanding of reality (Francis, 1988). Studies about the benefits of playing in outdoor natural environments are few (Fjørtoft, 2001) but suggest that outdoor play in a natural environment provides an exciting field for children's exploration. "Playscapes" (Frost, 1997), which incorporate natural features such as slopes, rocks, and trees for climbing, can enhance children's learning experiences and challenge their motor skills (Hart, 1979; Moore, 1986; Frost, 1997; Fjørtoft, 2001). Children's experiences in POS rely on the design of playscapes, and some types of environments can support children's development more effectively than others (Frost, 1997). The more diverse the landscape, the more play opportunities it offers to children (Fjørtoft, 2001). The diversity of structures and functions of a playscape and its affordances of play can affect

children's physical performance and increase opportunities to learn and grow (Moore & Wong, 1997).

Children need spaces to play to enhance their ability to make the necessary distinction between their outer – social and reality – and inner world – imaginative and symbolic fantasy (Day & Midbjer, 2007). Frost (2006) affirms that most playgrounds for school-age children “fall short on integrating garden and natural areas, constructive play materials and symbolic props into outdoor play and learning environments” (as cited in Staempfli, 2009, p.274). Creativity generally involves a process of responding to environmental stimuli and connecting them with previous experiences to create something unique (Fjørtoft, 2001). “Play is therapeutic” (Frost, 1997), especially symbolic play. Children express themselves through play. Playing can help children to resolve emotional conflicts consequences of abuse and trauma.

Design must tread a narrow path between nourishment and manipulation, between the reverent magical and the dramatically theatrical, fantastical; between reassuringly secure and the creativity stimulating challenging; between places that nurture and those that help them grow. (Day & Midbjer, 2007, p.18).

Active free play and other unstructured activities such as walking and cycling in POS have the potential to be the most effective ways to enhance children's physical activity levels (Burdette et al., 2004). The amount of time children, especially in school-ages, spend outdoors is a strong predictor of their physical activity levels (Sallis et al., 2000). From more structured outdoor play settings such

as playgrounds to less structured ones such as streets and alleys, POS represent an opportunity to contribute to children's social, physical, and mental health through active free play (Boreham & Riddoch, 2001). Despite that, there is an association between low levels of physical activities and the decline of outdoor play and active transportation. With most of the world's population living in cities, children's ability to play and move freely through POS has mainly decreased due to parents' perceived idea of cities as dangerous for children (Wikström & Dolmén, 2001; Alparone & Pacilli, 2012). Among other social and environmental factors, parental safety concerns may be the primary cause of children's limited opportunities to free play and access to POS.

2.3 Barriers to Independent Mobility

"Children's independent mobility" (CIM) is defined by Hillman et al. (1990) as the freedom to use active modes of transportation to move through and to places and engage in outdoor play without adult supervision. Independent mobility (IM) is an integral part of children's developmental experience in their local neighbourhood environment (Chaudhury et al., 2016). The ability to move between places allows children to choose where and how to play. Researchers associate CIM's decline with parent's increased car dependency (Engwicht, 1992; Tranter and Sharpe, 2008), sense of insecurity and negative perception of urban environments (Wikström and Dolmén, 2001; Alparone & Pacilli, 2012). Parent's subjective perceptions of risky environments and anxiety about road safety, and fear of crime may be among the main barriers to children's mobility freedom. However, the

parent's positive perception of the impact of autonomy in children's growth and development can counterbalance their negative perceptions of the neighbourhood (Prezza et al., 2005). Also, literature shows that there is a correlation between social fears and the level of social integration within a community (Farrall et al., 2000; Ross and Jang 2000; Gibson et al., 2002), and that sense of safety is often related to sense of community (Chipuer, 2001) and neighbourhood attachment (Riger et al., 1981, Brown et al. 2003).

Mitra et al. (2014) examine the correlation between parental perceptions of the neighbourhood environment and CIM in Toronto, Canada. The analysis includes the influence of other aspects such as age and gender of a child, household's socio-economic characteristics, and parental travel attitudes. Results showed that 65 percent of fifth and sixth graders were allowed out without adult supervision. CIM was associated with up to 19.6 percent increase of children's daily moderate to vigorous physical activity on average. Studies in Europe and Australia suggest perceived traffic danger and the absence of street crossings as significant barriers to CIM (Fyhri et al., 2011; Hillman et al., 1990; Johansson, 2006; Villanueva et al., 2012). In Toronto, parental concerns about stranger danger and neighbourhood safety might play a more vital role in CIM levels (Mitra et al., 2014). Research also indicated that higher levels of CIM are potentially correlated with parent's preferences for active modes of transportation (i.e., walking, cycling and transit) and living in the same residence longer than nine years.

CIM's main barriers can be a result of socio-demographic, environmental and psychosocial factors (Alparone & Facilli, 2012). Studies have shown that CIM levels

also vary with age (Blakely, 1994; Heurlin-Norinder, 1996; Giuliani et al., 1997; Sissons Joshi et al., 1997; Timpero et al., 2004; Fyhri & Hjorthol, 2009) and gender (Hillman et al., 1991; Kytä, 1995; Heurlin-Norinder, 1996; Hart, 1997; O'Brien et al., 2000; Tranter and Pawson, 2001; Johansson, 2006; Brown et al., 2008; Fyhri & Hjorthol, 2009). Mitra et al. (2014) confirm that boys have more freedom of mobility amongst Toronto's school-aged children than girls. A study with Australian children aged between 10- and 12-years (Villanueva et al., 2014) identified that although boys have higher CIM levels than girls, girls' independent mobility (IM) increases in a walkable neighbourhood. A well-connected, low traffic street network and proximity have a positive influence on girls' IM. Boys' IM is more likely associated with parental concern about neighbourhood road crossings' safety because boys are generally more exposed to their neighbourhood environment. Villanueva et al. (2014) note that "because boys have more experience in being IM, it appears that parents may feel they are more capable than girls in negotiating traffic conditions, and being spatially aware of their surroundings" (p.405).

Parental decision-making appears to be the mediator of the relationship between the built environment and CIM (McMillan, 2005). Villanueva et al. (2014) suggest that the potential influence of the built environment in parents' perception of the neighbourhood may affect parents' confidence in their child's ability to use active modes of travel without adult supervision. Familiarity with the local neighbourhood environment gained over time may positively influence parents' decision on whether their children can travel independently (Alparone & Pacilli 2012). Another study has reported that children may also fear their safety (Mitchell

et al., 2007). Children have expressed concerns about strangers and older children when going to parks and other neighbourhood destinations (Nayak, 2003; Jago et al., 2009). On the other hand, interactions with friends and neighbours and the presence of other people walking and cycling have been correlated with increased outdoor activities (Timperio et al., 2004; Evenson et al., 2007; Carver et al., 2008; Page et al., 2010) and can contribute to parent and children's sense of safety by increasing real and perceived surveillance (Valentine, 1997).

Designing safe, 'walkable' neighbourhoods appears to be an important precondition for children to be independently mobile. Streets surrounding destinations should be both highly connected to minimise distances between home and local destinations yet carry lower levels of traffic. This may involve creating avenues or boulevards that separate children, pedestrians, and cyclists away from cars. This would not only create a safer neighbourhood environment for children but would also increase parent and child's confidence in children being independently mobile. (Villanueva, 2014, p.406).

Different aspects of POS, such as proximity, size and design quality related to usage, have mainly focused on adults. The way POS incorporate the needs and desires of the local population, the quality of design, and if they are poorly or well-maintained have been demonstrated to encourage or not its usage by people across all age groups (Wood et al., 2010; Villanueva et al., 2013). For school-aged children, a study in Australia has shown that increased distance from POS is associated with lower levels of IM (Klinker et al., 2015). Other studies confirmed that living within

walking distance to POS positively impacts children's IM (Mackett et al. 2007; Alparone & Pacilli 2012; Zubrick et al. 2015). Villanueva et al. (2013) highlighted that girls' IM levels were higher if they perceived the closest POS as safe while boys would be more encouraged to be independently mobile if they perceived these spaces as fun and attractive. After examining the correlation of children's use of POS and IM with these spaces' attributes in New Zealand, Chaudhury et al. (2016) state that environmental features such as POS size and proximity potentially have more influence on CIM than design quality.

2.4 Child-Friendly Cities Approach

Children restricted access to POS, whether to play or to move freely, have led to decreased physical activity levels and an increase in overweight and obesity. Overweight and obesity in childhood have severe physical and mental health consequences, including diabetes, respiratory and cardiovascular diseases (Figueroa-Munoz et al., 2001; Ludwig and Ebbeling, 2001, Young-Hyman et al., 2001), negative self-image, and low self-esteem (Erickson et al., 2000; Strauss, 2000; Davison & Birch, 2001). Public health guidelines encourage at least one hour of moderate to vigorous physical activity per day. Without the proper balance between energy intake and energy expenditure, overweight and obesity in children have become a growing concern in cities worldwide (World Health Organization, 2020). As cities face the lack of POS suitable for children to enhance their physical activity levels (Karsten and Van Villet, 2006; Ergler et al., 2013) “contemporary strategic planning has almost become child-blind, with the new higher-density

centres being built essentially for the childless in mind” (Woolcock et al., 2010, p.83).

The emerging concept of child-friendly urban planning focuses on encouraging a combination of planning, design, and engagement strategies (Punter, 2003; Hutton, 2004; ARUP, 2017) to support children’s healthy psycho-physical development. A child-friendly city (CFC) “is a city, town or community in which the voices, needs, priorities and rights of children are an integral part of public policies, programmes and decisions” (UNICEF, 2020). ARUP (2017) developed two critical concepts for a more child-friendly approach to cities: ‘everyday freedoms’ and ‘children’s infrastructure.’ The concept of everyday freedoms acknowledges the relevance of free play and independent mobility for children to form healthy behaviour patterns. It also highlights that strategies should address children’s needs in each stage of development. A possible solution to everyday freedoms for younger children is the use of POS adjacent to residential areas for exploration with informal supervision. Children’s infrastructure refers to an integrated and connected POS network for children and their families starting from streets and the immediate outdoor area of residential buildings to parks and playgrounds.

By promoting connected, multifunctional, intergenerational and sustainable public spaces for cities, children’s infrastructure can generate a substantial range of benefits for all urban citizens. (ARUP, 2017, p.17).

Krysiak (2019) report suggests that the first step towards a child-friendly city is to address families' needs with children in high-density neighbourhoods. Besides,

it emphasizes that the built environment's physical characteristics can facilitate children's free play and IM. For Krysiak, new communities' design should consider how it could contribute to children's health and well-being. The study gathered examples of design and programmed interventions and policy change initiatives as it acknowledges that "built interventions often require programmed or policy implementations to address deeper social barriers that may prevent children from accessing their communities and feeling a sense of belonging" (p.18). The effectiveness of child-friendly design strategies for compact developments relies on planning policies consistent with providing safe, attractive, and natural environments for play and IM.

Planning for urban childhood is about placing children's right to the city at the core of urban planning and design practices (Whytzman et al., 2010; Lin, 2018). Article 3 of the United Nations (UN) *Convention on the Rights of the Child* states that "the best interests of the child shall be the primary consideration" in all activities concerning children. The child-friendly cities approach prioritizes children's right to participate in public space and discourse. They have the right to physical and social infrastructure that address their specific needs and the right to express themselves and participate in decisions that affect them. Whytzman et al. (2010) noted that children's right to public space "can only be achieved through legitimating the right to recognition as a distinct group, developing appropriate mechanisms to interpret the issue, and then developing the policies that will satisfy that need" (p.478).

One study in Rotterdam, The Netherlands (van den Berg, 2013), confronts a child-friendly city's concept by unveiling the correlation between such an approach

and gentrification. According to the study, the process is at the intersection of gender and class. When targeting Young Urban Professional Parents (YUPPs) with policies designed to encourage larger, more expensive, owner-occupied homes for middle-class nuclear families, cities are reproducing dominant gender ideals and perpetuating inequalities. Dual earners have more spending power than a single-parent and, therefore, can afford bigger homes. The guidelines for a family-friendly house portray parents with one or two children under 18 living in one unit as the norm. Rotterdam's plan for a child-friendly city was inspired by Vancouver's strategy to attract dual-earner families with children to inner-city neighbourhoods to promote urban livability (Punter, 2003). This study's critical analysis shows how children of highly educated dual earners are perceived as desirable for urban livability while the children of current low-income residents are the cause of livability problems.

The plans for genderfication, the production of space for gender equality, for childcare, playgrounds and bicycle paths, could indeed produce a more equal urban space for girls and boys, men and women. However, because 'child-friendly' means 'middle-class friendly' in the plans, it is to be expected that the gender equality of the middle classes is facilitated, while the poor become further marginalized. (van der Berg, 2013, p.532).

2.5 Summary of Ideas

Researchers have strongly argued that play is a fundamental right and an essential fuel for children's healthy growth and development. There is an

association between the decline in children's physical activity levels and the rise of psychopathology in children with the lack of active free play opportunities in dense urban centres. Growing concern over children's health and well-being has led to a dense body of studies investigating factors that can actively facilitate or challenge their ability to navigate the urban environment with freedom and joy. The great majority of these studies indicate parental concerns over children's safety as the main barrier to active free play and IM. However, few have delved into the associations between parental perception and the design of POS.

The child-friendly city concept can put the needs of families with children at the core of urban planning. Nevertheless, family-friendly housing policies in Rotterdam's and Vancouver's plans may have benefitted the interests of YUPPs over the detriment of higher-social-need families. The livability approach behind these plans appears to be exclusive and insensitive to structural inequalities. Some studies have shown that cities have tried to distribute playgrounds within neighbourhoods equally, but high-social-need neighbourhoods were at a disadvantage when assessing quality. This type of evidence reveals that planning and urban design have been failing to provide POS suitable for children free play and IM and address the impact of social inequalities in children's right to the city.

A significant body of research about children's use of POS focuses on school-age children, while babies, toddlers, and caregivers are usually left behind. Especially in their early ages, children need a safe, clean, and stimulating environment to grow and develop. Also, there is barely any research available about the use of POS by children with disabilities and their caregivers. Parents and

caregivers are the “gatekeepers” (Veitch et al., 2006, p.384) of children’s access to POS. Researchers claim that parental perception of the built environment is one of the main determinants of children’s ability to actively and independently enjoy POS. Literature shows that caregivers generally perceive denser urban environments as dangerous for children. Listening to their thoughts and opinions about children’s relationship with the built environment in high-density neighbourhoods may help overcome current barriers to active free play and IM in POS.

Hence, this study builds on the existing body of knowledge presented earlier in this chapter to look at how caregivers perceive the child-friendliness of POS in central Toronto neighbourhoods and identify which common issues can challenge families’ positive experience in outdoor environments for play.

Chapter 3. Methodology

This study employs a multi-method exploratory approach to address the concept of child-friendly POS in central Toronto's context (downtown Toronto and adjacent neighbourhoods). Specifically, to answer the research question: Which planning, engagement, and urban design strategies can facilitate children's free outdoor play and IM in high density neighbourhoods’ POS? It also looks to achieve the research four specific objectives:

- Assess caregivers' perception of central Toronto’s POS child-friendliness.
- Examine realized projects from other cities where strategies to promote child-friendly POS were successfully employed.

- Analyze Downtown Toronto's municipal policies and guidelines currently in place that potentially addresses children's needs in POS.
- Provide recommendations for planning, engagement, and urban design strategies that help create more child-friendly POS in Downtown Toronto and adjacent neighbourhoods.

3.1 Research Approach

As this research centres on children and their caregivers' experiences in POS in high-density neighbourhoods such as central Toronto, it uses a qualitative research approach because it allows researchers to look at an issue from a phenomenological perspective. That means that researchers view humans as "thinking motivated actors" (Palys & Atchison, 2014, p.8) to understand their behaviour and come closer to such experiences. From a phenomenological perspective, any attempt to understand human relationship with their environment takes into consideration that humans are cognitive beings who "perceive and make sense of the world around them, have the capacity to abstract from their experience, ascribe meaning to their behaviour and the world around them, and are affected by those meanings (Palys & Atchison, 2014, p.8). It also adopts a constructivist lens to emphasize the pluralist and plastic character of one's reality. Constructionist-oriented qualitative approaches focus on dynamic and collaborative processes in which, ideally, "the researcher will begin the research with an open mind and without preconceived theory" (Palys & Atchison, 2014, p.14).

The multi-methods exploratory strategy used to conduct this study consists of two qualitative methods, which unfolds into two data sets: semi-structured interviews and document review. The interviews comprise the research's primary data collection method, followed by document review used to collect supplementary information that effectively addresses the research question (Johnson et al., 2007; Palys & Atchison, 2014). This strategy permits more credible observations through methodological triangulation. Methodological triangulation involves combining multiple methods to study the same phenomenon (Johnson et al., 2007; Creswell, 2014; Palys & Atchison, 2014). Generally, researchers employ methodological triangulation to overcome potential deficiencies and biases resulting from a single-method approach.

3.2 Research Context

The research context is the City of Toronto, most specifically downtown Toronto and adjacent neighbourhoods (central Toronto). The City of Toronto (Tkaronto) is the traditional territory of many nations, including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples. It is now home to many diverse First Nations, Inuit and Métis peoples. Toronto is the largest city in Canada and is within its largest metropolitan region – the Greater Toronto Area (GTA). The GTA is composed of Toronto and the municipal regions of Halton, Peel, York, and Durham. As of 2016, the City of Toronto population surpassed 2.7 million, with roughly 240,000 people living within the 17 square kilometres comprising the downtown Toronto area (City of

Toronto, 2018). For this thesis, Downtown comprises the area bounded by Lake Ontario to the south, Bathurst Street to the west, the mid-town rail corridor, and Rosedale Valley Road to the north and the Don River to the east (Appendix A).

3.3 Data Collection Methods

3.3.1 Semi-structured Interviews

This study uses in-person semi-structured interviews to collect more subjective and unquantifiable data (Rowley, 2012; Palys & Atchison, 2003), such as parents' feelings, thoughts, and opinions about children's experiences in Downtown's POS. The research process becomes more collaborative through semi-structured interviews, allowing for interaction, engagement, and observation. The interactive and flexible character of face-to-face semi-structured interviews can promote a positive connection between researcher and participant, which is beneficial to the quality of the information gathered (Palys & Atchison, 2003). Interviews with parents are critical to understanding their concerns about children's use of POS and the factors that may influence decisions related to children's active free play and IM. Instead of following a rigid script, interviews happen more organically using a combination of closed and open-ended questions as guidelines (Robson, 2011) to the collection of in-depth information. Having the ability to use questions in a flexible order and with various degrees of adaptation (Rowley, 2012) helped accommodate the participant and create opportunities for dynamic interactions "in more of an ongoing conversation style" (Palys & Atchison, 2003, p.143).

Although the face-to-face interaction between the researcher and participant has many benefits, it also requires caution about reactive bias (Palys and Atchison, 2003). Reactive bias, or reactivity, emerges when participants' desire to respond in a more socially or morally acceptable way prevents them from being open about their views. Participants can also take cues on the exchanges that happen due to this method's interactive nature about how they should respond to a particular question, which requires the interviewers to be as neutral as possible in their verbal and body language. To allow more engagement and guarantee the most complete and accurate record of the conversation, interviews were audio-recorded with participants' consent. The depth and richness of the information gathered balance the time-consuming of transcribing recorded responses. Individual audio-recorded interviews were transcribed on the following day of the interviews and anonymized in the process. Data from the interview transcript was organized into some consistent rationale after several readings allowing the themes to be identified without pre-establishing codes and categories. Closed-ended questions and rating scales helped to gather interviewees' information and create a profile for each participant.

Sample and Recruitment

Supported by a large body of literature, this study identifies parental concerns over roads' safety and stranger danger as the main barriers to children's access to POS in high-density neighbourhoods such as central Toronto neighbourhoods. Although it also acknowledges that a child-friendly approach to cities is only possible by ensuring children's right to public discourse, the study

focuses on its research question and objectives to determine the interviews' sample. The sample comprises adults living with children in Toronto and frequently using Downtown and adjacent neighbourhoods' POS to assess their primary concerns and desires and identify common issues. Adults in seating areas next to play structures were approached individually, informed about the study, and invited to participate in an on-site face-to-face interview. The length of the interviews varied between 20 and 40 minutes long. Sometimes discussions had to pause for a few minutes for parents to check if the children were okay. Other times, parents engaged children in the process by asking them to add to their answers. Generally, interviews with parents who had someone to help supervise the children or willing to dedicate more time sharing informative and provocative thoughts were longer.

Setting

In-person interviews occurred in structured playgrounds in two Downtown Toronto's parks. Although this study focuses on a wide range of POS, a small setting such as a playground allows identifying preferences and concerns about the built environment more easily. Downtown has most of its parks with less than 0.5 hectares in size. There are three parks between 1.5 and 2.0 hectares, which are considered large enough to include facilities, passive and active spaces. Amongst those, Grange Park (1.83 hectares) and Regent Park (1.75 hectares) have the character of neighbourhood parks, and their play area recently built. Harbour Square Park (1.90 hectares) was not included in this study because its location may attract more tourists than residents, and the sample only addressed caregivers living in central Toronto. Grange Park and Regent Park are distinct neighbourhoods

with contrasting social environments but share similar physical environment characteristics such as higher densities, mixed uses of land, proximity to transit, and access to recreation facilities.

Ethics

Before conducting the interviews, the ethics application was submitted to the Office of Research Ethics and received clearance in March 2018. Parents with children living in Toronto were approached in the two parks, informed about the study topic and purpose, and invited to participate on-site. A clear "expectation of confidentiality" (Palys and Atchison, 2003, p. 77) was ensured by the content of an "information consent letter" (Appendix C) and a consent form. These documents also reinforced participants' right to withdraw from the study at any time, without giving a reason and without a negative impact. All responses were audio-recorded with the participants' consent and saved with an identity code. Participants' identities remained confidential, and consent forms with personal information were safely stored. The identity code did not offer any clue as to the participant's identity. At the end of the interviews, participants received a "feedback letter" (Appendix D) with the researcher's contact information, the supervisors (Dr. Laura Johnson and Dr. Pierre Filion), and the Office of Research Ethics for further questions about the study.

3.3.2 Document Analysis

Another method of qualitative research data collection employed in this study is document analysis. Such a method comprises a review of organizational

and institutional documents like planning policies, strategic plans, guidelines, and reports. When combined with interviews, document analysis forms an integral part of data triangulation that can help the researcher "uncover meaning, develop understanding, and discover insights relevant to the research problem" (Mills et al., 2006, p.118). Firstly, several documents containing planning, engagement and urban design strategies from other cities are reviewed to identify and select relevant information to integrate and complement data collected through interviews. Secondly, data gathered using interviews and documents from other cities are combined to critically review Toronto's documents and support recommendations. The process involves elements of content analysis and thematic analysis to help "establish the meaning of the document and its contribution to the issues being explored" (Bowen, 2009, p.33).

Document analysis as a data collection method provides a wide range of advantages, including time efficiency and cost-effectiveness, document availability, and lack of obstructiveness and reactivity. To ensure research credibility and rigour, the researcher plays an intrinsic role in investigating, evaluating, and interpreting the data collected through document analysis (Bowen, 2009; O'Leary, 2014).

Document analysis requires assessing whether the document is relevant to the research problem and purpose and its content fits the study's conceptual framework (Bowen, 2009). It also presents concerns over potential bias both in the document and from the researcher. For this research, documents were systematically analyzed for completeness, aiming to build empirical knowledge and develop a comprehensive understanding.

3.4 Data Analysis

The analysis of data collected through semi-structured interviews and documentary analysis was undertaken simultaneously to allow themes to emerge across all data sets. A balance between deductive and inductive analytical strategies led to elaborating categories to fulfill the research questions and objectives and connected to data to identify overarching themes (Palys and Atchison, 2014, p. 327). For the semi-structured interviews, transcripts data were organized following the interview outline for coding and category construction purposes. As document analysis supplements semi-structured interviews, predefined codes used in the interviews were applied to the content of documents. The codes and themes generated were used to integrate data from different collection methods.

3.5 Limitations

Given this study's purpose, research question and objectives, semi-structured interviews were conducted with caregivers rather than children. It was vital to learn from parents' experiences and perspectives to understand better the barriers to children's access to POS that may be posed by the design of Downtown's physical environment. Twenty participants were interviewed individually at Grange Park and Regent Park's playgrounds. The size of the sample may challenge the idea that their experiences are extended to a broader population. There are potential flaws in document analysis, such as the lack of sufficient details or "biased selectivity" (Yin, 1994, p.80) in organizations' documents.

Overall, the advantages offered by semi-structured interviews with parents and document analysis in aligning with the research intent outweigh the limitations. Although this thesis addresses urban design-related issues and possible solutions, urban design is not the focus of this study. Further research will be needed to delve into the design specificities of child-friendly POS in high-density neighbourhoods.

3.6 Research Rigour

To enhance research rigour, this study is based on four general guiding principles to qualitative evaluation: credibility, transferability, dependability, confirmability (Lincoln and Guba, 1985). The notion of credibility is centred on the assumption that "there is no single reality but rather multiple realities" (Baxter and Eyles, 1997, p.512) to define sample selection procedures, interview practices and strategies for analysis. This thesis uses purposeful sampling and methodological triangulation as strategies to satisfy this criterion. The principle of transferability, which refers to "the degree to which findings fit within contexts outside the study" (Baxter and Eyles, 1997, p.515), is early incorporated by using central Toronto as the bounded system of this research. As previously stated, throughout its urbanization history, Toronto has played a significant role in setting precedents for other cities in Ontario. This study's findings may help other cities with intensification targets facilitate children's free play and IM in POS in high-density neighbourhoods.

The study uses audio-recorded data and peer examination as strategies to ensure the criterion of dependability is satisfied (LeCompte and Goetz, 1982).

Dependability focus on documenting the research context to minimize idiosyncrasies in interpretation. The fourth principle that guided this research rigour evaluation is confirmability. The use of raw data, process notes, and techniques to track information development helped bring awareness to potential biases and interferences in data or reality. By having the principle of confirmability in mind, it was possible to continually incorporate concerns about the data's character during decision-make processes. However, this study's research question's exploratory nature can carry the investigator's biases, motivations, and interests.

3.7 Summary

The study employs a multi-method approach, including semi-structured interviews and document analysis. The purpose of such approach is to undertake a process of knowledge-building applicable to practice situations. It reflects the research question: Which planning, engagement, and urban design strategies can facilitate children's free outdoor play and IM in high density neighbourhoods' POS? As the primary data collection method, interviews were vital to listen to how caregivers perceive children's environments in central Toronto neighbourhoods and identify common issues, while document analysis provided "real-world" examples of how other cities have been addressing children and their caregivers' needs to respond to these issues. The study draws on the outcomes of semi-structured interviews and other cities' documentary analysis to review Downtown's planning documents for POS critically to search for challenges and opportunities to

implement child-friendly solutions. The underlying goal is to combine data to create recommendations derived from real-world settings to respond to issues faced by children and caregivers in central Toronto's POS. Therefore, guiding planners and urban designers' practice towards a more child-friendly public outdoor environment.

Chapter 4. Results and Discussion

As explained in the previous chapter, this study uses interviews to help frame common issues found by parents and caregivers in central Toronto's POS that may challenge children's outdoor free play and IM. In Chapter 4, the interviews' findings are organized and presented in four categories. These correspond to the scales of children's public outdoor play environments in which open-ended questions focused on – neighbourhood, streets, parks, and playgrounds. Three recurrent themes of issues emerged in parents' responses and comments - sense of safety, proximity of play, and unstructured play - summarize the interview's findings' analysis. These themes guided the document analysis to search for solutions implemented by other cities. The analysis focuses on how other cities' specific solutions can potentially respond to issues suggested by parents in central Toronto's context. Looking at Toronto's policies and guidelines, the study attempts to identify challenges and opportunities to apply such solutions and make Toronto's central neighbourhoods' POS more child-friendly.

4.1 Semi-structured Interviews

This section consists of the findings of semi-structured interviews undertaken in person with caregivers in two of Downtown's playgrounds. Structured playgrounds such as Grange Park and Regent Park with a reasonable number of facilities helped identify the purposeful sample and facilitated participants to indicate preferences and concerns about the built environment. Participants' responses to closed-ended questions and rating scales were organized in Table 1 to provide general information such as where they live, children's age, commute type and time to go to the park, how safe they feel at the park and how much they like the playground and the park. Data from open-ended questions are presented in four subsections related to the different scales of children's public outdoor play environments in which the questions were addressed: neighbourhood, streets, parks, and playgrounds. The purpose of the interviews was to assess parental perception about central Toronto's POS that may challenge or facilitate children's outdoor free play and IM. It fulfills the first objective of this study.

Table 1. Participants' general information.

	Home	Child's Age	Commute Type	Commute Time	Safety Rate ¹	Likeability Rate ²
G01	Dufferin/ Lawrence	8	Driving	20 min	9	10
G02	Downtown	8, 6	Walking	10 min	10	9
G03	High Park/ Mimico	5, 7	Transit	About 1 h	10	10
G04	Downtown	9	Walking	5 min	10	8
G05	Spadina/ Queen	7, 8	Walking	10-15 min	9	9
G06	Yonge/ Finch	7, 5	Transit	30 min	8	7
G07	Sixteenth Ave/ McCowan Rd	9, 11	Driving	45 min	6	9
G08	St. Lawrence near Esplanade	4	Transit	25 min	8	9
G09	Broadview/ Danforth	6, 4	Transit	25 min	10	10
G10	Bain/ Broadview	3	Transit	30 min	10	7

R01	Carlton/ Parliament	16 months	Walking	10 min	10	10
R02	Dundas/ Ossington	7, 5, 3	Transit	25 min	10	10
R03	Pape/ Danforth	7, 6, 4	Driving	12 min	9	9
R04	Queen/ Jarvis	> 2	Walking	15-20 min	9	9
R05	Danforth/ Donlands	7	Driving	10 min	8 or 9	10
R06	Yonge/ Englington	9, 8	Driving	15 min	10	10
R07	Pape/ Danforth	5	Transit	25 min	10	10
R08	Parliament/ Bloor	3	Walking	20 min	9	7
R09	Dundas/ River St	2 1/2	Walking	5 min	8	6
R10	Queen St/ Kingston Rd	7, 7, 4	Driving	15 min	9	9 or 10

G – Grange Park; R – Regent Park; 1. 0 unsafe; 10 very safe; 2. 0 dislike 10 – like it a lot

4.1.1 Neighbourhood

Researchers have associated parental perception of the neighbourhood environments with factors that can influence children’s ability to play and move independently through POS. In general, parents interviewed in Grange Park and Regent Park have a positive perception of the neighbourhoods. Especially in Grange Park, parents highlight the neighbourhood’s qualities, such as being central, accessible, convenient, diverse and with a wide range of activities for adults and children within walking distance. Parents who live outside Grange Park but go to the neighbourhood with their children to see family or friends, go to the Art Gallery of Ontario (AGO) or have swimming classes generally take the opportunity to visit the Park. For instance, participant G06 goes to the Park every Sunday after visiting her mother-in-law, who lives in the area.

Participant G04 lives with her husband and 9-year-old daughter in less than a 5-minute walk to the Park. They expressed feeling confident to let their daughter go with friends after school without adult supervision. The child already goes once a week with the school, and her parents bring her home from there. Going with the school to the Park and having parents bring them home from there can help

children to gradually gain familiarity with the environment (school-park-home) and parents (and children) to feel confident about children's IM (Alparone and Pacilli 2012). The participant's confidence about her daughter's IM to play in POS close to home can also be associated with her positive experience in the neighbourhood.

“It's about half an hour walk to pretty much everything we want to do. It's surrounded by a bunch of other interesting neighbourhoods. It's a walking distance to her school and it's on the subway [line].” – G04

Parents in Regent Park mentioned the neighbourhood's diversity easy access to public transportation, the DVP (Don Valley Parkway), shops, restaurants, and community and recreation centres. However, they give more emphasis to community events that take place at the Park and in new developments' facilities (Daniel's Spectrum). Participant R03 said that she likes to go to Regent Park's “Musical and cultural” events and often takes the children to “Wednesday movies night” at the Park. *Under the stars* is a free outdoor movie series presented by Regent Park Film Festival in the summer. The festival includes music and recreational activities for the family, such as yoga and soccer games before the film begins. Improvements in the neighbourhood's physical and social environment can offer children and families opportunities to spend more time in outdoor spaces and enhance their sense of community.

Sense of safety is often related to sense of community (Chipuer, 2001). When asked about how safe they feel about the Park's environments, including the neighbourhood, most parents said they feel safe or very safe (see tables 2 and 3). Parents mainly focused their comments about neighbourhood safety on social

fears. Participant G07, who took a 45-minute drive to Grange Park, perceives downtown neighbourhoods as poorly safe for children because they “Feel intimidated by the diversity of people... with different colours and personalities”. On the other hand, participant G08, who lives in a downtown neighbourhood, referred to an incident where the family was “Chased out” of St. James Park as a “Rare thing”: “In downtown, you can see some folks under the influence of alcohol and drugs... [but] it is not something that would keep me away from parks. It makes you just a little bit more aware”. Participant R07 said that she found a person with alcohol use disorder making “Weird noises” when she was leaving a school in the immediate surroundings of Regent Park (the Park). She shared similar thoughts as participant G08 on the relationship between sense of safety and the use of POS. **“It can happen anywhere in the city, so I don’t think there is anything specific about Regent Park that I would say feels any less or more safe... If we didn’t feel safe here, our daughter wouldn’t be here.” – R07**

Regent Park resident participant R01 lives in a 10-minute walk from the Park and identifies the neighbourhood as "Family-oriented" with "Lots of children, lots of moms and strollers everywhere." However, she and her husband often see people with alcohol and substance use disorder or experiencing homelessness in the neighbourhood. She said, "It can be scary sometimes, especially at night." She explained that she feels safe in redeveloped areas, where new developments replaced " Older" buildings. The areas in the neighbourhood that remain untouched makes her feel unsafe. Simultaneously, she added that she knows families who live in the "Older" areas and "they're good people too." She thinks that having both in

the neighbourhood is suitable for children to be aware of the "Different levels of status and income." Participant R10 lives in a 15-minute drive east from Regent Park, and despite feeling safe in the Park, for him, the neighbourhood's safety "Is a little bit questionable." Other participants in Regent Park also shared concerns about the neighbourhood's safety:

R03: "I like the playground, [but] the neighbourhood scares me."

R04: "Maybe I would be more cautious at the nighttime, but at daytime, I wouldn't have any concerns."

R08: "Anytime I hear [there was a] shooting, then I don't come, and then I hear everything is calm, then I come. I usually come during the day; I wouldn't come here after evening time."

Participant R08 said that despite her fears of crimes occurring in the neighbourhood, she feels safe in Regent Park. She clarified that although people tend to associate public housing with safety issues, she does not perceive public housing as a problem. She added to that by saying, "People here [in public housing], they have little kids too... my aunt lives in the [public] housing... because her husband passed away and she has four kids". Participant R04, who lives in Moss Park, claims she worries about the presence of *Overdose Prevention Sites* and shelters downtown because "The addicts can be rough." Parents in Grange Park also expressed their concerns about stranger danger and neighbourhood safety. Participant G06 said that feels safe "despite come characters that walk through the park." Participant G04 mentioned the community programs held at the *University Settlement* next to Grange Park. Although she acknowledged that "[they] never

really impede on the kid's space," she says, "Guys can get a little rowdy." Participant G05, who lives in Alexandra Park, prefers to take a 15-minute walk/bike with the children to Grange Park rather than go to their neighbourhood park. She states, "I'm afraid for needles and other issues," referring to "Other people that use the park." **"At the park 5min-away (from home) I don't feel safe, I have to sit there because the neighbourhood is not entirely that safe. I have to go with them to the park around my house because of safety reasons... because it's not a very safe area, I have to supervise them the whole time." - G05**

At the neighbourhood level, findings confirm what research says about the potential influence of the built environment on parents' perception of the neighbourhood. Most parents interviewed in the two parks perceive neighbourhood characteristics such as a mix of land uses, easy access to public transportation, diversity of the population, and a wide range of activities for adults and children as positive. They also express their fear of crime and stranger danger more intensely related to higher-social-need neighbourhoods like Regent Park, Kensington-Chinatown (Alexandra Park), Moss Park, and North St. James Town (St. James Park). Parents in Regent Park often associate a higher sense of safety to the areas where occurred the replacement of public housing by new developments. It means that planning and urban design may have failed both public housing residents and Regent Park's POS users. As a parent stated, public housing is not a problem. Families with children living there have the right to be there and use POS with safety and freedom.

Participants living in downtown neighbourhoods shared a slightly different perception of the relationship between social fears and social inequalities compared to other parents, which aligns with the body of research that correlates social fears with the level of social integration within a community (Farrall et al., 2000; Ross and Jang 2000; Gibson et al., 2002). Even after describing real safety issues that tend to be associated with public housing residents in Regent Park, parents who know families with children living in public housing said they feel safe in the neighbourhood. They reinforced that the presence of families with children in the area makes them feel safe. Parents and children living downtown recalled exposure to challenging situations while in POS, but instead of increased fear, they reported being more aware of and familiar with the environments.

Literature has shown that neighbourhood familiarity gained over time can enhance parents' and children's sense of safety. However, without feeling safe, parents and children will not have opportunities to be familiar with the local environment. TDSB Student Census data (2017) show that 86 percent of the children living in Grange Park compared to 61 percent in Regent Park feel safe "All the time or often" in their neighbourhood environments. Parents interviewed in Regent Park also expressed their social fears more often and with more emphasis than parents in Grange Park. Even though participants have rated Regent Park as safe and very safe, their answers imply a strong correlation between sense of safety and contrasting built environments.

4.1.2 Streets

Children's access to streets, whether to play or to go to places, relies mostly on parents' subjective perceptions of risky environments and anxiety about roads safety (Fyhri et al., 2011; Hillman et al., 1990; Johansson, 2006; Villanueva et al., 2012). Parents in Grange Park and Regent Park commented at which age they would let their children use downtown's POS without adult supervision and their main concerns about CIM. Most parents think they would feel confident to let their children use active modes of transportation by themselves between the ages of eight and ten. Between eight and nine years of age, children develop their sense of space. By the age of 11, they understand things more actively through words, rules, and principles than with their bodies, senses, and awareness. Participant R03 states that, at these ages, children can go with friends to the neighbourhood park because it is a walking distance from home. If they want to go to another park where they need to take public transportation, she prefers to drive them.

Parents who live in other neighbourhoods than Grange Park and Regent park highlighted that they would not let the children go to these parks by themselves because "They would have to take transit" (G03) and "There is a lot of very busy streets" (R04) in the parks' immediate surroundings. Participant G10 who lives east of downtown took a 30-minute transit ride to Grange Park with her husband and three-year-old daughter. She said they had not thought yet about the age they would let their daughter use POS without supervision. She mentions seeing groups of children who look like being around the age of six walking by themselves in her neighbourhood and that she would consider letting her daughter do the same when

she is six or seven. In downtown, she shows concern about her daughter's interactions with the environment and traffic danger, "I want to make sure she is not going to end up at the car's side." Participant G04 who lives within a 5-minute walk to the Park thinks it is "Totally safe" for his daughter to walk there without supervision. However, he refers to the risk of traffic danger when traffic lights take longer to allow children to cross streets, mostly when children use these streets to access parks and other public open playscapes.

"There's one light to cross here that takes forever to change, so I think if the kid went by herself, they're gonna stand there for three minutes, you sort of hope the light will change more often so they can move their way through instead of looking for an opportunity to j-walk or something." – G04

Participant R10 was at the playground with his seven-year-old children after attending a birthday party at Regent's Park Aquatic Centre. He claims that he "Wouldn't feel safe" to let them go to the Park without supervision because he is not familiar with the neighbourhood and does not have a positive perception of the built environment. Participant G05 says she would let the children play "Wherever they want" at Grange Park without feeling the need to supervise them. However, she states that she does not feel confident to allow them to walk or cycle there by themselves because it "Would pose a little safety issue." Participant R07 said that she and her daughter have cycled through Regent Park, "Where streets are quieter." They live at Pape and Danforth and avoid "Major streets" when they go to Cabbagetown. Although the participant does not feel confident to let her five-year-old daughter cycle to places without the parents yet, being exposed to it earlier can

help them learn how to negotiate traffic conditions and gain more spatial awareness of their surroundings. Participant R02, who lives at Dundas and Ossington, west to downtown, states, "My 7-year-old does go do things on his own, but no other kids are out, so there's no reason to really stay out".

Amongst participants interviewed in both parks, perceived traffic danger and lack of confidence in children's ability to negotiate traffic conditions appear to influence parental decision-making significantly. POS within a low traffic street network near home potentially makes parents feel safer about letting children spend time outdoors without formal supervision. On the other hand, the absence of other children in POS can hinder children's active use of these spaces. Parents' anxiety about road safety and children's IM draws attention to the need for more focus on safety rather than actual statistical risk. If parents and children do not feel completely safe, even on the sidewalk, it can lead to restrictions on children's use of POS.

4.1.3 Parks

POS with large green areas can help to improve children's health and wellbeing. Parks have the potential to provide natural and unstructured outdoor settings for children to explore and play freely. During the interviews, most parents expressed their preference for parks within walking distance from home. Some also mentioned they prefer parks with a more considerable amount of green area. Participant G10 says they often go to different parks because they want to expose their daughter to multiple environments and experiences. She claims, "I don't

necessarily expect that there's going to be a park that will have everything." She mentions Corktown Commons as one of the family preferences because it is bigger and offers more diversity of areas and activities. She highlighted that diversity of environments and play opportunities can be limited in compact parks such as those more often found downtown.

"We love it [Grange Park], but there are so many great parks in Toronto. We live right next to Eathrow Park and the park was a big reason to move there. We also go often to Corktown Commons, Kensington Market's park and High Park." - G10

Other parents also referred to the High Park as one of their favourite parks in Toronto to go with the children. The reasons include easy access to public transportation and the size of natural landscaped areas. The Bellevue Square in Kensington Market, despite small, was recently revitalized, and it is surrounded by low traffic streets, including Augusta Avenue. Augusta Avenue closes to vehicle traffic once a month in the summer in an event called "Pedestrian Sundays." The park's location along pedestrians-only streets with local shops and cultural activities is one of the highest expressions of family-friendly POS. Participant G01 claims that although she prefers her neighbourhood park, she wants to have something like Grange Park near home. Participant G08 stresses the lack of maintenance and improvements in "Older parks that haven't really got attention in a lot of years." This parent, who lives in St Lawrence near The Esplanade street, states that building new parks or revitalizing old ones outside of their neighbourhood "Just means travelling a little bit farther."

"The whole strip on The Esplanade [street] is really beautiful, there's a lot of trees and stuff, but the parks are ancient, you can't even get a water fountain that works. Very simple stuff. There's a wading pool, but it's like the brick on the bottom is always really dirty; it never really feels it's kept up. It's a shame because it's a really vibrant community down there but hasn't got the attention like a lot of these new ones have." – G08

It appears that parents' number one option is the park closest to home. Even if the park does not offer exciting play opportunities for children, it is still the preference of most interviewees. If the City evenly distributes quality through parks, parents and children would enjoy their neighbourhood park's convenience and attractiveness without travelling further unless they want to. Participant R10, for instance, says they have parks "All over the place" within a 2 to 15-minute walk from home. However, according to him, the parks' playgrounds are "Limited in age" while Regent Park's playground "Goes up in age." For his seven- and four-year-old children Regent Park's playground is more challenging and fun. Other parks mentioned by parents were the Riverdale Farm and Dufferin Grove. Participant R02, who lives near Trinity Bellwoods, shares why he prefers to bring the children to Dufferin Grove, "Dufferin Grove has food, a good play area, shaded water play and green fields." Participant G05 adds the following:

"For them [children] just being outdoors and there are places to play, and it's safe, I think that's all that they really care about. If you ask them if there's a favourite place, as long as they go to the park, they're happy". – G05

Parents in both parks have claimed the need for comfortable and shaded places to sit while supervising children. Participant G08 at Grange Park states, "In the middle of the day, you end up like roasting as a parent, so more and more shade [is needed]." Likewise, participant R04 at Regent Park says, "More shade would be helpful." According to Participant R09, "It is usually really blazing hot in the summer in the afternoon." Participant R06 refers to their neighbourhood park near Yonge and Eglinton as "More convenient" for the parents compared to Regent Park. She says, "There is more wood, more shade, and then parents can sit comfortably." Participant G09 reports being satisfied with Grange Park's spaces and reinforces the need to provide comfortable areas for children to play and for parents to supervise them.

"One of the things that is also nice here is that there's shade. A lot of the new parks don't have any shade and that's a big thing for parents watching, and kids don't get super hot. So just making sure that especially in the heat in the summer there's some shaded areas for kids and water features to play in." - G09

Another concern about parks that were shared by parents is the availability and functionality of washrooms. When washrooms and water fountains are not available, parents and children who use the Park can find themselves in challenging situations. Participant G03 at Grange Park explains they had to walk about ten minutes to find a washroom that they could use because it was early spring, and the Park's washrooms were closed. He adds that the number of washrooms is insufficient, and the layout is confusing, "That design is horrible, I see people

totally confused," he says. In Regent Park, there are no public washrooms.

Participant R04 reports that they usually must "Go across the street to Daniel's Spectrum if they are open."

Parents also expressed their wish to see places to eat at the Parks.

Participant G09 at Grange Park relates to their experience at parks in Europe, "What impressed us was that there were little food areas to eat." She highlights the fact that except for a food stand at the Dufferin Grove, "There is never any food at any park in Toronto." The parent suggests that given the neighbourhood's diversity, it would be beneficial to parks to have "Small kitchens that people can use to be able to share their food," something like local food stands run by families who live in the community. When participant R02 at Regent Park talks about their park's preferences, he mentions Dufferin Grove especially because it "Has food." Few other parents in Regent Park also suggest places to eat at the Park. Participant R04 says, "More food options nearby would be nice," while participant R09 suggests, "Maybe a farmer's market too."

The Parks' design qualities are mainly addressed in parents' comments through the description of safety attributes such as being "enclosed," with play spaces "far from streets" and allowing "spatial visibility." In both Parks, most parents say that they enjoy the fact of being able to see what is happening in the immediate surroundings. They gave great relevance to the parks' infrastructure (e.g., washrooms, water fountains, shaded seating areas and play structures, and places to eat). Parks have a strong potential to provide opportunities for children to spend more time engaging in outdoor activities. However, parents and children

need an infrastructure that allows them to stay for long periods. Several parents expressed their preference for neighbourhood parks because of the proximity to home. They also said that they would like to see old neighbourhood parks near home with the same quality as the new ones. Size and amount of natural landscaped areas also play an essential role in parks' preferences. In general, there is a potential gap in the distribution of quality within the existing Toronto's parks. Additionally, there might be a lost opportunity to provide safe connections between neighbourhoods to allow children to walk or cycle by themselves to explore different environments and playscapes.

4.1.4 Playgrounds

Most parents claimed to be happy and satisfied with the parks' play settings. In Regent Park, they highlighted they like that the Park is new, and that the area has been going through positive transformations. Parents at Grange Park made positive comments when comparing the Park before and after the revitalization project. "There is something to do now compared to before; there was literally just grass here," says participant G04, who takes her daughter to the Park's playground at least twice a week in the summer. Likewise, participant G05 reinforces that Grange Park now is "Pretty good after renovated" and adds that "They made it really catered to children of all ages." Participant G01 states that Grange Park is "Really well planned" with the seating areas "placed strategically" to allow parents to watch their children playing in different play structures. Participant G09, who was at Grange Park for the first time, said their son asked them to go there for him to "Show them

how good it was." She refers to the least structured settings of Grange Park's playground that creates opportunities to free play.

"I like seeing parks that aren't made of plastic; that have this sort of wooden more natural area and lots of different options and not a path. Some of the parks I see, there's clear activities to do, this one allows for a little bit more creativity and movement for the kids, so I like that." - G09

Participant G08 adds that Grange Park's play spaces have an appealing design. She says, "There is so much going on that he doesn't really get bored." She claims that having children's activities in their older ages helps the younger ones challenge themselves, "He can do all of the stuff in the 5 to 12 years old, and it keeps him like engaged". Participants R01 and R02 also refer to the various levels of challenge for different ages as a positive feature of Regent Park's playground. Indeed, children need perceived risk and the stimulus of new challenges to grow self-reliance and self-esteem (Day and Midbjer, 2007). There is yet a debate about safety over fun in play areas. Studies have argued that if children do not have risky and adventure play opportunities, they will seek them in dangerous places. Danger-thrill deprivation can also lead teenagers to pursue more significant risks.

At Regent Park, parents refer to the rubber surfacing of play spaces as their favourite feature. Participant R02 said he saw a child fall from a high point without getting injured. He says, "You can bounce on this stuff." He adds that the playground is "Very well laid out and has different stuff for the kids to do." Parents in Regent Park state that they like that the playground is new and "It looks really nice" (R05). Participant R04 mentions the visual permeability of Regent Park's

playground, "If you look across, you can see the whole Park." Seeing other people and what is happening is a valued characteristic of POS (Gehl, 2010). The design should also provide possibilities of seeing and having unobstructed sightlines at children's eyes level. Amongst parents' concerns about the playgrounds, participant G07 addresses the "graffiti vandalism" with "inappropriate wording" on the playground of Grange Park. Previous research found that what children most dislike in the urban environment are the "insults" such as vandalism, graffiti, dirt, garbage, and other signs of people not caring for the place (Woolley et al., 1999).

Parents also commented about what they would like to see more at playgrounds such as the ones in Grange Park and Regent Park. Participant G05 suggests that playgrounds could have "Musical instruments made of recycled things, like pots and pans." She says that despite children having "A little bit of everything" to play with, such as climbing structures and slides, they don't have the artistic component of play like music. She also suggests a "Sandpit. Not every child has access to the beach". For participant G09, especially in the summer, it is essential to have water features to play and cool the body. Participant G06 believes that the splash pad area in Grange Park "Could be a lot more fun, right now just looks like little fountains." In Regent Park, participant R05 shares a similar thought. She believes that the Park's splash pad would benefit from a "Little bit more variety." She says that they have seen different types of sprayers, tall lands, and more interactive water features for the children to play within other playgrounds, "Stuff like that is really great at helping to make the experience fun for the kids."

Participant G10, who has a 16-months-old daughter, addresses the difficulty of finding playgrounds that have engaging play environments for babies and toddlers. She claims, "Most parks are mainly geared for kids five and up, so toddlers, you know, a lot of the features at the park are not for them." She says her baby loves light, water, and swings, but sometimes at Grange Park, they see a line up for the baby swing because it is the only one. Participant G09 would like to see more spaces where the children could "Get disgustingly dirty" because "They love it." Participant G02 had one of her children saying that "Maybe a soccer place" at Grange Park would be right "Because boys and girls like to play soccer." Participant G02 recalls parks with toys' sheds in Scandinavia, where children can borrow things such as "Shovels for the sand, scooters and tricycles." She says, "It is hard to carry all that stuff" when going to a park or playground for families with children living in the city. Most parents in Regent Park refer to the Aquatic Centre as the best feature of the Park. Many stated that they went there because of the swimming pool. Participant R06 says, "We are here because there was a birthday party at the pool". Participant R08, who lives in the neighbourhood, also goes to the Aquatic Centre without the children during the women-only hours.

Participant R07, who lives east of Regent Park, says she feels "odd" about her daughter's free-swimming lessons. "We come to this pool not because it's free, but because it's a beautiful pool," she says. Her concern is that children with higher-social-needs may have unequal opportunities to use the facility. She believes that families with more access to technologies may have an advantage compared to families with higher social needs living in the neighbourhood. According to her,

families who do not have easy access to the internet usually have to line up at the facility early in the morning for a chance to register. "I feel like, if we are coming here, we are taking the spot from someone who lives here. People that maybe need it the most", says the participant R07.

Parents' concerns about playgrounds generally relate to how much fun and challenges they offer to children's play. Participants also said that they prefer when playgrounds incorporate more natural materials such as wood, sand, and water. Participant R07 states that the large green area adjacent to Regent Park's play spaces looks like a "Soccer pitch or something" because it does not "feel natural." Playscapes with natural features or materials can help children to have a proper understanding of reality, enhance their learning experiences, and challenge their motor skills (Hart, 1979; Moore, 1986; Francis, 1988; Frost, 1992; Fjørtoft, 1999, 2001). Participant G02 suggests that playgrounds should have toys available to rent. This idea can be beneficial to parents, especially those living downtown, who walk, cycle, or take public transportation to playgrounds.

Another concern that emerged during the interviews was insufficient and sometimes inadequate or unavailable opportunities for infants and toddlers (under two years of age) to engage in outdoor public play. Playscapes that incorporate the needs of infants and toddlers are perhaps the most overlooked in urban parks. Spaces for toddlers include obstacles to challenge and enclosures for safety (Frost, 1992). As avid explorers, toddlers need an environment that allows for experimentation to grow their sense of independence and motor skills. Simultaneously, such environments must encompass spaces for parents and

caregivers to stay in constant visual and physical proximity to children. Parents have also mentioned that they would like to see more opportunities for children to create their play environment. Constructive materials such as sand and mud and artistic and musical instruments can help children make the distinction between their outer and inner world by creating something unique.

4.1.5 Summary of Issues

The summary of parental concerns presented below serves to elicit issues related to central Toronto's POS child-friendliness. Parents' observations on each scale of children's outdoor play environments help frame characteristics that can either facilitate or challenge children and their caregivers' positive experience in POS. Sense of safety, proximity of play, and unstructured play are the three themes of most recurrent issues suggested by parents in central Toronto neighbourhoods.

Sense of Safety

Parents' perception of the neighbourhood's environments can influence their confidence in children's ability to navigate POS freely. As explored in Chapter 2, parents' and children's sense of safety can be affected by traffic and strange danger or POS design. Some parents highlighted feeling safe in the playground because of how play areas' design fostered a sense of enclosure – surrounded by buildings or far from the streets. Others mentioned that they do not feel safe in their neighbourhood's playground and prefer to walk with the children to a safer area. Some parents said they would leave their children playing unsupervised in the playground but would not let them walk there by themselves because of traffic

danger or explore the surroundings because they do not feel safe in the neighbourhood. It indicates that probably child-friendly efforts to provide children and caregivers with a sense of safety in POS mainly concentrate within the playground boundaries. Thus, what type of solutions did other cities create to promote children and caregivers' sense of safety beyond these boundaries and expand children's opportunities to experience POS with freedom and joy?

Proximity of Play

During the interviews, parents have expressed a preference for parks and playgrounds within walking distance from home. Proximity seems to play a significant role in parents' decisions regarding children IM. Most parents said they would let children go by themselves to playgrounds and parks within walking distance without supervision at earlier ages than other parts of the city that they would need to take transit. Parents mentioned the need to have comfortable places to sit, eat, and washrooms available in play environments in central areas. Either living or doing other activities with children in these areas, parents feel that the more convenient, the better, and it also means having facilities such as places to rent toys. There is also the need to have quality play areas better distributed throughout the city. Parents have highlighted that sometimes they need to travel farther to access quality outdoor play areas. That said, what programs, design and planning solutions have other cities implemented to enhance children and their caregiver's access to and convenience in play areas within walking distance from home and places they usually go together?

Unstructured Play

Another issue suggested by parents is related to the character of outdoor play areas in terms of nature, fun, challenge, creativity, and art. Parents said that they not only appreciate a more natural feeling of outdoor play spaces, but they would also like to see more opportunities for children to "Get disgustingly dirty" (P09). Others said they would like to see more creative and artistic elements that would allow children to explore their imagination and create their play environment with recycled materials. As discussed in Chapter 2, unstructured play brings several benefits to children's healthy development and growth (Francis, 1988; Frost, 1997; Fjørtoft, 2001; Brown, 2008). Through unstructured play, children have the freedom to choose how to play. In addition, outdoor natural environments can afford children an exciting field for exploration. Parents interviewed in this study seem to agree with that and would like to see more opportunities for unstructured play in central Toronto neighbourhoods. How have other cities incorporated unstructured play in their public realm? What examples can help to envision possible and applicable solutions to central Toronto?

In the following chapter, the study explores examples from other cities that may help to address the three issues described above and shed light to alternatives that can be applied to central Toronto's context.

4.2 Document Analysis: Strategies from other Cities

Following the interviews, the study undertakes a thorough documentary review to select planning and urban design initiatives to create more child-friendly environments to elucidate possible answers to the issues indicated by parents in

central Toronto neighbourhoods. Documentary materials include reports published by Bernard van Leer Foundation, Arup, and Cities for Play, and the planning department from cities like London, UK, and Rotterdam, The Netherlands. This section explores how these examples, developed, and implemented to specifically address the needs of children and their caregivers in other cities' POS, can provide direction to central Toronto neighbourhoods' child-friendliness planning and design.

4.2.1 Sense of Safety

This subsection presents and discusses alternatives to address parents' and children's sense of safety in POS. As literature shows in Chapter 2, there is a correlation between parental social fears and the level of integration within a community (Farrall et al., 2000; Ross and Jang 2000; Gibson et al., 2002), and that sense of safety is often related to sense of community (Chipuer, 2001) and neighbourhood attachment (Riger et al., 1981, Brown et al. 2003). This subsection illustrates initiatives based on holistic child-centred approaches that integrate and coordinate planning strategies to achieve safety and friendliness in all scales of the public realm's outdoor environments by fostering families' sense of community and belonging.

These projects begin with cities acknowledging children's' specific needs in urban environments and their commitment to ensuring that policies and initiatives create opportunities for cities to meet those needs. Their approach to safe POS includes engagement programs to listen to children and caregivers' experiences in

POS and how they feel about these spaces. By involving children and caregivers in the early stages of planning and designing child-friendly neighbourhoods, these strategies help create placemaking and enhance sense of community, consequently creating a stronger sense of safety. Strategies presented here address child-friendly streetscape and community design to ensure safe travels and children's IM. These are mainly applied to expand children's outdoor environments to play beyond the schoolyards and playground limits.

A planning approach named “*Building Blocks*” was developed by the City of Rotterdam during a three-year program aiming to transform Rotterdam in a Child Friendly City. The program started in 2017 implemented pilot studies in eleven neighbourhoods, to measure City efforts and analyse neighbourhoods’ level of and potential for child-friendliness. One of the outcomes of the *Building Blocks* is a set of urban design guidelines including Child-Friendly Public Spaces and Safe Traffic Routes. The Public Spaces guidelines provide directions on the design of wider sidewalks that allow children’s play and create more opportunities for them to navigate through POS safely and freely. Three to five metres wide sidewalks are encouraged on one side of every street, preferably the sunny side. Speed reduction measures and “no-cut-through” traffic zones are included on the Safe Traffic Routes guidelines (De Jonge, 2010) to foster sense of safety and create opportunities for IM. The table below presents a summary of some of Public Spaces guidelines.

Outdoor Play Areas	Green Play Areas	Liminal Space	Existing Buildings
▪ Sports/play areas with a minimum of 5,000 m ² for each demarcated	▪ Seasonal tree species and climbing trees.	▪ Including the area between the dwelling front door and the public	The design options for liminal space are determined by location. The liminal

<p>residential zone larger than 15 ha. In blocks covering less than 15 ha, a single combined sports/play area of 1,000 m² minimum.</p> <ul style="list-style-type: none"> ▪ A second large sports/play area covering at least 1,000 m² within 300 m of the central sports/play area. ▪ Sidewalks suitable for playing with 3 to 5 m minimum width on at least one side of the street, preferably on the sunny side of the road. 	<ul style="list-style-type: none"> ▪ Grass areas and “green playgrounds” (climbing trees rather than prickly shrubs and bushes). ▪ Schoolyards with green surfaces in a ratio of 2:1 to paved surfaces. 	<p>space in the whole design should become a standard design procedure.</p> <ul style="list-style-type: none"> ▪ Sidewalks should be encouraged in areas where houses have no front yard and in urban neighbourhoods with sidewalks with a minimum width of 3 m. 	<p>space can be a vertical garden, a bench or other hardscape elements for sitting. On busy traffic routes, liminal space works as a buffer. In quiet residential streets, liminal space provides opportunities for children and adults to gather.</p>
---	---	---	--

Table 2. Rotterdam, city with a future. Adapted from City of Rotterdam, 2010, p.3-04)

The *Building Blocks* Public Spaces guidelines focus on four main outdoor areas: designated play spaces, green spaces, liminal space, and existing buildings. The “Liminal Space” category presented in the guidelines consist of transitional areas between the private and public realms, between “front doors and street-level” (City of Rotterdam, 2010, p.3). The design of the private outdoor area of a building adjacent to public spaces can play an essential role in the use of public outdoor spaces and support life between buildings (Gehl, 2010). Liminal or transitional spaces allow for activities to naturally flow between indoor and outdoor spaces. For instance, a bench next to the entrance door can potentially enhance the neighbourhood's sense of safety by creating informal supervision opportunities.

Building Blocks Safe Traffic Routes guidelines highlight the importance of child-friendly traffic routes to encourage children to explore the urban environment and participate in city life with more independence (p.4). This section suggests measures such as speed limit reduction and “no-cut-through” traffic zones. It also recommends strategically locating public amenities to make the streets safer for children to socialize and move freely. The *Building Blocks* methodology can also measure the level of child-friendliness of a neighbourhood and identify challenges and opportunities for improvements. According to the City, it helps in defining projects’ priorities and creating implementation schedules. For instance, the “*Rotterdam Child-Friendly Monitor*” was developed specifically for the *Rotterdam Child-Friendly* program, and it is the designated tool to measure the results of implemented efforts to build child-friendly neighbourhoods.

"*Healthy Streets for London*" by *Transport for London* recognizes the relationship between safety concerns and reduced physical activity levels in children. It acknowledges that the provision of high-quality public spaces includes creating places suitable for children to engage in outdoor activities such as play and mobility. The approach aims to encourage local authorities to implement strategies to support safe and attractive walking, cycling and public transport infrastructure (Arup, 2017).

The City of Antwerp partnered with the architecture firm Stéphane Beel & Lieven Archtergael Architecten to create a neighbourhood redevelopment project based on a "car-lite" approach. The former military hospital's redesign comprises a mix of apartment buildings, block townhouses, co-working spaces, and a

neighbourhood cafe. Spaces between buildings have landscaped areas free of parking and vehicular traffic. Most parking is at the underground level to reduce car presence in the public realm and limit surface parking. Designers located family-friendly units on the ground level to allow visibility to outdoor amenities and play spaces. There is no spatial separation between play areas and other outdoor spaces, including private front yards. According to Krysiak (2019), this helps to create a "natural sense of community as parents and grandparents sit outside to watch the children play" (p.23). Such redevelopment projects allow for the implementation of child-friendly strategies to foster a stronger sense of safety for children and caregivers in the neighbourhood scale.

Using engagement strategies to understand children's needs and experiences in POS is part of providing a safer environment and help parents to feel more confident about children's free play and independent mobility. Engagement strategies are vital to the community-building process, which plays a crucial role in the neighbourhood's sense of safety. As mentioned in Chapter 2, it can be difficult for local authorities, planners, and designers to recollect their childhood narratives in the city and address children's needs in today's urban environments. There is also a relationship between a sense of safety and neighbourhood familiarity built over time. Familiarity and a sense of community can be fostered by engagement programs to actively promote children and parents' inclusion in the public realm design process to make them safer and more suitable to their needs.

The Rotterdam *Building Blocks* method employs "Mental Maps" as a critical and imaginative exercise for children to draw their neighbourhoods with things

they like, do not like, and things they would like to see. According to the City of Rotterdam (2010), the results are simple solutions easy to implement. This example illustrates the use of a method that can be tailored based on how children gather information from the environment, organize it and store it in their mind.

Understanding children's different ways of processing their experiences in the environment and communicating them are crucial to designing effective inclusive, and safe POS.

Another example of an engagement program was developed by Dinah Bornat, ZCD Architects and Matt Bell in London, UK, to assess children's neighbourhood's perception and understand their everyday experiences and play behaviours to better address their needs and create safer spaces for them to play and move freely. They asked children to use red and green to colour a neighbourhood map. The "traffic-light" approach helped them indicate in red the places that make them feel unsafe or unwelcome and in green, where they feel invited to move, play and socialize. The result is a rating system map that illustrates how children pursue their neighbourhood in terms of IM and playability and what it means (Krysiak, 2019).

4.2.2 Proximity of Play

During the interviews, parents mentioned playground proximity and convenience as issues faced in central Toronto environments for children. Parents living in central areas highlight the need to have a supportive physical infrastructure that allows them to combine play with other outdoor activities with

children throughout the day. Parents talked about the importance of public washrooms being open and accessible all seasons. They also expressed the desire to have places to sit in the shade, buy food and rent toys. In central areas, parents feel encouraged to use active modes of transportation. However, they would need to find convenient ways to spend time outdoors with their children without worrying about carrying things around.

The City of Antwerp believes that every child should have the opportunity to play near their home and has established a vision to create a network of connected play spaces within neighbourhoods. In collaboration with Kind & Samenleving, the City developed a holistic play strategies approach to create various play opportunities for different age groups and link them to the pedestrian and cycling network. The initiative called Speelweefselpan (Play spaces Network) involves mapping and analyzing children's mobility and play behaviours through geodata and public consultation. During the public consultation, they ask children how they move, places to play and socialize, their play experiences, favourite places, and improvements they would like to see (Krysiak, 2019). Data gathered from public consultation are combined with neighbourhood statistics such as households' demographics and school locations. This process allowed the City to create a connected network of POS and other public amenities for children as part of primary infrastructure improvements. Specific City staff is responsible for coordinating the project and undertake consultation strategies led by specialized consultants (Krysiak, 2019). The project includes educational programs to address communities' social barriers and encourage outdoor play. They have a specific

budget for public consultations that ensure the continuity of children's participation and implemented strategies' effectiveness.

The "Playful City" is a research strategy developed by Mexico City's experimental and creative office – Laboratorio para la Ciudad – to understand the role of play and playfulness in the process of city-making (Lozano & Vertíz, 2018). The project claims that focusing on urban planning and policy design to respond to children's environmental needs will help the City create tools and implement strategies to address other major urban issues. Playful City undertook a review of Mexico City's urban planning regulations, including design manuals and found that the combination of factors such as adult's misconception of play, environmental hostility in public spaces and car-oriented urban design impacts children's cognitive and physical development. The City implemented two pilot projects to create opportunities for children to reclaim urban spaces: Peatoniños y Peatoniñas (Little Pedestrians) and Juguetes Urbanos (Urban Toys). Peatoniños y Peatoniñas employs community centred design approaches, planning analysis, and pedagogical methods to implement playstreets. The second consists of a design competition to create temporary playful interventions on underutilized POS in neighbourhoods with larger children's population. The guidelines for the competition were co-developed with children.

The "Play Streets" project in Rotterdam contemplates design solutions to encourage families with children to spend more time in POS. The project installed communal "toy boxes" along streets, parks, and public squares to improve children's use of and experiences in POS. The so-called "Duimdrop" refers to the

famous Dutch licorice "thumb drop" – a licorice strip that children from past generations have wrapped around their thumbs to suck them on. The idea is to help adults to recollect their childhood memories and encourage children to create their own. The toy boxes are made using refurbished shipping containers and filled with toys and play equipment such as tricycles, roller skates, go-karts, skateboards, and craft materials. There is a free membership available for all children who access rental toys they can use in the immediate public spaces. Volunteers manage the rentals, usually caregivers, but children can help with small tasks like cleaning the space and fixing broken toys. In return, they receive stamps they can use to rent unique toys such as a go-kart (Krysiak, 2019).

These examples show possibilities of enhancing play proximity and convenience in POS. By expanding children's outdoor play environment beyond the playgrounds' limits and shifting to a child-centred approach to streets usage and design, cities can make POS more convenient to parents and caregivers. The example of Antwerp proves that integrating data to major infrastructure projects to incorporate the needs of children and caregivers can be an effective way to provide accessible and convenient play opportunities for children within the neighbourhood realm. Ideas like the "toy boxes" in Rotterdam would be beneficial to provide toy rental and sell food. Parents mentioned food kiosks, which are essential for parents to spend more time with children outdoors. Public washrooms accessible all seasons are also crucial for parents and children and should be part of the design of POS.

4.2.3 Unstructured Play

The third issue parents mentioned was the need of a more natural, challenging, and creative play environments. Unstructured play allows for children to create their own play by using imagination and creativity. In *Design for Play: A guide to creating successful play spaces* (2008), the UK Government provide guidance and inspire creative ideas for the design of outdoor play space "that does justice to children's endless capacity for adventure and imagination, their fundamental need for exercise and social interaction and, above all, to their innate sense of fun" (Shackell et al., 2008, p.8). The guide highlights the role of design in providing suitable play spaces within a more comprehensive public design. It acknowledges that "well-used and well-loved places to play will often be integrated within the cohesive design of a wider community space" (Shackel et al., 2008, p.8).

Since 2006, the UK Government has a growing body of policy documents that support children's right to free play. Moreover, local authorities have gained support to provide play opportunities, "and to create play spaces which will attract children, capture their imagination and give them scope to play in new, more exciting, and more creative ways" (Shackel et al., 2008, p.12). The City of Rotterdam's child-friendly approach to POS looks at green spaces' potential to incorporate community gardens, educational programs, and "semi-wild" nature play. The so-called "*play wilderness*" is a City's project developed to encourage children to freely explore nature by engaging in climbing and other activities in "semi-wild" playscapes (City of Rotterdam, 2010).

The "*Neighbourhood Nature Play*" is a child-centred approach to neighbourhood placemaking held in Kitchener, Canada, and led by Evergreen. With children's participation, the two-year program is transforming underserved green areas into nature play environments. This initiative aligns with existing City's strategies like "*Love My Hood*" and is built upon a strong partnership with community stakeholders. In this program, children are co-designers of regeneration projects in neglected forested landscape areas. Using natural materials such as wooden planks, re-purposed textiles, logs, and ropes, children can create their play environment and consciously exercise their right to transform their neighbourhood's landscapes. They encourage students to discuss play preferences and features they would like to incorporate into parks' design during school hours. The project reports the participation of over a thousand children (Campbell & Musa, 2018). Understanding urban design's role in bridging the gaps between the neighbourhood built and natural environment is crucial to create opportunities for children's nature play in urban POS. Moreover, when the process recognizes children's value as co-designers of their neighbourhood POS, it helps them build a sense of ownership, agency, and community pride.

"*The Whaler*" at Somerford Grove Adventure Playground in London results from a collaborative program between Build Up, HTA Design, Newman Francis, and Haringey Play Association. Build Up is an organization that allows young people to develop design and construction activities in their local communities. The Whaler, opened to the community in 2016, started as part of an eco classroom in Muswell Hill and became a climbing structure, shelter, and performance space. The

construction phase involved 31 young people from a high-social-need neighbourhood in London, allowing them to take roles and learn skills such as running and manage construction sites and make real-life decisions (Arup, 2017). Over the past decade, while adventure playgrounds have resurged in many European countries and regained relevance on both local and national policies (Chilton, 2003), in North American, they have traditionally remained unpopular (Staempfli, 2009). For instance, London has more than 80 adventure playgrounds incorporated into the city's landscape. Staempfli (2009) explains that the word "adventure" refers to the adventure in children's minds while they play in unstructured POS that allows them to be creative and innovative.

The City of Rotterdam created opportunities for imaginative and nature play by promoting the use of playful natural elements within the school's front yards and urban pocket parks and along pedestrian trails. These spaces are strategically placed adjacent to amenities that allow for direct visibility and informal supervision (Krysiak, 2019). Examples of unstructured play opportunities such as nature and adventurous play reflect solutions to address parents' desires in central Toronto neighbourhoods. They also demonstrate the possibility of incorporating design features to foster children's imaginative and creative play while navigating through POS in their urban environment. By doing so, cities are contributing to children's healthy growth and development.

4.2.4 Summary of Solutions

Solutions implemented by other cities to address the needs of children and caregivers help to envision ways to respond to the issues that emerged during interviews with parents in Downtown Toronto. City planning policies and initiatives that support engagement activities can afford parents' and children's sense of safety by fostering a sense of community and belonging by listening to their experiences and including them in these spaces' analysis and design process. Integrated strategies that use data collected from engagement activities to guide neighbourhood redevelopment projects may create safer environments for children and their families. When thinking about streets as play environments and mobility infrastructure for children, planners can facilitate their access and independence in POS. People-centred approaches, embedded in Rotterdam, London, and Antwerp projects, contribute to implementing strategies to inhibit car traffic and create safer roads for children to roam and parents to develop a stronger sense of community.

As previously discussed, parents rely on a connected and convenient network of play environments close to home. Like the *Play Spaces Network* initiative in Antwerp, using neighbourhood data in infrastructure projects to create connectivity between POS can afford children the ability to walk, cycle, and play everywhere from their doors to common destinations with safety and freedom. The "toy boxes" in Rotterdam, part of an initiative to expand the City's environments to play to the streets' scale, is a simple and effective solution that helps to address the need for more convenient infrastructure for families living in central Toronto neighbourhoods. The use of refurbished shipping containers can be applied to food

kiosks and public washrooms, increasing the time children spend in outdoor activities and improving caregivers' experiences in POS.

Parents' desire to see more nature and creative play in children's environment in central areas can be fulfilled by incorporating wild and adventurous play in POS landscape design and repurposing underutilized neighbourhood's open spaces. Imaginative and nature play are essential for children to grow healthy and develop a sense of ownership, agency, and community pride. Examples in London, UK, and Kitchener show how effective nature and adventure play solutions can engage children in the community-building process through unstructured play. Unstructured play allows children to use imagination and creativity to create their environment. As presented early, it can be as simple as incorporating natural or recycled materials to landscape design in school's front yards, urban pocket parks, and pedestrian trails adjacent to amenities that allow for direct visibility and informal supervision. The following section will review Downtown's policies and guidelines' challenges and opportunities to incorporate such solutions to address the sense of safety, proximity of play and unstructured play in central Toronto neighbourhoods' environments for children.

4.3 . Document Review: Downtown's Public Realm Planning and Design

The second data set gathered from document analysis comprises a critical review of Downtown Toronto planning documents focusing on the challenges and opportunities to address parents and children's sense of safety, proximity of play and unstructured play in Toronto's central neighbourhoods. The following

subsections refer to three primary documents considered in this analysis - *OPA 479*, the *Downtown Plan*, and the *GrowingUp* guidelines. As explored in Chapter 2 and through examples of solutions from other cities, POS's child-friendliness relies on a framework of policies, strategies, guidelines, and initiatives for the public realm that embraces parent's and children's needs at its core. This section takes a critical look at how the documents' content can challenge or facilitate strategies to create opportunities to:

- enhance parents' and children's sense of safety;
- create a network of connected, accessible and convenient POS within neighbourhoods; and
- foster children's nature and adventurous play through unstructured play settings.

4.3.1 Official Plan Amendment No. 479

The City of Toronto, through *Section 3.1.1 The Public Realm* of its *Official Plan* ("OP"), provides a detailed description of the components and role of the public realm within the urban fabric. The *Official Plan Amendment 479* ("OPA 479") – adopted by City Council on December 17 of 2019 and currently being reviewed by the Province – describes the public realm as "the fundamental organizing element of the city and its neighbourhoods" which role is to support "population and employment growth, health, liveability, social equity and overall quality of life." The amended *Section 3.1.1* contains a framework for the expansion, enhancement, and

maintenance of the public realm to ensure a high-quality network of public spaces that supports communities' needs.

The new Policy 1 defines the public realm as a network of public and private spaces, including streets and lanes, parks and open spaces, and publicly accessible areas in the buildings. New Policy 2 states the role of the public realm, which includes:

- to foster well-connected walkable communities that meet the daily needs of people and support a mix of activities
- provide a comfortable, attractive, safe, and accessible setting for social interaction
- contribute to the identity and physical character of the City and its neighbourhoods
- provide opportunities for passive and active recreation

New Policy 3 informs that the City, together with its partners, will seek opportunities to expand and enhance the public realm to support existing and future populations, contribute to a high quality of life for people of all ages and abilities, and anticipate growth and changing needs. New Policy 6, existing Policy 5, replaces "vulnerable groups such as women, children, seniors and people with disabilities by implementing the Toronto Safer City Guidelines, or an updated version thereof" for "Users of all ages and abilities." Existing Policy 13, renumbered Policy 27, establishes the criteria for providing "universal physical access" to publicly accessible spaces and buildings. On the new Policy 27, the words "Universal physical access" are either replaced with the word "Access" or removed,

and the words "to users of all ages and abilities" are added after the word "accessible."

New Policy 8 sets the criteria for designing new streets to provide visual and physical integration and connectivity to the public realm, including "allow the public to freely enter without obstruction." The new Policy 10 acknowledges lanes' role in the public realm and states that they "should be designed to provide safe, accessible, and comfortable pedestrian and cyclist movement." The word "lanes" is also added after the word "streetscapes" in Policy 14:

Design measures to promote pedestrian safety and security will be applied to streetscapes, lanes, parks, other public and private open spaces, and all new and renovated buildings. Policy 14, *OPA 479*.

Existing Policy 3 and Policy 4 are replaced by new Policy 17 that supports preserving and enhancing physical and visual access to the City's natural features. Existing Policy 20 is replaced by new Policy 19 and states that parks and publicly accessible open spaces such as schoolyards should be made prominent, visible, functional, and accessible by being located along public streets and buildings active frontages. Existing Policy 6, New Policy 13, encourages the design of sidewalks to be safe, attractive, enjoyable, and comfortable. The criteria for the design of boulevards include the provision of well-designed and co-ordinated tree planting and landscape, quality street furnishings and decorative paving, and the planting and growth of trees to maturity.

New Policy 15 replaces existing Policy 18 and enlists design parameters to be new and existing city blocks and development lots. It includes creating,

enhancing, and integrating walking and cycling connections and identifying opportunities to connect existing and planned green infrastructure. Schedule 3 - Application Requirements is amended to ask for Block Context Plans to demonstrate how proposed developments will be designed and planned to fit the existing and planned public realm and built form context. New Policy 20 defines Privately Owned Publicly Accessible Spaces (POPS) and states that the provision of such spaces through development will include design and program for users of various ages and abilities. It also highlights that buildings' siting and design will be seamlessly integrated and connected to the broader public realm. New Policy 21 defines public square and emphasizes its role in the public realm as a "civic gathering space that provides opportunities for social interaction, entertainment, cultural events and flexible programming that enhance the daily lives of residents and workers."

New Policy 21 addresses the parameters for public squares design, such as integration and scale compatibility with the surrounding context. It supports a design that provides pedestrian connections to the public sidewalk and various programming, including seating areas and places to eat. The design of public squares is encouraged to envision and accommodate temporary facilities such as small-scale retail and vendors, temporary markets, performance and exhibit spaces, and a range of other facilities. Existing Policy 1, New Policy 5, refers to the quality of architectural, landscape and urban design and construction processes. It suggests skilled professionals' participation in these processes and encourages creativity and design excellence through programs such as urban design awards.

New Policy 2 replaces Policy 8 and defines "scenic routes" as streets with public views of significant natural or human-made features. It states that these streets should be preserved and improved by maintaining views and vistas, creating new or extending existing scenic routes or views, and increasing pedestrian and cycling facilities. New Policy 24 and 25 respectively replace existing Policy 10 and 9 and reinforce those views from the public realm to prominent buildings, structures, landscapes, and natural features should be created where possible.

In general, policies within the *OPA 479* Section 3.1.1 potentially set the framework for providing opportunities for child-friendly POS. The policies give a positive emphasis on creating a well-connected and integrated network of POS that includes facilities and programming that, if focusing on a child-centred approach, can support the needs of children and their caregivers. The challenge is that by conforming to the policies, new or renovation developments will not necessarily incorporate children's needs in the public realm, mostly because the wording containing in these policies is generally broad and may lead to a public realm designed by adults and mostly for adults. For instance, the shift from "vulnerable groups such as women, children, seniors and people with disabilities" on the existing Policy 5 to "Users of all ages and abilities" on new Policy 6 might not be beneficial to children. Even though the statement attempts to imply inclusion efforts, generalization can potentially reproduce dominant age, gender, social and physical ideals and help perpetuate systemic inequalities that directly impact children's and their caregivers' experiences in POS.

Policies that address pedestrian safety, comfort, and accessibility would be more constructive if they focus on children and other vulnerable groups' specific needs. The lack of acknowledgement of children's scale and sense of safety in POS may contribute to more inhospitable than child-friendly landscapes. If children and their caregivers feel unsafe or unwelcome in POS, they may choose not to use active transportation modes or spend less time in outdoor activities. Moreover, by writing policies in ways that allow this to happen, they potentially deny the city's right to "users of all ages and abilities." New Policy 15 regarding city blocks and development lots places an opportunity to build a consistent pedestrian-oriented neighbourhood system to address caregivers' and children's sense of safety and provide fun and convenient outdoor play environments. Simultaneously, when they emphasize how developments will "fit in" the existing public realm and built form, it may overlook priorities such as the conditions created for children's free play and IM. New Policy 5 references to skilled professionals and design awards to set quality standards to the POS design may pose a barrier to children's participation in the co-creation of these spaces to build a sense of community and enhance the sense of safety.

4.3.2 Official Plan Amendment No. 406 (the Downtown Plan)

In 2014, City Planning initiated a study to create an updated planning framework to guide downtown Toronto's developments. The *TOcore* study was built on existing policies, guidelines, and practices, informed by related studies and initiatives, and resulted in the *2019 In-Force Downtown Plan (Official Plan*

Amendment 406). The City of Toronto's *Official Plan Amendment 406* ("OPA 406") was approved on June 5th of 2019 by the Minister of Municipal Affairs with 224 modifications. The *OPA 406* informs modifications in *Section 2.2.1* and *Map 6* of the City of Toronto OP and introduces a new *Downtown Plan* ("Plan"). Policies within the Plan must be read together with the OP policies and only apply to the area shown on *Map 41-1: Downtown Plan Boundary* (Figure 3).

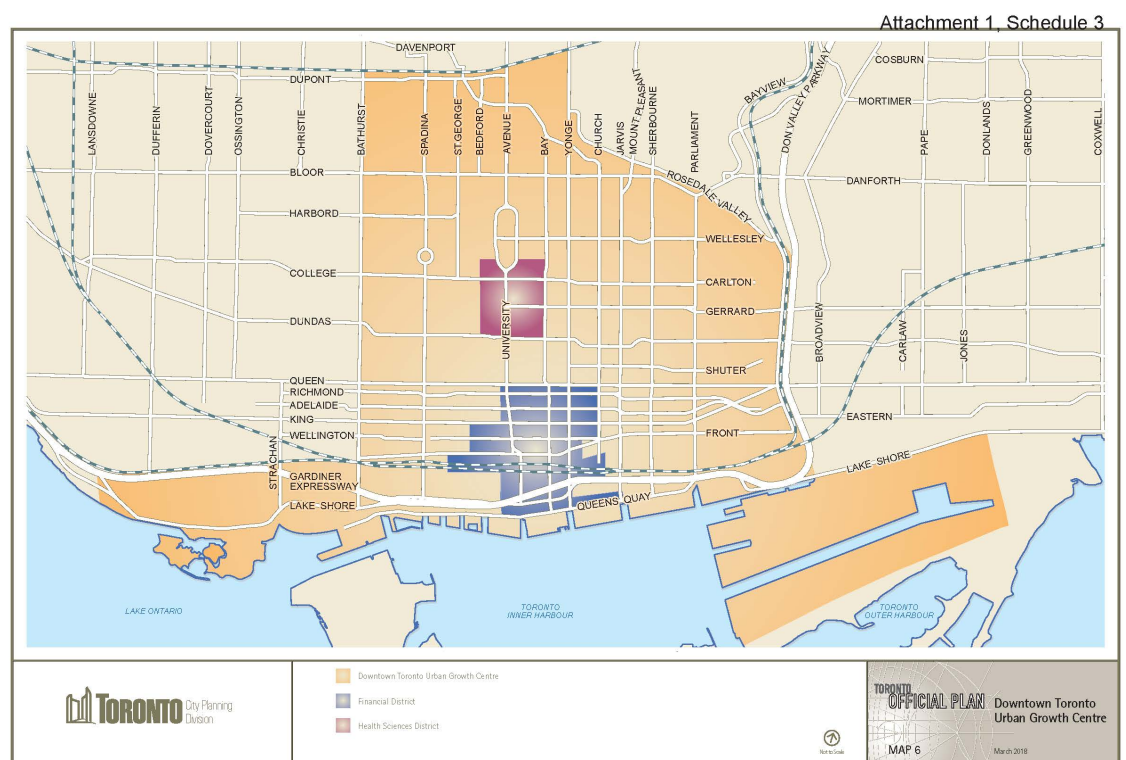


Figure 3. Map 6 - Downtown Toronto Urban Growth Centre. City of Toronto (2019).

Lands that are subject to the *Central Waterfront Secondary Plan* are not subject to the Plan. The Plan provides directions for decision-making processes through vision, goals, and policies to the growth of Toronto's downtown over the

next 25 years. In the Plan, downtown is envisioned as “a place where Torontonians of all ages, incomes, and abilities can live, work, learn play” (p.3). The Plan’s vision describes downtown’s public spaces as vibrant places that accommodate a range of activities all year round with:

- Park districts at the core of each neighbourhood to provide a focal point for community life.
- Beautiful parks along the water’s edge and improved access to the Toronto islands.
- A chain of parks and natural areas with a continuous pedestrian and cycling route that encourages active lifestyles.
- New parkland to serve the whole of the city through the transformation of underutilized spaces, such as the space over the rail corridor.
- Great streets, generous sidewalk space and a comprehensive network of bike lanes.

The Plan sets out five primary goals for downtown Toronto: *Complete Communities, Connectivity, Prosperity, Resilience, and Responsibility*. The table below shows the policies created to achieve the Plan’s goals.

Complete Communities

Policy 3.1 encourages the provision of community services facilities, parkland, green infrastructure, and physical infrastructure.

Policy 3.2 encourages walkable access to a complete range of amenities, services, and infrastructure.

Policy 3.3 states that new buildings will expand and improve the public realm as a community benefit.

Policy 3.4 encourages public spaces to be diverse, accessible, flexible, dynamic, and safe, supporting year-round public life and setting the stage for daily social interaction and community building.

Connectivity *Policy 3.8* states that downtown will strive to have more space within the street network allocated to sustainable modes of transportation, prioritizing high-quality, accessible, and safe networks for pedestrians, cycling and surface transit.

Policy 3.9 states that a connected public realm with an expanded system of parks and open spaces linked together by a fine-grain network of streets, sidewalks, laneways, mid-block connections and pathways will provide the foundation for health, liveability and public life as downtown grows.

Prosperity *Policy 3.10* claims that downtown will project a competitive image of Toronto to the world as an attractive place to live, work, learn, play, invest and visit.

Resilience *Policy 3.13* encourage Green infrastructure in downtown to improve air quality, absorb stormwater, minimize the urban heat island, expand biodiversity, and improve human health.

Responsibility *Policy 3.17* support strong partnerships and communication between the City, agencies, the development industry and community-based organizations will provide the basis for implementation of this Plan with a collective understanding of and responsibility for building a liveable downtown made up of complete communities.

The Plan's *Chapter 7 - Parks and Public Realm* - mainly addresses streets, parks, and publicly accessible open spaces. The policies within Section 7.1.1 and 7.1.2, Policy 7.1, highlights the City's commitment to providing a diversity of parks that meet people's needs and contribute to Toronto's system of parks and open spaces by creating a "connected network of parks, open spaces, and recreational facilities" (p.23). Section 7.1.3 establishes the provision of "neighbourhood hubs and civic spaces that allow for social interaction, healthy lifestyles, and a range of

activities” (p.23). Section 7.1.4 stipulates that improvements to the public realm “will be accessible, inclusive, and welcoming to all people who live, work, learn, and visit *Downtown*” (p.23).

Policy 7.3 sets the objectives for the Planning, Design, and Development of Parks and the Public Realm, which includes creating engaging active and passive spaces for people of all ages and abilities and encourage public life through placemaking and pedestrian amenities as stated in Section 7.3.1, 7.3.4, 7.3.5, 7.3.6, and 7.3.12. From Section 7.3.7 to 7.3.9, objectives generally address the provision of a connected and enhanced network of pedestrian and cycling paths through parks and the public realm with a seamless relationship between the various public realm elements. Section 7.3.11 illustrates the intent to provide public washrooms, drinking water stations and other public amenities “where reasonable” (p.24). The objective stated in Section 7.3.13 consists of supporting community-based planning and design processes such as pilot projects in parks and the public realm. Policy 7.4 sets the design criteria for development adjacent to a park, such as to provide an appropriate interface between public and private lands (7.4.2), be oriented to maximize public access and views to the park (7.4.4), be designed to have an attractive façade with animated uses at grade (7.4.5), and increase passive surveillance and safety through casual overlook (7.4.6).

The Downtown Parks and Public Realm Plan

The *Downtown Parks and Public Realm Plan* (“Parks Plan”) defines a vision and proposes a framework for downtown’s public spaces. The Parks Plan aims to

inform the development of a network of parks and public realm to promote healthier systems to support growing downtown by:

- Creating stronger connections to the surrounding natural landscapes.
- Expanding and improving access to the parks and open space network.
- Addressing visual and physical connections and improve active transportation within and beyond the downtown boundaries.

The Parks Plan aims to inform the City's decisions to improve the quality, quantity and connectivity of parks and the public realm. It also attempts to guide development review, parkland dedication and acquisition priorities, and capital funding allocation. The Parks Plan's objective is to ensure that people who live, work, and visit downtown have access to a full range of parks and active and passive recreational opportunities, connected by a public realm network. The Parks Plan policies are organized in five types of POS with significant relevance in downtown: Core Circle, Portal Parks, Great Streets, Park Districts, The Queen's Park and Civic Precincts, The Shoreline Stitch, The Blue Parks and Local Places. Below, a summary of policies on each category of POS that are most relevant to this analysis.

Core Circle *Policy 7.7* defines the Core Circle as a “circuit of public spaces that connects existing natural features around *Downtown*”.

Policy 7.8 states that the Core Circle will be connected to a continuous pedestrian and cycle route.

Portal Parks *Policy 7.14* defines Portal Parks as ones located on the edge of the Core Circle and offer opportunities to provide physical and visual access into adjacent natural features.

Policy 7.15 states that physical and visual access to the Core Circle through the Portal Parks may be achieved by stairs, ramps, signage, viewpoints, interpretation elements, public art, bridges, and other appropriate means.

Great Streets *Policy 7.17* defines the network of 12 Great streets by the location, scale, and historic role of these streets in the city, as well as their potential contribution to the public realm.

Policy 7.18 and *Policy 7.19* sets out the role of the Great Streets in the public realm, such as to improve mobility between neighbourhoods, parks, the Core Circle and the waterfront, to create a unified streetscape, improve the scale of pedestrian clearways, transit stops and space for public gathering, prioritize tree planting, and be informed by complete streets principles.

Park Districts *Policy 7.22* defines Park District as a group of neighbourhood parks, streets, and other open spaces including laneways, school yards, church yards and ravines, which will be designed to form a cohesive public realm network providing access to a wide range of experiences and programs that support community life.

Policy 7.23 states that the parks, open spaces, and streets that form the Park Districts will be designed to create legible and distinct identity or reinforce existing, and to form a cohesive and connected network. It will be animated through programming, public art and other means to create vitality and vibrancy.

Policy 7.24 highlights that the Park Districts will be integrated with cycling and pedestrian networks.

The Queen's Park and Civic Precincts *Policy 7.25* defines the Queen's Park and Civic Precincts as a collection buildings and parks, public spaces, and streets with civic value to the city.

Policy 7.26 reinforces the focus of these spaces to create, enhance and/or support connectivity, identity, and a pedestrian oriented realm.

Policy 7.27 states that these precincts will incorporate placemaking that acknowledges Indigenous cultures and histories.

The Shoreline Stitch	<p><i>Policy 7.28</i> defines the Shoreline Stitch as the area encompassing the Union Station rail corridor, Gardiner Expressway and ramps, and Lake Shore Boulevard from Ontario Place to Corktown Common. Public realm improvement along the Shoreline Stitch aims “to limit the barrier effect of the existing transportation infrastructure and to stitch communities and their parks and public realm together” to increase access to waterfront parks.</p> <p><i>Policy 7.29</i> reinforces the goal to increase and promote physical and visual connections for pedestrian and cyclists, to improve safety and comfort along Lake Shore Boulevard, and to develop a connected public realm under and around the Gardner Expressway.</p>
The Blue Park	<p><i>Policy 7.30</i> states the intent of the Blue Park to improve public access to the water’s edge by creating a pedestrian and cycling route around the Inner Harbour and offer opportunities for water-based recreation.</p>
Local Places	<p><i>Policy 7.33</i> encourages that institutions, public agencies, and other orders of government integrate their open spaces into the public realm network.</p>

Policies between Policy 7.34 to Policy 7.38 encourage expanding the urban forest and address the provision of trees that enhance the identity, character and comfort of streets, parks, and open spaces, including POPS. These spaces will be designed to accommodate green infrastructure that supports the long-term growth of trees. Policy 44 states that POPS provision may help expand the public realm by creating and connecting public open spaces. Policy 7.47 addresses the collaboration with Indigenous communities in the planning, design and development of parks and the public realm. Policy 7.48 states that the City and local school boards will work in partnership to ensure recreational and landscaped open space on existing, reconfigured or redeveloped School Properties. It will also

pursue their greater utilization for community access by developing shared-use open spaces and recreation facilities.

Chapter 8 – Mobility reinforces the commitment to make downtown a walkable area with a pedestrian-oriented network of sidewalks, pathways, laneways, trails, mid-block connections, and pedestrian crossings. The Parks Plan recognizes downtown as "a dense, walkable grid of streets and relatively low vehicle speeds." It focuses on the pedestrian experience to ensure connectivity and circulation between destinations by creating a network to improve comfort, convenience, and safety. It supports wider sidewalks with adequate pedestrian clearways and streetscape enhancements to encourage walking as the first choice of travel modes for trips within downtown. Laneways may provide opportunities to supplement the pedestrian-oriented street network by offering additional walking and cycling routes. Policy 8.11 sets out the criteria for laneways' design to accommodate pedestrian use without compromising their primary use for vehicular access and servicing by discouraging cut-through traffic and design on slower vehicle speeds.

The City of Toronto OPA 476 comprises policies for Downtown Toronto's public realm with a strong focus on the provision of pedestrian-centred environments. The policies successfully address the existing potential of downtown's streets grid to support safe and active transportation modes. The Downtown Plan envisions an integrated system of POS that can transform Parks Districts into child-friendly neighbourhoods similar to Antwerp's *Play Spaces Network*. However, there is no clear intention to include children and their caregivers' specific needs in the planning, design, and construction of POS,

representing a lost opportunity to implement solutions such as the Rotterdam's *Building Blocks*. The Parks Plan's broad commitment to creating more opportunities for children's outdoor play appears limited to the School Properties, as stated in Policy 7.48.

4.3.3 GrowingUP: Urban Design Guidelines

The *Growing UP: Planning for Children in New Vertical Communities - Urban Design Guidelines* ("Guidelines") were adopted in 2020 and built on the City of Toronto's OP vision to create an attractive and safe city for people of all ages and abilities to enjoy a good quality of life. The objectives of the Guidelines include livability and quality of POS and planning from the perspective of a child. The Guidelines give direction on planning for children in new vertical communities. Their primary focus is on enhancing children's experience in the urban environment by promoting IM, facilitating access to POS, schools, and other community facilities, and creating civic engagement opportunities. The document is organized into three scales: *The Neighbourhood*, *The Building*, and *The Unit*. This analysis will focus on the neighbourhood scale, more specifically on the guidelines that directly or indirectly impact the design of POS.

Guidelines within Section 1.1 – Mobility: Design secure mobility networks to encourage children's independence and active transportation to address safety measures to create a child-friendly pedestrian infrastructure. Guideline "a" states that new capital projects, master-planned communities, and larger development sites incorporate children's safe routes by:

1. Locating new child-focused destinations on safe routes
2. Identifying routes between existing child-focused destinations
3. Considering existing walk-and-bike-to-school programs
4. Congregating child-focused destinations to minimize the number of intersections children need to cross
5. Using signage to indicate the presence of children, as well as signage legible to children

Guideline "b" suggests that new developments may consider reduced speed limits on safe routes to child-focused destinations. Guidelines "c" states that "new or reconfigured streets should comply with Complete Streets and Green Streets Accessibility (barrier-free) criteria" and ensure that children are part of the user profile in the street context analysis. It also suggests that, where possible, new developments should consider alternatives such as laneways and shared streets to improve safety and wide sidewalks to accommodate peak pedestrian activity.

Guideline "a" in *Section 1.2 - Parks & Open Spaces: Access & Type: Provide a variety of types of parks and open spaces that are easily accessible and meet a range of needs*, subsection *i. Provide equitable access*, states that parkland investment should implement the City's Parkland Strategy and its guiding principles to expand, improve, and connect the City's parks system. Guideline "b" supports the location of new parks and open spaces within 250-500 metres, or a 5-10-minute walking distance, of a new development site to meet the daily needs of families. Guideline "b" in subsection *ii. Provide a range of types*, claims that park design should consider "a range of elements to allow for a diversity of activities including

resting, climbing and imaginative play to suit all ages and abilities." The guideline lists the following elements that should be provided in combination: (1) specific elements including play equipment for a broad range of age groups such as sandboxes, water features, play/sports courts and skateboard facilities; and (2) flexible elements including large boulders or other climbing/sitting features, lawn areas, mounds, concrete or stone shapes and seat walls.

In Section 1.2, guideline "d" includes the criteria for the design of playgrounds as follows:

1. Be located safely within parks and away from the streets.
2. Integrate physical barriers to prevent children from running into the street where required.
3. Offer group seating and gathering space for caregivers to allow for formal and informal supervision.
4. Provide shade from trees or shade structures to mitigate the impact from sun exposure.
5. Provide an accessible route of travel to playgrounds, ensure an accessible entry/exit point(s) are clearly demarcated, and surfaces are designed to support various mobility devices, including strollers.
6. Make play inclusive to children of all abilities and various age groups, including youth.
7. Provide a variety of play types, including but not limited to experiential, sensory, seasonal, imaginative, and challenging play.

8. Include natural components for children to explore, where appropriate.
9. Involve graduated levels of risk.
10. Include materials and play elements that extend the play season through winter.
11. Be designed to drain snowmelt efficiently.

Section 1.6 - Whimsy and Design for Four Seasons: Incorporate whimsical elements and design for year-round enjoyment guideline "a" states that design of public realm should encourage "a sense of joy and playfulness by incorporating whimsy in public art, building design, streetscapes, street furniture and parks and open space features." Guideline "b" addresses the need to have elements that respond to children's scale in POS and that "provoke the imagination and are fun, interactive, educational, musical, and brightly coloured in fantastic sculptural forms." Guidelines "c", "d" and "e" refer to design for four seasons, including winter maintenance near transit stops and on "routes in parks that are heavily used" and the provision of public washrooms open all year "where feasible." *Section 1.8 - Ecological Literacy: Teach children and youth environmental values to promote a resilient city* encourages new streets to maximize children's "access to nature and green infrastructure in the public realm" (guideline "b") and supports the implementation of community gardens on POS (guideline "c").

Guideline "a" in *Section 1.9 - Civic Engagement: Engage children and youth in the planning and design process* informs that "the perspectives and smaller scale of children" should be incorporated in public consultation processes. Guideline "b"

enlists how child-centred public consultation should be integrated into the school curriculum and located where children congregate. It also gives direction on possible engagement tools such as "mental mapping, hands-on workshops, computer-based tools and social media for older children and youth." Section 1.9 guideline "c" encourages that community partnerships include children's participation in local planning matters and guideline "d" that public events in public spaces are used to "demonstrate to children alternative and flexible ways to use the public realm."

The Guidelines presented above comprise valuable design directions that may help create child-friendly POS in central Toronto neighbourhoods. Although mainly focused on new mid-rise and tall buildings developments, guidelines regarding mobility (Section 1.1) refer to new "capital projects, master-planned communities, and larger development sites" to incorporate child-centred safety measures in the pedestrian infrastructure. These mobility guidelines may facilitate solutions such as the neighbourhood redevelopment project in Antwerp presented in Subsection 4.2.1. Guidelines in Section 1.1 include design alternatives such as laneways, shared streets, and wide sidewalks, which will potentially enhance children's and caregivers' sense of safety.

Section 1.2 successfully addresses the need to provide parks and other open spaces within walking distance of new developments. Section 1.2 and 1.6 include playscapes features and year-round facilities that may offer more opportunities for free outdoor play if implemented "where possible." These guidelines can help respond to parents' issues highlighted during interviews – sense of safety,

proximity of play, and unstructured play. Despite the intention to design secure mobility networks, the guidelines emphasize safe routes and the location of "new child-focused destinations on safe routes." These may imply that children's IM is limited to safe routes, and the lack of safe routes elsewhere may pose a challenge to new child-focused destinations. As exemplified through the Rotterdam's *Building Blocks* and Antwerp's *Play Spaces Network*, the reverse would be ideally implemented. Hence, safe traffic routes and play landscapes are incorporated within the neighbourhood and integrated into infrastructure projects.

There is considerable potential for these Guidelines to shed light on the needs of children in POS and inform underlying concepts of a child-friendly approach that may respond to issues that emerged during the interviews with parents in Downtown Toronto. Sections 1.8 and 1.9, for instance, give examples of engagement tools to include children in the process of building more sustainable and democratic urban spaces. Section 1.8 highlights the need to maximize children's access to nature and unstructured playscapes, which align with the previously analyzed literature and results. Section 1.9 encourages new developments to explore tools and community partnerships to assess children's opinions on local planning matters.

However, guideline "d" by stating that public events in public spaces should be used to "demonstrate to children alternative and flexible ways to use the public realm" shows a subtle but structural bias in the current process of designing POS for children. Events that temporarily close streets to cars and open them to people can help planners and designers to observe and learn from children about their

relationship with POS, not the opposite. When given proper stimuli while reclaiming POS, children will create and demonstrate innovative ways to design the public realm as demonstrated by engagement strategies implemented by other cities presented in Subsection 4.2.1.

4.3.4 Highlights of Challenges and Opportunities

The highlights of challenges and opportunities previously discussed in Section 4.3 provides an overview of how the City of Toronto’s planning strategies and initiatives can address the issues indicated in Section 4.1 – sense of safety, proximity of play, and unstructured play – and implement solutions from other cities presented in Section 4.2. The policies and guidelines discussed above contain several opportunities to implement child-friendly solutions to POS like other cities, especially the *GrowingUp* guidelines. However, the guidelines do not have a normative character and are not integrated into a comprehensive plan to make Downtown Toronto and adjacent neighbourhoods more child-friendly. When compared to city-wide initiatives such as Rotterdam’s “*Building Blocks*” or Antwerp’s “*Play Network*,” the “*GrowingUp*” guidelines perform as its intent of an informing document instead of a strategic plan. The *GrowingUp* guidelines may not be as effective as the child-friendly solutions coming from other cities in addressing issues of safe spaces for children and caregivers, and proximity and character of the play environments.

City-wide initiatives not analyzed here, such as the *Child Friendly TO*, *Vision Zero Road Safety Plan*, *Raising the Village*, *Open Streets TO*, *KidScore*, and *The*

Laneway Project, can play a complementary role in addressing parents' concerns identified in this study. Despite their relevance to Toronto's child-friendly city-building process, there is no clear integration between these strategies and Downtown Toronto's policies and guidelines. Throughout the literature review and examples from other cities, this study highlights that a significant barrier to child-friendly cities is child-blind policies and planning regulations (Whitzman, 2010; Krysiak, 2019). The standard approach seen on Downtown's documents referring to children as inclusive of "users of all ages and abilities," in practice, can lead to the maintenance of children's position as outsiders of the city planning process and outcomes.

Sense of Safety

Both the literature review and the semi-structured interviews show traffic safety as a determinant to children's and caregivers' sense of safety in POS. Examples from Antwerp, London, Rotterdam, and Mexico City implemented a "car-lite" approach to streets and new developments' roads to avoid as much as possible vehicular circulation. As discussed in Chapter 2, road safety measures applied alone will not guarantee a sense of safety. Most vulnerable groups, such as children and their caregivers, may need specific street design strategies to address their needs concerning traffic safety. Rotterdam's Building Blocks include a minimum width to sidewalks for children to walk and play safely with direct sunlight access in cold seasons. It also encourages climbing trees on sidewalks' landscape design.

The Downtown Plan for the public realm incorporates policies to create a connected network of pedestrian-oriented public spaces and green infrastructure.

More specifically, Chapter 8 – Mobility encourages sidewalks to improve comfort, convenience, and safety outdoors and uses laneways to accommodate pedestrians by discouraging cut-through traffic and design on slower vehicle speeds. In Chapter 8, the Downtown Plan refers to them with the mobility lens only when addressing sidewalks. It means that sidewalks should be designed with the circulation function in mind. Chapter 8 states that the laneway's primary use is for vehicular access. Although it adds that cut-through traffic should be discouraged and low-speed limits implemented, these actions do not guarantee that children and their caregivers will feel safe and comfortable using laneways. Moreover, it poses a barrier to children's and parents' sense of safety if bolder policies will not specifically address their needs.

Toronto's *OPA 479* and the *Downtown Plan* policies, especially ones regarding complete communities, provide several opportunities to enhance neighbourhoods' physical and social environments to support children's and caregivers' sense of safety and community. In the GrowingUp Guidelines, detailed information adds to these documents a great potential to actively create a child-friendly public realm in complete communities. Despite the relevance of the GrowingUp Guidelines to neighbourhood child-friendliness, they only focus on new vertical developments. The document states guidelines are supplementary to other public realm design documents such as the Complete Streets Guidelines and the Vision Zero Road Safety Plan. In the *OPA 479*, the focus on the neighbourhood's existing character at the cost of limiting improvements and repeating existing

negative patterns of POS may challenge implementing bolder solutions like ones from other cities previously discussed in this study.

Proximity of Play

Downtown's documents analyzed in this section emphasize green infrastructure's connectivity and accessibility within walking distance. During the interviews, parents highlighted the value of proximity and convenience in POS. They also expressed the desire for more trees for shade and facilities such as washrooms, water fountains, places to eat and rent toys. Research indicates that more affordances in POS lead to more time families with children spend outdoors. Examples from other cities, especially from Rotterdam and Antwerp, illustrate practical solutions to play spaces proximity and convenience issues. The *Downtown Plan's Great Streets and Parks Districts* policies include various functions to help support children and their families needs. The City of Toronto *OPA 479* through New Policy 21 addresses the parameters for public squares design, supporting a design that provides pedestrian connections to the public sidewalk and various programming, including seating areas and places to eat. If extended to other types of POS and focused on a child-centred approach, Downtown's public realm policies can best support the needs of children and their families.

Policies 3.1 to 3.4 of the City of Toronto *OPA 406* establishes the goals for Downtown's Complete Communities, which includes providing a community infrastructure with accessible and diverse services and facilities, parkland, and open spaces network within walking distance. Despite the relevance of the GrowingUp Guidelines to central Toronto neighbourhoods' child-friendliness, they only focus

on new vertical developments. The document states guidelines are supplementary to other public realm design documents such as the Complete Streets Guidelines and the Vision Zero Road Safety Plan, which may be challenging to incorporate and integrate child-friendly solutions into an effective, comprehensive strategy.

Unstructured Play

During the interviews, parents expressed their primary desires over children's play environment. Participants' commentary included a design that incorporated more natural materials, challenging and creative play. Throughout the document analysis of realized projects from other cities, examples of adventurous and nature play illustrate how planners can afford the benefits of free outdoor play through the designing and programming of POS. The *GrowingUp* Guidelines include recommendations to playground design such as to provide a variety of play opportunities such as unstructured and adventurous play and suggest that streets' design incorporate whimsical elements to enhance children's experience in POS.

There may be a lost opportunity in the *Downtown Plan's Great Streets and Parks Districts* to incorporate *GrowingUp* guidelines for outdoor play environments. Most guidelines presented in the *GrowingUp* document can promote unstructured play and respond to parents' needs to have more imaginative and nature play incorporated in central Toronto neighbourhoods' POS. The highlights of the challenges and opportunities discussed above integrate findings from all three data sets to prepare recommendations for Downtown's child-friendly POS.

Chapter 5. Recommendations and Final Thoughts

This chapter addresses this study's fourth and final objective: Provide recommendations for planning, engagement, and urban design strategies that help create more child-friendly POS in Downtown's and adjacent neighbourhoods. Recommendations may help overcome the challenges identified within the City of Toronto's planning documents analyzed in this study to implement child-friendly solutions to address parents' concerns over safety and access to convenient and fun play environments in central Toronto neighbourhoods. By drawing from semi-structured interviews and document analysis, recommendations are derived from real-world settings to produce ideas that can be used by planners and designers to guide practice.

Recommendation #1. Foster children's and caregivers' sense of community. Downtown's public realm policies and guidelines can address children's and caregivers' sense of safety by creating a child-friendly framework of strategies and initiatives to foster community building. Programs such as the Play Streets implemented in Rotterdam and Mexico City can be used to improve existing initiatives like the Open Streets TO. Local streets open for children to play for a certain period during the weekends can increase neighbourhood familiarity by creating opportunities for children and caregivers to interact with other neighbours. Community engagement activities with children to assess their perception of and foster interactions with the neighbourhood environment can increase sense of belonging.

Recommendation #2. Enhance streets safety for children. Families living in central Toronto neighbourhoods can benefit from the current public realm’s policies and guidelines and initiatives such as Vision Zero Road Safety Plan to enjoy a more pedestrian-oriented urban environment. Placing children and other vulnerable groups’ needs at the core of transportation master plans will help enhance traffic safety and afford caregivers the confidence needed to allow children to roam through POS without supervision.

Recommendation #3. Provide accessible and convenient play opportunities for families. Downtown Toronto and adjacent neighbourhoods’ outdoor environments for children can be more accessible and convenient to increase the time families spend in outdoor activities. A child-centred approach to the public realm’s policies and guidelines can facilitate simple and effective solutions such as the “toy boxes” in Rotterdam. Refurnished, flexible, and mobile structures can be placed along streets, parks, and playgrounds to afford places to sit, eat, and rent toys and public washrooms.

Recommendation #4. Promote children’s nature and adventurous play. Leverage opportunities for nature and wild play within POS and adjacent to buildings to allow informal supervision. Unstructured play is crucial for children to grow healthier and happier, and creating POS to allow free and imaginative outdoor play relies on more child-centred policies and guidelines. Explicitly addressing the need for unstructured play in Downtown Toronto’s Parks Plan can help incorporate more natural and creative materials within POS.

Downtown's documents analyzed in the previous chapter present a common approach when referring to children as inclusive of "users of all ages and abilities," that can lead to the maintenance of children's position as outsiders of the city planning process. Existing body of research and examples of realized projects from other cities reinforce that a child-friendly planning approach relies on a holistic city-wide strategy that integrates interconnected initiatives focused on children's health and well-being. It starts with the City's recognition of children as a distinct group with specific needs and commitment to ensure their right to participate in the public space and discourse to help meet these needs (Whitzman, 2010). Planning strategies may include a critical review of existing policies and guidelines to identify gaps that potentially challenge children's ability to use POS with freedom and joy (Whitzman, 2010; Lozano and Vertíz, 2018; Krysiak, 2019). Data collection and analysis and the design and implementation of child-friendly temporary and permanent interventions in POS can be integrated and connected to major infrastructure projects (Krysiak, 2019).

The examples of other cities' engagement programs analyzed in the previous chapter demonstrate the relevance of including children's participation in the city-making process to help local authorities, planners, and urban designers address children's needs in POS. By focusing on caregivers' needs and play opportunities for children in POS, in public consultation projects it is crucial that planning and urban design departments collaborate with researchers, educators, play professionals, caregivers, and children to develop effective and inclusive methods tailored for children (Bruner, 1983; Krysiak, 2019).

It is through urban design that child-friendliness become more visibly and physically accessible. Children's transactions with the existing built environment can inform how urban design can better accommodate their needs and facilitate outdoor free play and IM by address caregivers' concerns over outdoor environments. Urban design guidelines for the public realm may benefit from a deeper understanding of the effectiveness of pedestrian safety measures in assessing and providing solutions to address children's and caregivers' sense of safety. The design of child-friendly POS should incorporate adequate furniture, services, and facilities to encourage children and their families to spend more time in outdoor activities (Floyd et al., 2008). It also needs to consider guidelines that support the connection between indoors and outdoors to enhance communication and familiarity between neighbours (Gehl, 2013).

The Covid-19 pandemic has been dramatically impacting children's access to outdoor play. Children living in high-density neighbourhoods, but especially ones living in high-social-need areas, have been the most affected by the restrictive measures. The lack of a more pedestrian and child-oriented public realm and the need to rethink streets and other POS design to incorporate caregivers' needs became more evident than before. If children's play spaces are often limited to schools and playgrounds, where will they play when schools and playgrounds are closed? The City of Toronto, through *ActiveTO*, responded to this quest by implementing three major actions: promoting shared streets, closing major roads to vehicular traffic, and expanding the cycling network. Parents installed swings and other play structures on trees. Children reinvented play and created colourful

figures and messages of support on sidewalks. The renaissance of neighbourhood life and active transportation can be an opportunity for planners and designers to place children and caregivers at the core of POS's design and create communities with stronger sense of safety and belonging.

Cities can only become child-friendly if planning policies assure every child's right to the city. Planners and urban designers' lack of acknowledgement of and accountability for the structural racism and social inequalities that manifest in POS have created inhospitable spaces for racial and ethnic groups. Through this research, concepts such as informal supervision and strange danger emerged from the review of literature and examples from other cities. These concepts need to be responsibly addressed by a profound reflection on how they impact racial and ethnic groups, specifically black men. For every black man violently killed by "community surveillance," there are thousands of black children suffering from the prospects of their adulthood. Black people's urban childhood narratives in POS have often carried episodes of racism. Structural racism has been a barrier to providing children's equal access, and treatment in POS, mostly because cities have become not only child-blind but also colour-blind.

This thesis concludes in a period of a changing urban environment. The year 2020 has surfaced urban structural issues often ignored by local authorities, planners, and urban designers. The need to address such issues is real and urgent. Schools and playgrounds' closure have potentially impacted children's physical and mental health negatively and with consequences yet unpredictable. As discussed in this research, children are designed to play, especially outdoors with other children.

They learn how to grow from their transactions with the environment, and the more they have freedom and scope for imagination, the better for their future. They are the changemakers, play experts and co-designers needed to make POS in high-density neighbourhoods friendly for everyone.

Bibliography

- Alparone, F. R., & Pacilli, M. G. (2012). On children's independent mobility: the interplay of demographic, environmental, and psychosocial factors. *Children's Geographies, 10*(1), pp. 109-122.
- ARUP. (2017). *Cities Alive: Designing for urban childhoods*. London: Arup.
- Aziz, N. F., & Said, I. (2012). The Trends and Influential Factors of Children's Use of Outdoor Environments: A Review. *Procedia - Social and Behavioral Sciences 38*, 204-212.
- Barbour, & A. (1999). The Impact of Playground Design on the Play Behaviors of Children with Differing Levels of Physical Competence. *Early Childhood Research Quarterly, 14, No. 1*, 75-98.
- Bee, H. (1992). *The Developing Child, 6th ed.* Happer Collins College Publishers.
- Bishop, R., & Peterson, G. (1971). *A synthesis of environmental design recommendations from the visual preferences of children*. Northwestern University Department of Civil Engineering.
- Björklid, P. (1995). Children-traffic-environment. *Architecture & Behavior, 10*, 399-404.
- Blakely, K. (1994). Parent's conceptions of social dangers to children in the urban environment. *Children's Environments, 11*, 16-25.
- Boreham, C., & Riddoch, C. (2001). The Physical Activity, Fitness and Health of Children. *Journal of Sports Sciences, 19 (12)*, 915-929.

- Brown, B., Mackett, R., & Kitazawa, K. (2008). Gender differences in children's pathways to independent mobility. *Children's Geographies*, 6(4), 385–401.
- Brown, B., Perkins, D. D., & Brown, G. (2003). Place attachment in a revitalizing neighborhood: Individual and block level of analysis. *Journal of Environmental Psychology*, 23, 259-271.
- Brown, J. G., & Burger, C. (1984). Playground design and preschool children's behaviors. *Environment and Behavior*, 16 (5), 599-626.
- Burdette, H., & Whitaker, R. (2005). Resurrecting free play in young children. *Archives of Paediatric and Adolescent Medicine*. 159, 46-50.
- Campbell, H., & Musa, A. (2018). The Power of Play: Child-led Placemaking in Parks. In R. Danenberg, V. Doumpa, & H. Karsenberg, *The City at the Eye Level* (pp. 68-72). Rotterdam/Amsterdam: STIPO.
- Carmona, M., De Magalhaes, C., & Hammond, L. (2008). *Public Space: The Management Dimension*. London: Routledge.
- Carr, S., Francis, M., Rivlin, L., & Stone, A. (1992). *Public Space*. Cambridge: Cambridge University Press.
- Chawla, L. (1992). Childhood place attachments. In I. Altman, & S. Low (Eds.), *Place attachments. Human behavior and environments* (Vol. 12, pp. 63-68). New York: Plenum Press.
- Chipuer, H. (2001). Dyadic attachment and community connectedness: Links with youth's loneliness experience. *Journal of Community Psychology*, 29, 429-446.

- Chudacoff, H. (2007). *Children at Play: An American History*.
- City of Rotterdam. (2010). *Rotterdam, city with a future: How to build a Child Friendly City*. Rotterdam: City of Rotterdam.
- Clements, R. (2004). An Investigation of the Status of Outdoor Play. *Contemporary Issues in Early Childhood*, 5, 68-80.
- Cradock, A., Kawachi, I., Colditz, G., Hannon, C., & Melly, S. (2005). Playground safety and access in Boston neighborhoods. *American Journal of Preventive Medicine* 28 (4), 357-363.
- Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.)*. Thousand Oaks: SAGE Publications.
- Day, C., & Midbjer, A. (2007). *Environment and Children: Passive lessons from the everyday environment*. Oxford: Elsevier Ltd.
- Ellaway, A., Kirk, A., Macintyre, S., & Mutrie, N. (2007). Nowhere to play? The relationship between the location of outdoor play areas and deprivation in Glasgow. *Health & Place*, 13, 557-561.
- Engwicht, D. (1992). *Towards an Eco-City: Calming the Traffic*. Sydney: Envirobook.
- Erikson, E. H. (1963). *Childhood and Society*. New York: W. W. Norton, Co, .
- Farrall, S., Bannister, J., Ditton, J., & Gilchrist, E. (2000). Social psychology and fear of crime. *British Journal of Criminology*, 40, 399-413.

- Fjørtoft, I. (2001). The Natural Environment as a Playground for Children: The Impact of Outdoor Play Activities in Pre-Primary School Children. *Early Childhood Education Journal, Vol. 29 (2)*, 111-117.
- Floyd, M. F., Spengler, J. O., Maddock, J. E., Gobster, P. H., & Suau, L. J. (2008). Park-based physical activity in diverse communities of two U.S. cities: An observational Study. *American Journal of Preventive Medicine. 34 (4)*, 299-305.
- Francis, M. (1988). Negotiation between children and adult design values in open space projects. *Design Studies, 9 (2)*, 67-75.
- Frost, J. (1997). Child development and playgrounds. *Parks & Recreation, 32 (4)*, 54+.
- Fyhri, A., & Hjorthol, R. (2009). Children's independent mobility to school, friends and leisure activities. *Journal of Transport Geography, 377-384*.
- Fyhri, A., Hjorthol, R., & RL., M. (2011). Children's active travel and independent mobility in four countries: Development, social contributing trends and measures. *Transport Policy, 18*, 703–710.
- Gehl, J. (2010). *Life between buildings: using public spaces, 6th ed.* Copenhagen: The Danish Architectural Press.
- Gibson, J. (1979). *The ecological approach to visual perception.* Boston: Houghton Mifflin.
- Giles-Corti, B., Macintyre, S., Clarkson, J. P., Pikora, T., & Donovan, R. J. (2003). Environmental and lifestyle factors associated with overweight and obesity in Perth, Australia. *American Journal of Health Promotion 18 (1)*, 93-102.

- Giuliani, M. V., Alparone, F. R., & Mayer, S. (1997). Children's appropriation of urban spaces. *Urban Childhood International Conference*. Trondheim.
- Gray, P. (2011). The Decline of Play and the Rise of Psychopathology in Children and Adolescents. *American Journal of Play*, volume , number 4, 443-463.
- Haikkola, L., Pacilli, M., Horelli, L., & Prezza, M. (2007). Interpretations of urban child-friendliness. A study in two neighbourhoods of Helsinki and Rome. . *Children, Youth and Environment*, 17, 319-351.
- Hart, R. (1979). *Children's experience of place*. New York: Irvington.
- Hayward, D., Rothenberg, M., & Beasley, R. (1974). Children's play and urban playground environments: A comparison of traditional, contemporary, and adventure playground types. *Environment and Behavior*, 6 (2), 131-168.
- Heft, H. (1983). Affordances of children's environments: A functional in balance and coordination abilities. *Children's Environments tendencies that are of great importance to the children's Quarterly*, 5 , 29-37.
- Heurlin-Norinder, M. (1996). Children, environment and independent mobility. *IAPS 14th Conference* (pp. 329-331). Stockolm: Book of Proceedings.
- Hillman, M., Adams, J., & Whitelegg, J. (1990). *One False Move... A Study of Children's Independent Mobility*. London: Policy Studies Institute.
- Hofferth, S., & Sandberg, J. (2001). Changes in American Children's Time, 1981–1997. In T. Hofferth, & S. L. (Eds.), *Children at the Millennium: Where Have We Come From? Where Are We Going? Advances in Life Course Research* (Vol. 6, pp. 193-229).

- Johansson, M. (2006). Environment and parental factors as determinants of mode for children's leisure travel. *Journal of Environmental Psychology, 26*, 156-169.
- Johnson, R., Onwuegbuzie, A., & Turner, L. (2007). Toward a Definition of Mixed Methods. *Research. Journal of Mixed Methods Research, 1 (2)*, 112-133.
- Kinra, S., Nelder, R., & Lewendon, G. (2000). Deprivation and childhood obesity: a cross sectional study of 20973 children in Plymouth, United Kingdom. *Journal of Epidemiology and Community Health 54*, 456-460.
- Kozlovsky, R. (2008). Adventure Playground and postwar reconstruction. In M. Gutman, & N. De Coninck-Smith, *Designing Modern Childhoods: History, Space, and the Material Culture of Children* (pp. 171-190). New Brunswick: University Press.
- Krysiak, N. (2019). *Designing Child-Friendly High Density Neighbourhoods: Transforming our cities for the health, wellbeing and happiness of children*. Cities for Play.
- Kyttä, M. (1995). The affordances of urban, small town and rural environments for children. *International Conference Building Identities: Gender perspective on children and urban space*. Amsterdam.
- Loukaitou-Sideris, A., & Sideris, A. (2010). What Brings Children to the Park: Analysis and Measurement of the Variables Affecting Children's Use of Parks. *Journal of the American Planning Association, 89-107*.
- Lozano, L., & Vertiz, B. (2018). Everyday playfulness as Development for Urban Transformation. In R. Danenberg, V. Doumpa, & H. Karssenbergh, *The City at the Eye Level* (pp. 87-91). Rotterdam/Amsterdam: STIPO.

- Macintyre, S., MacIver, S., & Sooman, A. (1993). Area, class and health: should we be focusing on places or people? *Journal of Social Policy*, 22 (2), 213-234.
- Mackett, R., Brown, B., & Gong, Y. (2007). Setting Children Free: Children's Independent Movement in the Local Environment. *UCL Working Paper Series*, 118.
- McCracken, D. S., Allen, D. A., & Gow, A. J. (2016). Associations between urban greenspace and health-related quality of life in children. *Preventive Medicine Reports*, 3, 211-221.
- Memarian, G. (2005). *Study to Architectural Theoretical Foundation*. Tehran: Sooroosh Publications.
- Mitra, R., Faulkner, G., Buliung, R., & Stone, M. (2014). Do parental perceptions of the neighbourhood environment influence children's independent mobility? Evidence from Toronto, Canada. *Urban Studies*, 51(16), 3401-3419.
- Moore, R. C., & Wong, H. H. (1997). *Natural learning. Creating environments for rediscovering nature's way of teaching*. Berkley: MIG Communications.
- Moore, R. (n.d.). *Childhood's domain*. London: Croom-Helm.
- Noschis, K. (1994). The urban child. *Architecture & Comportment, Architecture & Behavior*, 10, 343-350.
- O'Brien, M., Jones, D., Sloan, D., & Rustin, M. (2000). Children's independent mobility in the urban public realm. *Childhood*, 7, 257-277.

- Oloumi, S., Mahdavinejad, M., & Namvarrad, A. (2012). Evaluation of Outdoor Environment from the Viewpoint of Children. *Procedia - Social and Behavioral Sciences* 35 , 431-439.
- Palys, T., & Atchison, C. (2014). *Research Decisions: Quantitative, Qualitative, and Mixed Methods Approaches, 5th ed.* Toronto: Nelson Education Ltd.
- Piaget, J. (1962). *Play, dreams, and imitation in childhood.* New York: W. W. Norton.
- Prezza, M. (2007). Children's independent mobility: A review of recent Italian literature. *Children, Youth and Environments*, 17(4), 293-318.
- Prezza, M., Alparone, F. R., Cristallo, C., & Secchiano, L. (2005). Parental perception of social risk and of positive potentiality of outdoor autonomy for children: the proposal of two instruments. *Journal of Environmental Psychology*, 25, 437-453.
- Riger, S., Lebailly, R. K., & Gordon, M. T. (1981). Community ties and urbanites' fear of crime: An ecological investigation. *American Journal of Community Psychology*, 9, 653-665.
- Ross, C. E., & Jang, S. J. (2000). Neighbourhood disorder, fear, and mistrust: The buffering role of social ties with neighbours. *American Journal of Community Psychology*, 28, 401-420.
- Sallis, J., Prochaska, J., & Taylor, W. (2000). A review of correlates of physical activity of children and adolescents. *Medicine and Science in Sports and Exercise*, 32 (5), 963-975.
- Seyf, A. (2000). *Educational Psychology: Learning and Teaching Psychology.* Tehran: Agah Publications.

- Shackell, A., Butler, N., Doyle, P., & Ball, D. (2008). *Design for play: a guide to creating successful play spaces*. . The Department for Children, Schools, and Families (DCSF) and the Department of Culture, Media and Support (DCMS).
- Singer, D. G., Singer, J. L., D'Agostino, H., & DeLo, R. (2009). Children's Pastimes and Play in Sixteen Nations: Is Free-Play Declining? . *American Journal of Play* 1, 283-312.
- Sissons Joshi, M., MacLean, M., & Carter, W. (1997). Children's journeys to school—new data and further comments. *World Transport Policy & Practice*, 3, 17-22.
- Smilansky, S. (1968). *The effects of sociodramatic play on disadvantaged preschool children*. New York: Wiley.
- Smoyer-Tomic, K., Hewko, J., & Hodgson, M. (2004). Spatial accessibility and equity of playgrounds in Edmonton, Canada. *The Canadian Geographer* 48 (3), 287-302.
- Spencer, C., & Woolley, H. (2000). Children and the city: a summary of recent environmental psychology research. *Child: Care, Health and Development*, 181-198.
- Staempfli, M. (2009). Reintroducing Adventure Into Children's Outdoor Play Environments. *Environment and Behaviour*, 41 (2), 268-280.
- Stanley, B., Stark, B., Johnston, K., & Smith, M. (2012). Urban Open Spaces in Historical Perspective: A Transdisciplinary Typology and Analysis. *Urban Geography*, 33, 8, 1089-1117.
- Tehlova, A. (2018). Hop, Skip, and Make: Creating Child-Friendly Environment in Dandora. In R. Danenberg, V. Doumpa, & H. Karsenberg, *The City at the Eye Level* (pp. 63-67). Rotterdam/Amsterdam: STIPO.

- Timpero, A., Crawford, D., Telford, & A., S. J. (2004). Perceptions about the local neighbourhood and walking and cycling among children. *Preventive Medicine, 38*, 39-47.
- Tomaselli, C., Woldesenbelt, M., & de Carvalho, G. (2018). Maputo's Children Transform Area Through Digital Data Collection. In R. Danenberg, V. Doumpa, & H. Karssenber, *The City at the Eye Level* (pp. 341-345). Rotterdam/Amsterdam: STIPO.
- Tranter, P., & Pawson, E. (2001). Children's access to local environments: A case-study of Christchurch, New Zealand. *Local Environment, 6*, 27-48.
- Tranter, P., & Sharpe, S. (2008). Escaping monstropolis: child-friendly cities, peak oil, and Monsters Inc. *Children's Geographies, 6*(3), 295-308.
- Tranter, P., & Whitelegg, J. (1994). Children's travel behaviours in Canberra: Car-dependent lifestyles in a low-density city. *Journal of Transport Geography, 2*(4), 256-273.
- UNICEF. (2017). *Building the Future: Children and the Sustainable Development Goals in Rich Countries*. Florence: Unicef.
- van der Spek, M., & Noyon, R. (1997). Children's freedom of movement in streets. In R. Camstra (Ed.), *Growing up in a changing urban landscape* (pp. 102-118). Assen: Van Gorcum.
- Villanueva, K., Giles-Corti, B., & Bulsara, M. (2012). Where do children travel to and what local opportunities are available? The relationship between neighborhood destinations and children's independent mobility. *Environment and Behavior* .

Whitzamn, C., Worthington, M., & Mizrachi, D. (2010). The Journey and the Destination Matter: Children-Friendly Cities and Children's Right to the City. *The Role of Walking and Cycling in Advancing Healthy and Sustainable Urban Areas*, 36(4), pp. 474-486.

Whitzamn, C., Worthington, M., & Mizrachi, D. (2010). The Journey and the Destination Matter: Children-Friendly Cities and Children's Right to the City. *The Role of Walking and Cycling in Advancing Healthy and Sustainable Urban Areas*, 36(4), pp. 474-486.

Wikström, P., & Dolmén, L. (2001). Urbanization, Neighbourhood social integration, informal social control, minor social disorder, victimization and fear of crime. *International Review of Victimology*, 8, 221-140.

Appendices

Appendix A

Interviews Recruitment Outline



SCHOOL OF PLANNING
UNIVERSITY OF WATERLOO

RECRUITMENT OUTLINE

Individuals that will be invited to participate in this study are adults, having more than 21 years old, who will be accompanying children from 0 to 12 years old at a public park in downtown Toronto.

The researcher will approach individuals, verbally identify herself as a Master's student at the University of Waterloo's School of Planning, explain the subject and purpose of her research, and invite them to participate in the interview saying:

"Hello, my name is Vivian Gomes. I am a Master's student at the University of Waterloo's School of Planning. I would like to ask your opinion in an important study about children-friendly neighbourhood parks in downtown Toronto.

The purpose of the study is to find out how do you use these spaces, what do you like about them, and specifically what do you believe that can be improved. Recent research has shown that a majority of people with children living in downtown Toronto wants more and better designed outdoors spaces. However, we don't know what do they think about the existing ones. This research will evaluate how these spaces function and will explore strategies on how current conditions can be improved. **This study is being undertaken as part of my Master's thesis.** I plan to combine my literature review with perspectives from the community.

If you decide to participate in this research I will do an informational interview of approximately five minutes in length about the usage of this park. With your permission, this interview will be audio recorded. Your participation is voluntary and your identity will be kept confidential. You have the right to refuse to participate in this study. If you decide to participate, you may choose to pull out of the study at any time without giving a reason and without any negative impact.

I would like to assure you that this study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee. However, the final decision about participation is yours. Would you like to participate?"

After the individual express their wiliness to participate, the student researcher will give the individual a copy of the "INFORMATION CONSENT LETTER" and the "CONSENT FORM", read them to the individual, provide them the opportunity to read again alone, and ask them to sign it. After the individual have signed the "CONSENT FORM", the student researcher will proceed with the interview.

The interview questions can be find in the Appendices.



Appendix B

Interviews Questions



**SCHOOL OF PLANNING
UNIVERSITY OF WATERLOO**

INTERVIEW WITH COMMUNITY MEMBERS

Hello, my name is Vivian Gomes. I am a Master's student at the University of Waterloo's School of Planning. I would like to ask your opinion in an important study about children-friendly neighbourhood parks in downtown Toronto.

The purpose of my thesis research is to identify planning and design features that contribute to create better outdoor spaces for children. Using downtown Toronto as a case study, this research will evaluate how these spaces function and will explore strategies on how current conditions can be improved.

If you decide to participate in this research, I will do an informational interview of approximately five minutes in length about the usage of this park. **With your permission, this interview will be audio recorded. Your participation is voluntary and your identity will be kept confidential.** You have the right to refuse to participate in this study. If you decide to participate, you may choose to pull out of the study at any time without giving a reason and without any negative impact.

Questions:

1. Do you live in this neighbourhood? (If yes) How long have you lived here?
2. What do you like about this neighbourhood? Is there anything you dislike about it?
3. How many family members live with you? How old are your children?
4. Did you walk, cycle, use transit system or drive to this park?
5. From where do you usually come to here? How long does it take for you to get here?
6. How often do the kids come to this park to play?
7. Is this your/their favourite outdoors space in Toronto? (If no) Which one is your/their favourite and why?
8. From 0 to 10 how much do you and the children like this park? What do you like about it? (Less than 10) What you dislike about it?
9. From 0 to 10, how safe do you feel it is to walk/cycle in the immediate surroundings of the park with the children? What does make you feel safe? (Less than 10) What does make you feel unsafe? When the children get older, are they going to be allowed to walk/cycle to the park without supervision?
10. What is your opinion about how this park can be improved to better serve you and the children's needs?

Thank you very much for your time. Your knowledge and insights will be very helpful to this study.

Vivian Accioly Gomes
MES Candidate, School of Planning, University of Waterloo
Email: vaccioly@uwaterloo.ca



Appendix C

Information Consent Letter



**SCHOOL OF PLANNING
UNIVERSITY OF WATERLOO**

INFORMATION CONSENT LETTER

Title of the study: TPlay: planning and designing urban open spaces for children in downtown Toronto.

Faculty Supervisors: Laura Johnson, PhD, School of Planning, University of Waterloo.

Phone: 1-519-888-4567 x36635, Email: ljohnson@uwaterloo.ca and; Pierre Filion, PhD, School of Planning, University of Waterloo. Phone: 1-519-888-4567 x33963, Email: pfilion@uwaterloo.ca

Student Investigator: Vivian Accioly Gomes, MES Candidate, School of Planning, University of Waterloo. Email: vaccioly@uwaterloo.ca

To help you make an informed decision regarding your participation, this letter will explain what the study is about, the possible risks and benefits, and your rights as a research participant. If you do not understand something in the letter, please ask one of the investigators prior to consenting to the study. You will be provided with a copy of the information and consent form if you choose to participate in the study.

What is the study about?

You are invited to participate in a research study about the use of outdoors spaces for children in downtown Toronto. The purpose of the study is to find out how do you use these spaces, what do you like about them, and specifically what do you believe that can be improved. Recent research has shown that a majority of people with children living in downtown Toronto wants more and better designed outdoors spaces. However, we don't know what do they think about the existing ones. **This study is being undertaken as part of my (Vivian Accioly Gomes) Master's thesis.** I plan to combine my literature review with perspectives from the community.

I. Your responsibilities as a participant

What does participation involve?

Participation in the study will consist of an informational interview of approximately five minutes in length about the usage of this park. The types of questions that I will ask include; What do you like about this neighbourhood? How often do the kids come to this park to play? With your permission, the interview will be audio recorded to ensure an accurate transcript of the data collected and, if you agree, anonymous quotations may be used.

Who may participate in the study?

In order to participate in the study you must be at least 21 years of age and able to speak and understand English.

II. Your rights as a participant

Is participation in the study voluntary?

Your participation in this study is voluntary. You may decide to leave the study at any time by communicating this to the student investigator. Any information you provided up to that point will not be used. You may decline to answer any question(s) you prefer not to answer. You can request your data be removed from the study up until May 2018 as it is not possible to withdraw you data once my thesis has been submitted.



Appendix D

Interviews Feedback Letter



**SCHOOL OF PLANNING
UNIVERSITY OF WATERLOO**

PARTICIPANTS FEEDBACK LETTER

Dear participant,

I would like to thank you for your participation in this study entitled "TOplay: planning and designing urban open spaces for children in downtown Toronto". This study is being undertaken as part of my (Vivian Accioly Gomes) Master's thesis. As a reminder, the purpose of this study is to identify planning and design features that contribute to create better outdoor spaces for children. Using downtown Toronto as a case study, this research will evaluate how these spaces function and will explore strategies on how current conditions can be improved.

The data collected during interviews will contribute to a better understanding of the appropriate direction of future planning and design initiatives and information necessary for the development and implementation of these strategies.

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE#22910). If you have questions for the Committee contact the Chief Ethics Officer, Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

Please remember that your identity will be confidential. Once all the data are collected and analyzed for this project, I plan on sharing this information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please provide your email address, and when the study is completed, anticipated by May/June 2018, I will send you the information. In the meantime, if you have any questions about the study, please do not hesitate to contact me (Vivian Accioly Gomes), Dr. Laura Johnson or Dr. Pierre Filion. Our contact information is listed below.

Vivian Accioly Gomes
MES Candidate, School of Planning, University of Waterloo
Email: vaccioly@uwaterloo.ca

Laura Johnson
PhD, School of Planning, University of Waterloo.
Phone: 1-519-888-4567 x36635
Email: lcjohnson@uwaterloo.ca

Pierre Filion
PhD, School of Planning, University of Waterloo.
Phone: 1-519-888-4567 x33963
Email: pfilion@uwaterloo.ca

