2018

Parks Planning and Mental Health

The urban planner's role and influence in the relationship between healthy minds and greenspaces.

Berta Haikin

Ryerson University

School of Urban and Regional Planning

4/9/2018

PARKS PLANNING AND MENTAL HEALTH

THE URBAN PLANNER'S ROLE AND INFLUENCE IN THE RELATIONSHIP BETWEEN HEALTHY MINDS AND GREENSPACES

By
Berta Haikin
BA Urban Studies, Environmental Studies,
and GIS, University of Toronto, 2016

A Major Research Paper
presented to Ryerson University
in partial fulfillment of the requirements for the degree of

Master of Planning
in
Urban Development

Toronto, Ontario, Canada

AUTHOR'S DECLARATION

AUTHOR'S DECLARATION FOR ELECTRONIC SUBMISSION OF A MRP

I hereby declare that I am the sole author of this MRP. This is a true copy of the MRP, including any required final revisions.

I authorize Ryerson University to lend this MRP to other institutions or individuals for the purpose of scholarly research.

I further authorize Ryerson University to reproduce this MRP by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

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

PARKS PLANNING AND MENTAL HEALTH

THE URBAN PLANNER'S ROLE AND INFLUENCE IN THE RELATIONSHIP BETWEEN HEALTHY MINDS AND GREENSPACES

Master of Planning
in
Urban Development
Ryerson University

ABSTRACT

Greenspace is known to have positive effects on mental health. The proximity to, accessibility concerning, and maintenance of greenspaces are all factors which influence a person's mental health. Investigating this relationship in the context of the City of Toronto, this research explores the urban planner's role in facilitating the planning of effective greenspace to support its positive effects on mental health. The snowball-sampling method was used to collect a small, but diverse set of professional interviews to understand the degree of exposure that the planning realm has to this relationship. The culmination of the primary research, supported by evidence and policy, results in a summary of recommendations to urban planners and policy makers. Involvement in Official Plan Review, intentional language pertaining to greenspace and mental health, and emphasis on the relationship in professional education were themes shared by professionals and deduced as missing components within the literature.

Key words: parkland, greenspace, mental health, planning tools, planning policy, urban parks, urban planning, Toronto Official Plan

ACKNOWLEDGMENTS

This paper, the culmination of my Master of Urban Planning at Ryerson University and student career, is but a bittersweet milestone. The end of my academic career is signified with this paper—though I will certainly continue learning throughout my life and career, I am no longer a student on the day of this submission.

To my fantastic group of peers who have made the Bond building and the field of Urban Planning home; to the supportive faculty at SURP who have taught me so much and facilitated my work and learning; to Nina-Marie Lister, my supervisor and mentor in this process- for being patient and kind in your guidance; to my second reader Dr. Pamela Robinson- thank you for your meaningful feedback and support, to the City Staff, planners, and all interviewees who all kindly offered their insights and shared in talks on parks, planning, and life with me; and to my family- especially my loving mother, Marina who supports me in my late nights, hard nights, and nights where I probably overdo it on the ‘oy veys’ and other Yiddish musings—thank you, toda raba.

DEDICATIONS

To the little fluff-ball whose loyal eyes and paws are always there for support. Thank you, my Mollychka,

And to my mama, always.

Table of Contents

Author's Declaration ii
Abstract iii
Acknowledgments iv
Dedications v
List of Figures vii
List of Maps viii
Appendices ix
Introduction 1
Definitions and Scope 6
Methods 11
Literature Review 21
  Policy Scan 30
  Precedents & Case Examples 37
    San Diego, USA 37
    Tokyo, Japan 39
  Professional Best Practice Interviews 45
    Findings 45
Best Practices Guide 52
Conclusions 60
References 62

LIST OF FIGURES

Figure 1: Diagram of relationship between greenspace and different aspects of human health

Figure 2: Public health terminology classification chart

Figure 3: Knox College courtyard path at the University of Toronto, Canada

Figure 4: Knox College courtyard at the University of Toronto, Canada

Figure 5: Street trees, downtown Toronto

Figure 6: Sports complex, University of Toronto St. George Campus

Figure 7: Greenspace typology chart

Figure 8: Land Use Planning System in Ontario

Figure 9: Small dog in a meadow

Figure 10: Documents which feed into and influence the Toronto Official Plan

Figure 11: City of Toronto Parkland Dedication Requirements, By Development Type

Figure 12: Rendering of Sumida River Terrace Park, Tokyo, Japan

Figure 13: Sumida River Terrace Park, Tokyo, Japan

Figure 14: Forest bathers exploring a Japanese cypress forest

Figure 15: City Finances budget allocation (2017)

Figure 16: Services classified as “essential” within the City of Toronto administration

Figure 17: City of Toronto administrative structure

LIST OF MAPS

Map 1: Population change in Toronto, 2016 census vs 2011

Map 2: Greenspace in the City of Toronto (2018)

Map 3: Toronto Census Area Profile Districts

Map 4: Total parkland supply per person is m^2 in the City of Toronto (2017)

Map 5: Parkland Acquisition Priority Areas in the City of Toronto (2017)

Map 6: City of San Diego Open Space Areas including greenspace (2017)

APPENDICES

Appendix A: The Centre for Urban Design and Mental Health: ‘GAPS’ in Urban Design Policy Brief

Appendix B: Interviewee Profiles

Appendix C: Interview Guide

INTRODUCTION

This guide has been produced as an informative teaching tool for urban planners and professionals in the affiliated fields.

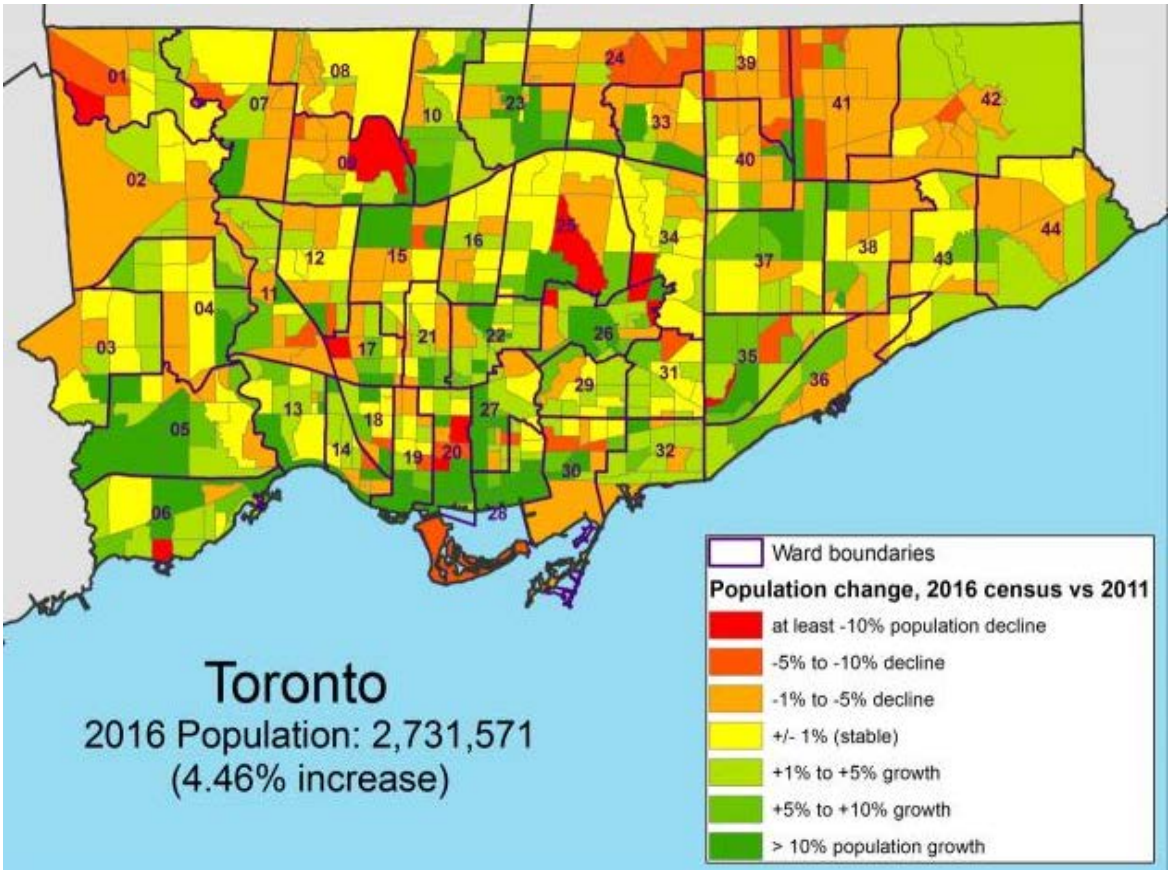
This paper will outline scientifically demonstrated positive effects of green space on mental health, and will go on to explore the tangible and practical aspects of parks and vegetation which support this relationship.

The utility of this paper lies in its recommendations and best practices which result from the primary professional interviews and secondary research conducted on existing literature. As a guide, this paper can be used by urban planners and anyone operating within the field to help plan effectively to support this positive relationship. As is now known, the public and professional spheres are aware of this correlation, but whether it is incorporated in active and meaningful planning is still uncertain.

What is the planning challenge?

Living in an urban setting, surrounded by structures and impermeable land is a known stressor on the mind and body (Swanwick, 2003). The City of Toronto is home to approximately 2.7 million people—with 6 million living in the Census Metropolitan Area (CMA) known as the Greater Toronto Area (GTA) (Statistics Canada, 2016). These population numbers make the GTA the largest CMA in Canada; and growing (Statistics Canada, 2016). As the City of Toronto's population continues to grow with a 4.5% increase from 2011 to 2016, the issue of parkland dedication for sufficient greenspace is

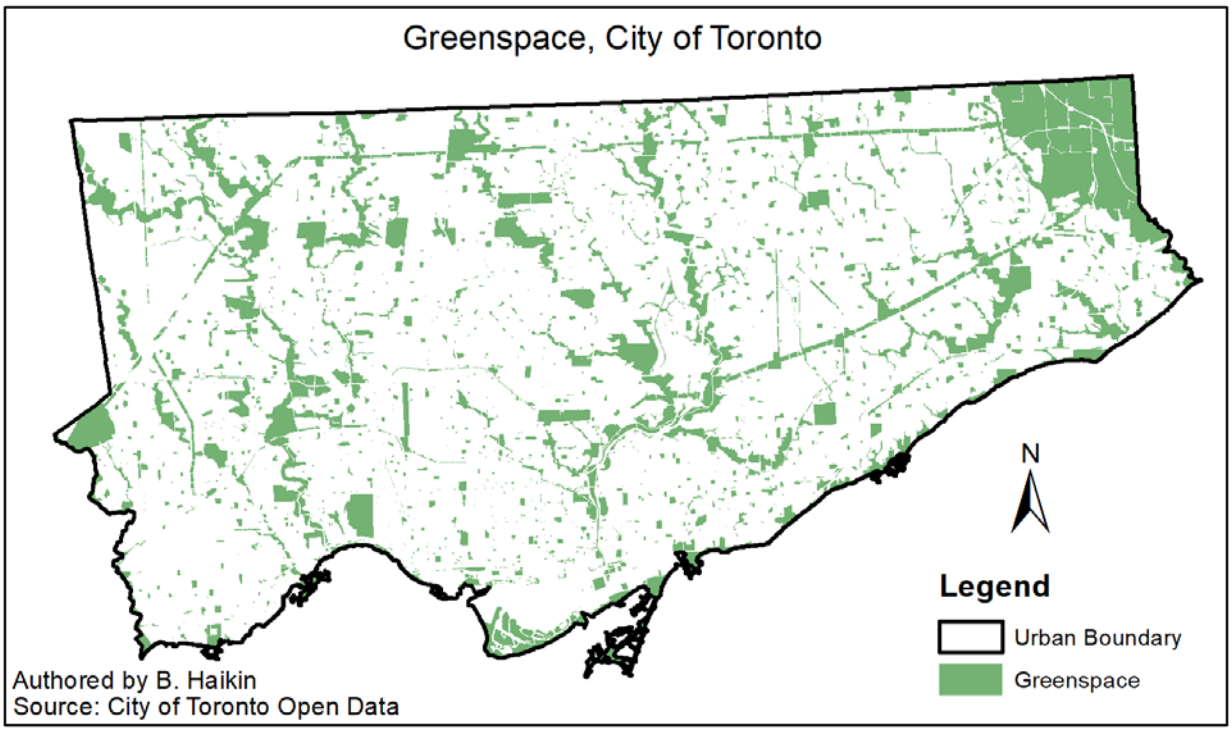
becoming more apparent with the downtown core growing at the fastest pace comparatively (See Map 1) (Statistics Canada, 2016).



Map 1: Population change, in percentage by census tract, from 2016 census vs 2011.

Source: Sean Marshall. UrbanToronto.ca

Toronto has approximately 8,000 hectares of city owned parkland or more than 1,500 such green spaces (See page 10 for a typology of greenspaces) within its central core and suburbs, along with almost 17,000 hectares of ravine lands managed by the Toronto and Region Conservation Authority (TRCA) (See Map 2) (Park People & Garrett, 2017) (TRCA, 2013). Although this bustling city has relatively large centralized parks such as High Park and Queen's Park and a good network of trails and parks across the area, there are remaining issues of accessibility and proximity to a well-maintained green space for many residents.



Map 2: Greenspace in the City of Toronto.

Why are parkland and greenspace important?

Many studies have yielded evidence of a causal relationship between greenspace and its positive effects on mental health (See Figure 1). Toronto Public Health's *Green City* evidence review looked at 37 different studies analyzing the quantitative effects that greenspace immersion and exposure has on overall health and wellness. Out of the 37 studies, 22 looked at the impact that exposure to greenspace has on a multitude of issues concerning mental health, including anxiety, stress, and depression (Toronto Public Health, 2015). These studies were analyzed based on statistical significance of the two variables, ultimately finding that 92% of the studies (concerning mental health and greenspaces) yielded statistically significant associations (Toronto Public Health, 2015). Further, it was found that none of the studies yielded negative findings or even suggested a poor quality score between the variables (Toronto Public Health, 2015).

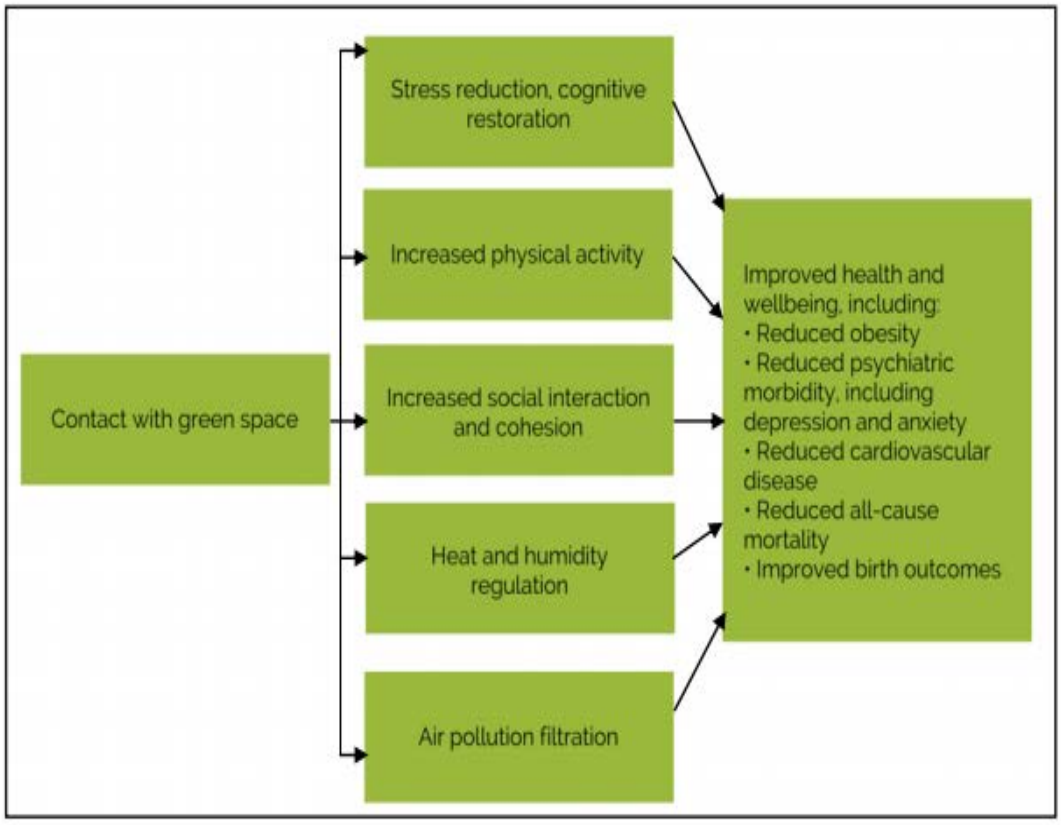


Figure 1: A diagram depicting the causal relationship between greenspace and different aspects of human health, including mental health in the form of stress reduction and cognitive recognition.

Source: Green City: Why Nature Matters to Health- An Evidence Review, 2015

The list of mental health benefits from exposure to greenspace is extensive with cases of ADHD symptoms in children seeing a significant decrease following outdoor play with 'big trees and grass' (Taylor et al., 2001). For example, in a study similarly looking at ADHD in children, a simple 20-minute walk in the park proved to help with concentration—shocking when comparing this simple remedy to common medications used to treat this disorder (Toronto Public Health, 2015) (Kuo, 2010).

As this relationship clearly exists, understanding it within the context of the City of Toronto is vital for the mental wellness for the future of a city which is only becoming more dense as the population increases. As the quantitative research has been

conducted in the field of psychology—as well as established as a proven correlation—the perspective of the urban planner is noticeably missing. In order to implement regulations pertaining to the relationship and guide the meaningful planning of parks to support mental health outcomes, the planner must be involved.

For example, an urban planner might ask: what aspects of a green space directly impact an individual's or a community's mental health? How can an urban planner be involved in the research and relationship between the mind and persons' green surroundings? The specific aspects of this correlation could help planners in advocating for more green spaces in cities, and even emphasize on the specific aspects of these parks that help to alleviate stress and mental anguish.

How an urban planner may deal with this issue, if not otherwise very well versed in the topic of mental health or neuro-related diseases, can be through experiencing park spaces. Everything related to the zoning, location and even maintenance of the spaces can be considered by a planner and then a collaborative work plan can be created between this field and fields grounded in psychology and science.

The important question remains: What is missing in Toronto's planning system in relation to this correlation and how should planners plan parks in terms of the following three objectives:

1. **Built form:** how can more greenspace be advocated for in the areas that need it most be supported from the planning field?
2. **Policy:** where is there a gap in the regulatory documents which prevents the meaningful planning of greenspace with the understanding of this causal relationship? Where can the gap be filled?
3. **Partnerships:** what sorts of partnerships (with other fields and entities) should urban planners be making during their careers in order to help incorporate this relationship into their work and local planning?

DEFINITIONS AND SCOPE

The discussion of green space and mental health includes two terms which need to be set within certain parameters in order to analyze the relationship between them in a purposeful way.

Healthy Minds

Mental health, although it may not seem to be at first glance, is a broad term and may refer to multiple states and conditions of health- aside from the large spectrum of disorders under the umbrella of this term.

Health, as it is known and described by the World Health Organization (WHO), encompasses all components of the body and mind- along with an aspect of social well-being which measures the satisfaction one feels from the social ties and capital within their personal repository (WHO, 2018). As an integral component of a person's overall health, mental health must be considered in the equation

There is an interconnected relationship between physical and mental health, allowing for a parallel to be drawn between the two. Therefore, a case for the inclusion of mental health in cases where only the physical is mentioned in documentation and research, can be argued for.

The term "mental health" is popular in use by the media and can be found in both the public news and lay context, as well as professional health fields. The difference between the two concepts is the connotation associated with the term. In a news article or online publication created for the general public- the term 'mental health' is used

interchangeably with a myriad of states having to do with the mind and its capacity and wellness. In the field of public health and its related practices, there are 3 different terms which classify a state of being pertaining to the mind and its processes. These are:

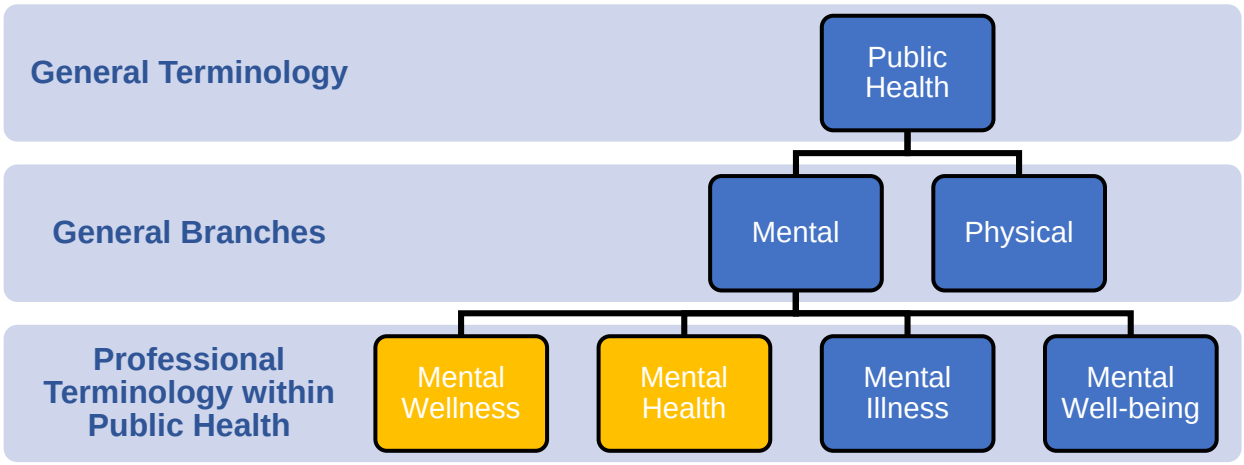


Figure 2: Classification sequence chart pertaining to different groups of terminology found within the health fields differentiating within and around cities, organized into field and public knowledge—moving from general, down to specific. ***Terms used within the scope of this paper are highlighted in yellow.***

Mental Health is resilience in the general sense, concerning the health of the mind

Mental Well-being is most often self reported- mostly through occurrences of illness and visits to mental health facilities, therefore it is supported by physiological data.

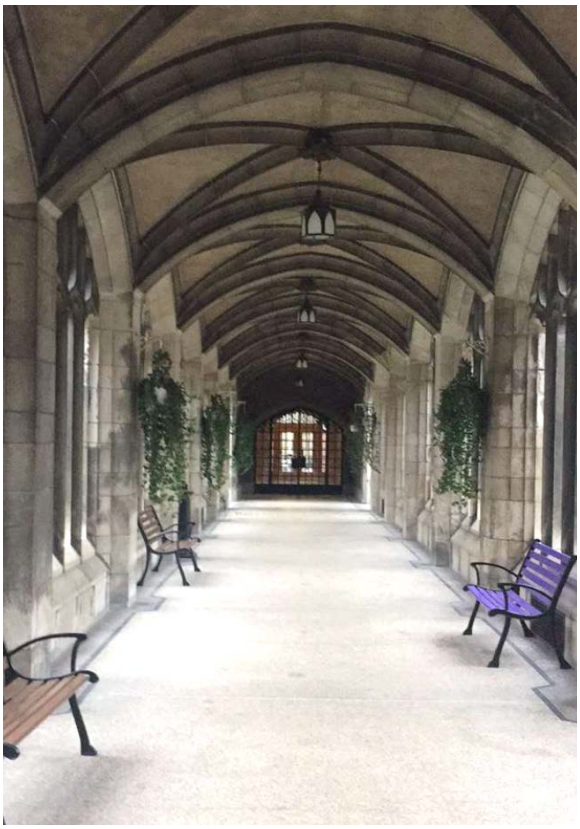
Mental Wellness fits within the mental health umbrella term- therefore they can be used interchangeably, especially in the context of this paper.

Sources: (World Health Organization, 2018, Toronto Public Health, 2015)

Positive mental Health and wellness is usually connected to a sense of belonging or purpose, happiness, easier recovery from illness, and associated with longer life expectancy (Cacioppo & Patrick, 2008).

Greenspaces

Spaces that are referred to as ‘green’ encompass a wide-array of land covers with a very important aspect in common which is vegetation. Many researchers in the environmental field, along with urban planning and the associated realms see greenspace as just that—a space which houses greenery in the forms of natural and/or ornamental vegetation.



Figures 3 & 4: Photos of the Knox College courtyard at the University of Toronto, Canada

Although certain urban classifications may be found in the rural setting as well- such as tree cover and community gardens- they will be analyzed within the urban context as to keep within the scope of this paper.

Urban vegetation and parks are the scope here as they are more regulated by municipalities and planning tools can help to encourage such greenery (beautification and greening in the form of street trees, shrubs,

and other herbaceous vegetation may differ on a site-by-site basis, but are still within the scope of this research).

Figure 5: Street trees during the fall in downtown Toronto

Greenspace is predominately characterized by land with some sort of vegetation cover and which is unsealed unlike the spaces which roads and land parcels with buildings and structures tend to stand on (Swanwick et al., 2003). The differentiation between 'grey' (sealed land) and 'green' (unsealed land with vegetation cover) spaces usually comes down to the impermeable land atop which buildings and infrastructure are built on (Swanwick et al., 2003). Some spaces may incorporate a mix of both 'green' and grey' characteristics, an example being a building that may encompass a terrace or an open concept pedestrian tunnel, which can act as both a natural landscape and functional space (See Figures 3 & 4).

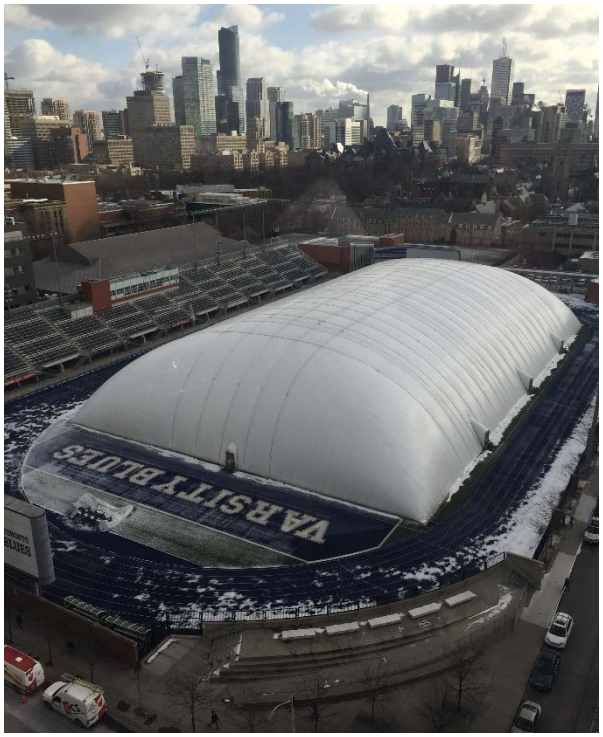


Figure 6: Sports complex on the University of Toronto St. George Campus

Urban Parks are not simply human designed parcels with play structures for children to swing and slide on, but rather the definition is wide ranging. Apart from the often-assumed parks and playgrounds within

cities, urban parks include woodland, street trees and plantings, cemeteries, both public and private gardens, green roofs, community and allotment gardens, even sports ovals and institutional grounds (e.g. hospitals, schools, and universities) (See Figures 5 & 6) (Konijnendijk et al., 2013, Hunter & Luck, 2015).

For the purpose of this paper the terms ‘greenspace’, ‘urban greenspace’, ‘parks’ and ‘urban parks’ are used interchangeably as they will all be referring to any open space area dominated by vegetation and/or water (commonly referred to as blue space)- including shrubs and street trees as they add to the natural environment of ‘grey’ spaces, making them more therapeutic and for a more ‘green’ public realm (See Figure 7).

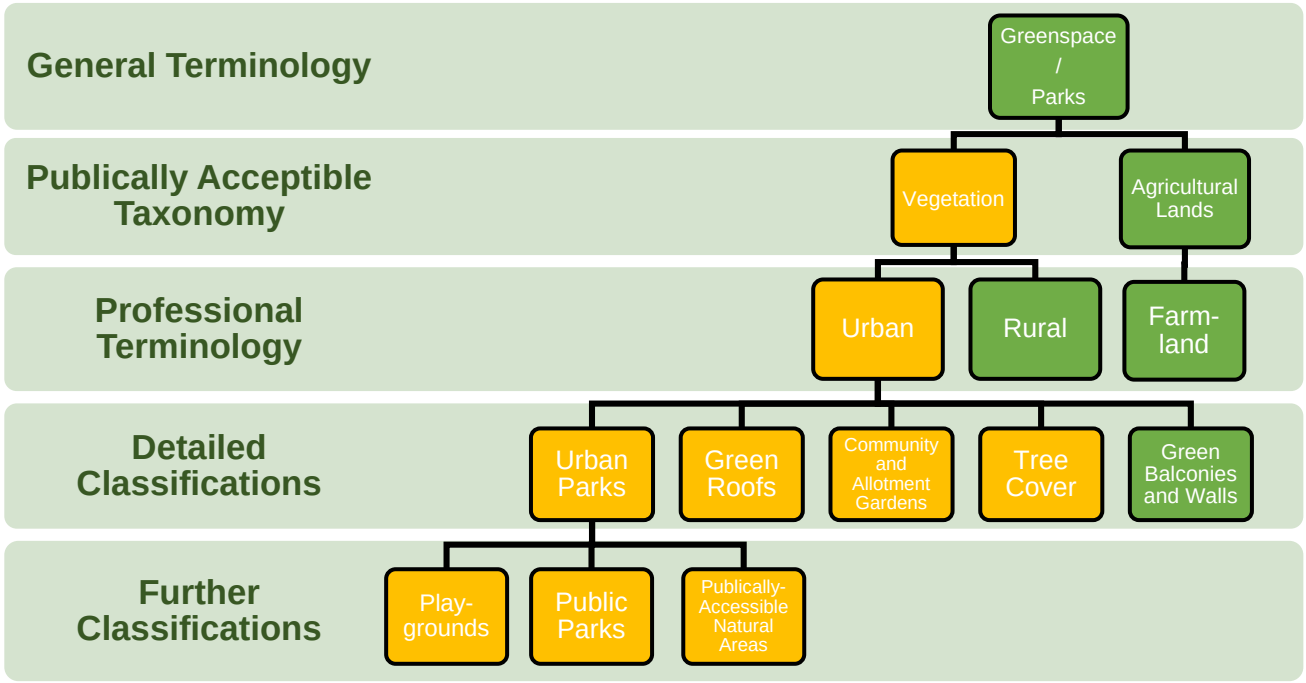


Figure 7: Classification sequence chart pertaining to the different types of greenspace that may be found in and around cities, organized into field and public knowledge—moving from general, down to specific. ***Terms used within the scope of this paper are highlighted in yellow.***

METHODS

The research process followed in this paper employed both primary and secondary research to ensure that the resulting best practices guide was well-informed through contemporary scholarly literature and professional advice. The need for this paper and its study of the urban planner's role in a scientific and biological relationship is an evident gap in municipal planning policy.

Through the background research needed to understand the relationship holistically, a literature review, policy scan and professional best practice interviews were conducted. Both the literature and policy scan revealed a clear policy gap.

Policy which clearly outlined the need for greenspace advocacy and planning, with a focus on mental health, was missing in plain language through all planning documents pertaining to the City of Toronto.

Documents pertaining to mental health and greenspaces within the City of Toronto—regulatory policy, guidelines, and other government documents—were analyzed to identify opportunities for the incorporation of this relationship. Where is the most effective niche to input the clear language that will lead planning change in the area of mental health and greenspaces? This is a pivotal question in the search for the missing piece in Toronto's planning system pertaining to mental health and greenspaces—the central question being answered in this paper.

Primary Research

Professional best practice interviews with key informants in the urban planning and affiliated fields were conducted for this paper.

I would like to thank the participants of this field work as their input has informed a crucial part of this research paper- in most part within the best practices section where the real world application of this subject- and the necessary reforms- are underlined and put forth as tangible recommendations backed by evidence from the fields of urban planning and political science. This work could not have been done without you.

The interviews conducted as part of this primary research and field work were not recorded digitally. Notes were taken, by hand, by the author of this paper- therefore direct quotes will not be mentioned, but the acknowledgment of the interviewee, institutions, bodies, and corporations- along with position titles- will be included in this section.

The snowball sampling method, a process of survey sampling where selection relies on the initially sampled respondents to refer the researcher to other potential informants, was used as a way to find interviewees with the appropriate professional backgrounds suited for this topic (Johnson, 2014). Representation from the municipal government—preferably both politicians and planners—were sought out, along with any related departments (Toronto Public Health, Parks, Forestry, and Recreation, etc.). Input from various parks groups within the City of Toronto was considered to be an asset as well.

This project was reviewed and approved by the Ryerson University Research and Ethics Board for key informant interviews.

The structure of the interviews was two-fold: the first section covered career history and background, followed second by the informative questions which were framed to inform the best practices guide of this paper through fact-finding.

The interviewees consisted of a Toronto City Councillor, an environment planner at the City of Toronto, a policy specialist at Toronto Public Health, and a program manager at Park People Toronto. A diverse background was preferred for this sample, and that goal was achieved. As each interviewee either worked as a planner or with planners in their day-to-day work, the information collected was both diverse and effective,

The interviews were 30-45 minutes each as they were only semi-structured, with a list of 10 generalized questions.

The awareness of urban planners in relation to greenspaces and mental health was polled through the key informant interviews to garner an understanding of how exposed the planning field is to the issue. Assumptions were based on preliminary knowledge pertaining to the planning field by the author of this paper. The main expectation for the outcome of these interviews were that planners will most likely be generally aware of the relationship, but not its intricacies or use in practice. Where this can hinder the field is in the practice itself when it comes to policy writing and parks planning as a whole. If the professionals only know of the theory anecdotally (this being part of the assumed outcome of this primary research), the grounds for action and putting the relationship into practice are not likely to be understood.

Secondary Research

The literature review conducted as part of this paper was extensive and wide-reaching as the research analyzed came from various fields outside of urban planning and political science. As the relationship being highlighted here is derived from the field of psychology, studies based in this field were included in the secondary research. Quantitative findings including geospatial studies and spatial research were used to understand the relationship and strengthen the argument in support of the urban planner's role.

The review of literature concerning this relationship was used as an information bank to answer 5 broad questions:

1. What are the benefits of greenspaces to mental health?
2. What are the parameters of a well-assigned park, i.e. one that offer opportunities for the improvement of mental health?
3. Who are the most vulnerable populations in this relationship?
4. Who are the main players in this relationship and how do they operate when it comes to greenspace planning?
5. What sorts of partnerships exist in this process and where does the planner fit in?

Precedents and example cases, from the local and global scales, were drawn on to create a case for purposeful greenspace planning for mental health in Toronto. Descriptions of a deeper understanding of this relationship were considered as a case example in Tokyo, Japan. The current initiatives were explored in Tokyo in this context.

The Official Plan for the Regional Municipality of York was also highlighted as a precedent for intentional language pertaining to the relationship.

Policy Scan

Having a general understanding of the positive relationship between green space and mental health is only the first step to meaningful parks planning. Supporting a positive relationship- with a proven correlation- calls for purposeful directive language within regulatory documents and policy.

A policy scan through varying levels of planning documents and staff reports lead to the conclusion that the most effective opportunity to include healthy minds and greenspaces in regulatory documents is at the municipal level. Municipalities experience the impact of parks in a more intimate way than any other level of government. As the main source of funding for urban parks is at the city level, the most logical point of entry for policy change would be within this jurisdiction. Therefore; a further scan at this level was conducted which included influential documents regarding greenspace planning and staff reports with language pertaining to mental health and parks planning were analyzed.

As can be seen in Figure 8: Land Use Planning System in Ontario, Toronto's urban fabric is governed by multiple levels of planning documents. The language within these documents does not directly reference the positive effects which urban greenspaces have on human mental health. Influential documents such as the Parks Plan and newly formed Parkland Strategy (currently in Phase 1 of a 20-year projection strategy) alludes to the relationship, though briefly and really only in the way of a mention.

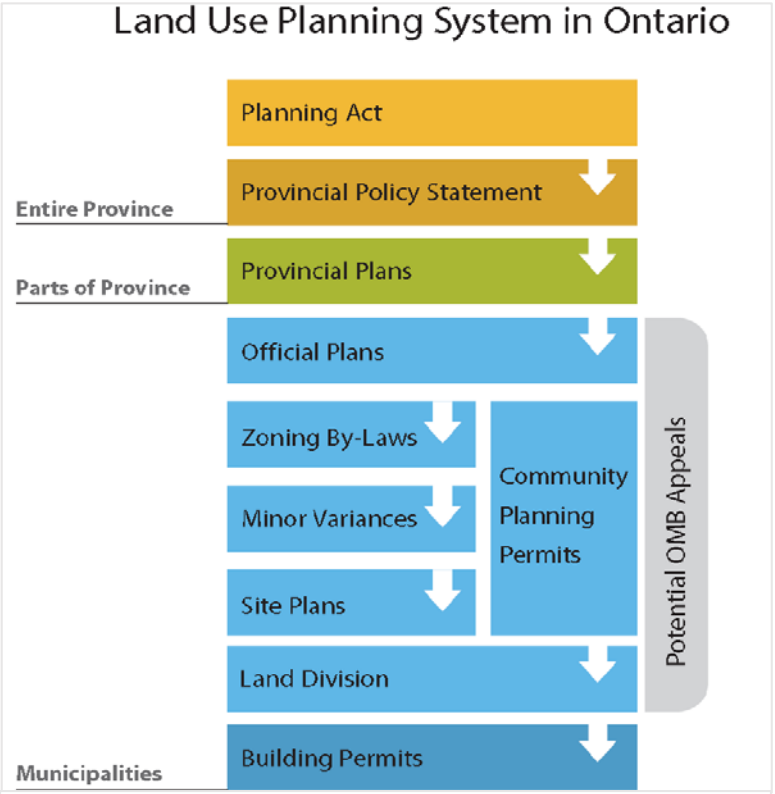


Figure 8: Land Use Planning System in Ontario

Source: Ministry of Municipal Affairs. Ontario.ca

The Official Plan itself speaks to "green spaces of all sizes and public squares that bring people together;" (City of Toronto, 2015, pg. 1-2) and "healthy neighbourhoods" in terms of healthy food and transit access- with references to social cohesion in the way of "community-based facilities and services" (City of Toronto, 2015, pg. 2-22), but nothing which specifies the key role which greenspace plays in alleviating mental stressors for example.

Below is an excerpt from the Toronto Official Plan under Section 2.3.2 TORONTO'S GREEN SPACE SYSTEM AND WATERFRONT:

The *Green Space System* performs many roles in the life of the City:

- these lands are the core of the City's ecosystem providing habitat for flora and fauna;
- they improve our environment by recharging groundwater, cleaning the air and water and limiting damage that might arise from flooding and soil erosion;
- they provide natural beauty and a variety of landscapes for reflection, contemplation and appreciation of nature;
- they offer opportunities for passive and active recreation, community gardens and environmental education; and
- they offer unique tourism and entertainment destinations attracting visitors from across the region and elsewhere.

Source: Toronto Official Plan, 2015- City of Toronto

Study Area

The area to which this research applies is outlined below. The City of Toronto is the general beneficiary of the recommendations and best practices outlined in the subsequent guide, but a more specific area is defined below. The area defined by the Toronto and East York boundary encompasses the downtown core and its adjacent periphery.

City: Toronto, Ontario

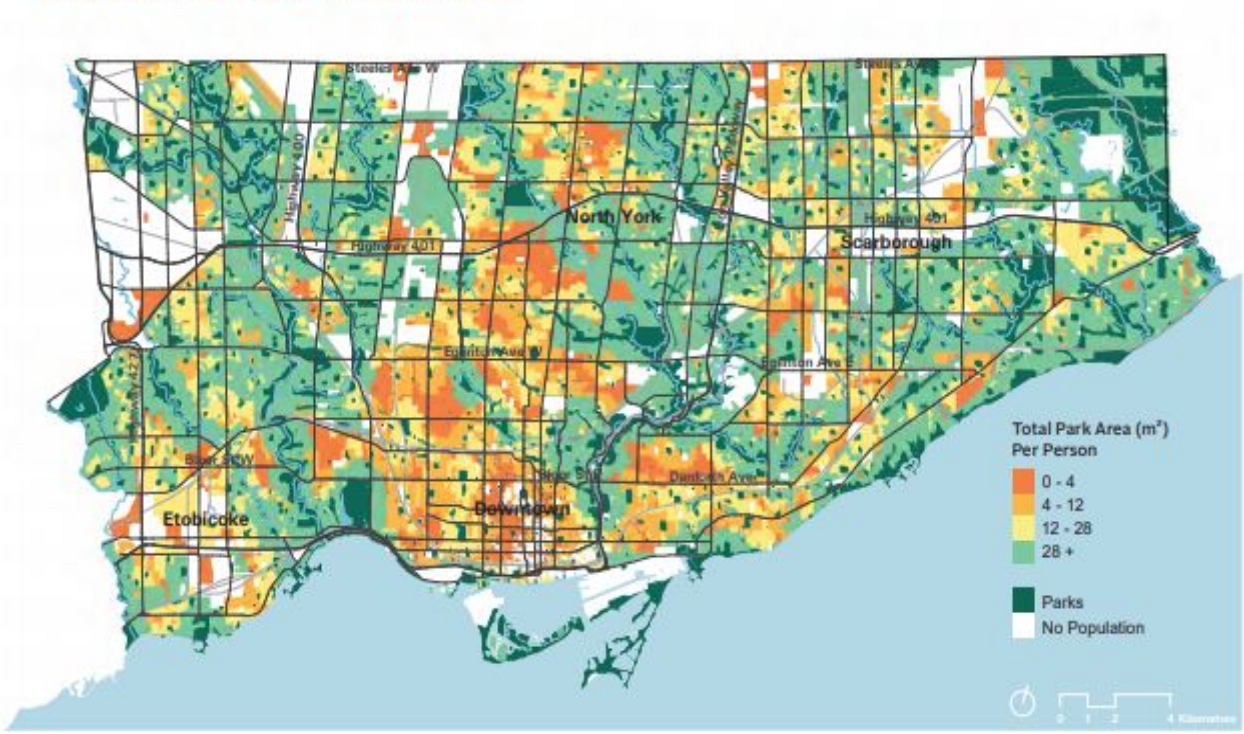
Area of Impact: Toronto and East York boundary as defined by the City of Toronto municipal government (City of Toronto Community Council Area Profiles)

Map 3: A map outlining the community council area profiles within the City of Toronto, bound by census tracts.

Source: City of Toronto Community Council Area Profiles, n.d.

The Toronto and East York (TEY) area (See Map 3), as defined by the City of Toronto Community Council District census tracts (Toronto and East York, North York, Scarborough, and Etobicoke York) is the target for the recommendations outlined in this paper. Although literature and study was conducted and pulled from within the bounds of the entire City of Toronto, the best practices produced from this research are most applicable to the TEY area. This is due to the high population density within this district, as compared to the adjacent districts (2011 Census), and its rapid population growth as it encompasses the 'downtown' core.

Figure 2: Toronto Parkland Supply (2016)



Map 4: A map depicting the total parkland supply per person is m^2. A concentration of lower parkland density can be seen in the lower central area, known as the downtown or Toronto & East York.

Source: Toronto Parkland Strategy Primer, City of Toronto Parks, Forestry, and Recreation Department, 2017

This means that parks and green spaces are imperative in such a setting, and specifically, their accessibility, state of maintenance, and overall appeal. This area also sees the least amount of total park area per person (See Map 4) out of the four census areas depicted in Map 3 above. The majority of the red, orange, and yellow polygons (representing the lowest quantiles of the greenspace density dataset) are located in the Toronto East York area. It therefore can be deduced that the lowest amount of greenspace per person is found within this area, making it evident that it would benefit most from targeted policy reform.

Constraints

The constraints associated with this paper were limitations on available literature (as the topic is quite specific), the sample size interviewed, and operating within a 3-month timeframe.

Although there is a rich bank of literature on greenspace and mental health from the perspective of a psychologist, the planner's role specifically is relatively unexplained and therefore, as this paper argues, is necessary. This did allow the paper to take on an interdisciplinary approach with sources stemming from a myriad of fields. Including a diverse a diverse set of perspectives when conducting research is valuable, but was also necessary for this paper as similar work is only becoming popular as of late.

With more time and a deeper budget, more interviews could have possibly been conducted, enriching the findings. However, the diverse set of views collected as part of this study were sufficient for the conclusions drawn. The argument here is that there is never enough information and more key informants would only improve the work.

LITERATURE REVIEW

The following secondary research presents the current state of the relationship between healthy minds and greenspace. The benefits of immersive interaction with greenspace are presented, along with a categorized break-down style analysis of greenspaces and parks to better understand the aspects which affect mental health. This approach will allow for clear areas of improvement for directive recommendations.

Green spaces and Mental Health

The health rationale for urban parks is not a new idea. The notion that green spaces improve health emerged in the 19th century with the rise of industrial cities characterized by squalor, pollution, and poor sanitation (Crompton, 2013). As such, the urban park was thought to be the solution as a way to provide clean air and act as a preventative measure for disease and epidemics (Crompton, 2013). Understanding this relationship through the field of psychology and medicine, various fields in the way of urban planning, public health, and public policy are slowly averting their attention to this relationship (Ekkel & de Vries, 2017). In the urban environment there exist a variety of green spaces (i.e. street trees, shrubs, community gardens, parkettes, green roofs, etc.), all of which are proven to alleviate various stressors—a therapeutic effect through experiencing nature (Carey, 2017).

Rapidly increasing urbanization is known to have caused spikes in certain health (cardiovascular disease, mental health illness and disorders, obesity and weight issues, etc.) and environmental challenges (extreme weather events, pollution, etc.) (Liu et al., 2017). As such, global jurisdictions have recognized the need for sustainable and

resilient infrastructure in the form of parks and greenery (Liu et al., 2017). These ideas will be explored in the following analyses of both greenspace and mental health studies as they relate to each other.

The Benefits

Understanding how greenspace plays a role in an individual's mental health is vital in being able to prescribe remedies and pinpoint solutions within the planning and political fields.

Eisenman (2016) undertook a comparative study in which he analyzed the differences in the ways in which the public and society as a whole perceived the relationship involving greenspace and human health in the nineteenth and twenty-first centuries. In his research, Eisenman delves into the various influencers on parks planning during both respective time periods. His research uncovered that just as technology, interests, and science have progressed and changed- as did the perspectives on parks and their relationship to the human condition (Eisenman, 2016). The key changes that Eisenman (2016) observed was a shift away from the simple physical lens through which parks and natural environments were analyzed previously (e.g. design, size, equipment etc.) and towards a more abstract view; drawing connections to the social cohesion and stress reduction potential of parks- the mental aspect.

Disseminating the Urban Park

Grounding the planners' role in the positive effects of green spaces and urban parks on mental health requires a break down of the practical aspects of the park and how they each contribute to the relationship.

This break-down follows Eisenman's structure of understanding the urban park in the context of public use and interaction (2016). The facets that will be explored are: design and use, size and maintenance.

Design and Use

The potential of longer walks and being immersed in nature for an extended period of time has found to be beneficial and a major draw for visitors to greenspaces. Interconnectedness between land types, neighbourhoods, and park space improves access to different parts of the city and, most important to this study, green space (Eisenman, 2016). Connectivity between parks through trail systems, paths, and types of urban public realm, shows signs of a growing awareness of parks being an important part of comprehensive planning in terms of urbanization and growth (Eisenman, 2016).

An important piece to be mentioned is that studies have shown short bursts of greenspace or vegetation exposure, over a short or long period of time, have similar effects on mental health as longer exposures over shorter periods (Eisenman, 2016). This supports Rachel Kaplan's 1985 psychological study on the idea of "nature at the doorstep" in where repeated, albeit short-term, exposure to green space- for example vegetation outside of your window/doorstep or taking short walks with a dog or pet- have shown to garner cumulative benefits through "micro-restorative opportunities" (See Figure 9) (Kaplan, 1985, Eisenman, 2016).

Figure 9: Small dog in a meadow

Size

New developments (residential) in the City of Toronto are required to set aside a certain percentage of their developable land to greenspace (that is a percentage of their proposed unit count). In the cases where adequate greenspace cannot be allocated, on or off-site, whether for size or quality related reasons, cash-in-lieu is accepted (City of Toronto, 2017). This technique is instilled based on the premise that smaller parks and greenspaces- which can at times be useful when designed efficiently and adequately given the surrounding context- can at times fail to properly serve the community in which they are situated (Eisenman, 2016).

While the vastness of an area of greenspace is not the main pillar on which success and positive mental health effects may stem from, it is an important aspect. In many instances, the safety and cleanliness of an urban park supersedes its size (Hassen, 2016), but certain sizes allow for events to occur, the support for the creation of community hubs, and the ability to create connections and trails.

Maintenance

While the above characteristics are important to the quality of a park and the value it brings to a neighbourhood and its residents, maintenance continues to be a keystone to a successful green space. While the size and look of a park is vital to its use, the experience and feel of a park and whether it is welcoming in that respect is imperative to its use as well. Regardless of the aforementioned components, a large and well-designed park is only as valuable as its cleanliness and upkeep (Hassen, 2016). Residents will not use a park that is not looked after—at least not in the way that it was intended. Studies have shown that an unmaintained greenspace has associations with

unsafe environments and assumptions of poor security (Eisenman, 2016). Letting vegetation become over-grown without proper landscaping techniques and upkeep can create these unsecure settings as many relate these features with hiding spaces to shade criminal activity and other suspicious acts associated with unsafe environments (Eisenman, 2016).

Issues with maintenance are most often related to budgetary allocations to parks and the funneling of funds to specific neighbourhoods within cities. This being that some areas and communities may see more attention from the municipal government, for whatever reason (whether a priority neighbourhood or heritage conservation district/area with heritage value), while others, who may have sufficient or a surplus of green land cover cannot benefit from these spaces as they are not properly maintained through financial means (Hassen, 2016).

Mental Health

The many studies conducted pertaining to this relationship point to a deep correlation between greenspaces and mental health. The effects of nature on the mind go far beyond the superficial and have returned evidence pointing to mind remediation and a supportive aspect to recovery of mental illness in some cases. This section will outline studies which support this correlation, broken down into the benefits of greenspace on mental health.

i. ADHD

   Just as seniors share a relationship with greenspace and health maintenance (expanded on further in this section under “Active Aging”), children’s’ interactions with urban parks have similar effects. Attention Deficit/Hyperactivity

Disorder (ADHD) affects more than 4.4 million children in the United States (Taylor & Kuo, 2011). With the myriad of drugs on the market to treat this condition, parents are always looking for a way to control their children's ADHD symptoms by less invasive and costly means (Taylor & Kuo, 2011).

In a 2011 study conducted by Taylor and Kuo, data was collected on 421 children analyzing their AHD symptoms daily play and living settings. The study yielded positive results where children who were more commonly immersed in greenspace showed signs of reduced ADHD symptoms through their daily life. Overall symptom severity was lower in these children leading to the assumption that this effect could carry forward into the future and reduce the severity of the condition in the long term, with increased greenspace exposure.

These findings, and similar ones in the field, help to encourage more such studies, possibly setting the stage for regulatory changes in childcare and community greenspace planning in the future.

ii. Active Aging

Seniors' facilities and old age homes are designed with accessible features in order to accommodate for the needs of the elderly. As such, greenspace is should be taken into consideration as well, through design and policy, as many studies have been conducted pertaining to the physical and mental benefits of this relationship, relaying it to planning for seniors' seems intuitive. The World Health Organization defines the term 'active aging' as "the process of developing and maintaining the functional ability that enables wellbeing in older

age. Functional ability is about having the capabilities that enable all people to be and do what they have reason to value." (WHO, 2002).

To support active aging, studies have been conducted in support of the elderly interacting with greenspace as much as possible as to preserve their health. In a 2014 study looking at elderly men and their interaction with greenspace, and the associated physical and health effects, Gong et al. (2014) found that participation in physical activity was much higher when elderly men were situated in closer proximity to greenspace. Their conclusions stated that the built environment- which include neighbourhood greenspace and its accessibility within their community, has an imperative role to play in health maintenance and mental state.

Planning with this relationship in mind could lead to minimum greenspace requirements near seniors' facilities- which could extend to childcare facilities as well.

iii. Depression

As urbanization spreads with more people living in cities, approximately 50% as of 2015- the issue of depression is ever growing (Bratman et al., 2015). It is projected that by 2050, this number will rise to 70% meaning that the stresses of working where you live and vice versa—surrounded by concrete and glass will only continue taking a toll on the public (Bratman et al. 2015). Although the direct correlation between living in cities and depression exists, its causes are undetermined. As the correlation exists—it should be enough to take action and conduct studies.

In a study conducted in 2015, healthy participants were asked to take a walk in nature. Although these participants were self-proclaimed as healthy, with no history of chronic depression, the only condition to be met in order to take part in this study was living in an urban environment (Bratman et al., 2015). The participants had their rumination measured before and after a nature walk as a way to quantify brain activity.

The results showed that participants who part-took in a 90-minute walk through greenspace experienced lower levels of rumination and thought, both self reported and through having their neural activity measured.

The study concluded that having accessible greenspace within the city will be vital for mental health in the urban setting. Many studies similar to this one, with scientific methods used and neurological processes measured garnered similar results. Rates of stress and depression go down as the brain slows and allows the person to take a “mental break”.

iv. Healing & Therapy

The multifunctional use of nature is not a new concept. Urban parks and greenery have been used for social gathering, recreational sports, and the like. As well, as places such as Tokyo, Japan have discovered, the green spaces around us have therapeutic potential. The healing properties of nature have been explored from varying fields with psychology at the forefront.

In a 2017 study conducted by Revell and McLeod, the therapist’s perspective was explored in research looking at the “walk and talk therapy” method. This method has seen growing interest from both therapists in practice and the

research realm (Revell & McLeod, 2017). This study looked at therapists who put this practice to use through qualitative means describing their experience. In all, the study returned results that showed a positive response from patients and participants.

Walking in nature has calming effects on the individual and allows their mental processes to slow (Bratman et al., 2015). This allows deeper reflection without the noise of the urban setting and stressors of work or the city being added to the equation.

POLICY SCAN

The City of Toronto uses its rapidly urbanizing quality as a means for parkland dedication. This means that every new development must set aside parkland as part of the application and planning process. There are various planning and policy tools in place which guide this vision for a greener Toronto, from the point of the municipality.

The following is the existing policy governing greenspace creation and parkland acquisition in the City of Toronto:

The (Ontario) *Planning Act*

- Sections 42 and 51 of the Planning Act allow municipalities to require that land be conveyed for parkland as a condition of development or redevelopment
- An amendment in the Planning Act under Bill 73 requires a “parks plan” before adopting alternative rate policies.

The 2014 Provincial Policy Statement

The City of Toronto’s Official Plan, *Secondary Plans*, and *the Municipal Code*

- Section 3.2.3.4 of Toronto’s Official Plan assigns a parkland dedication of 5% of lands for parks purposes for residential developments and 2% for all other development- unless the Alternative Rate applies.

Decision-making and the creation of legislation and policy regarding greenspace is informed by:

The Parks Plan 2013-2017

The Recreation Service Plan 2013-2017

The Strategic Forest Management Plan, 2012-2022

Toronto Ravine Strategy

Etc.

Figure 10: A representation of the process of influence which occurs between various reports and plans (only a few shown as examples above) written by various departments within the City of Toronto and other levels of government, and the city's Official Plan document.

The City of Toronto is governed by various planning documents (See Figure 10) at the federal, provincial, and municipal levels- as most cities are. The federal and provincial jurisdictions, as is seen generally at the city level, are not as influential when it comes to local planning matters. Currently, cities are slowly beginning to take become more autonomous when it comes to governance and planning. Local planning matters are garnering more of this control as Ontario Municipal Board (OMB) reform kicked in with more focus and weighting being added to municipal decisions- away from the provincial- by the newly formed Local Planning Appeals Tribunal (LPAT) (Ministry of Municipal Affairs, n.d.). As such, it would seem that the City would be able to leverage funds using existing revenue sources for more greenspace. In addition, increased municipal control

could translate into meaningful planning where proven relationships and benefits could be factored into decision-making through policy.

The most influential document governing greenspace through regulation at the municipal level is the Official Plan. Although the purpose of an Official Plan is to broadly dictate growth and preserve natural and built heritage, an important piece of this planning document is to manage and promote the designation and preservation of natural landscapes and greenspace (City of Toronto, 2015). This document produces the broad strokes directives upon which municipal planning decisions are made—as this is a regulatory document. The language within this document is purposeful and—although broad—is followed by planners, politicians, and other regulatory bodies within the city.

Other documents produced by various departments within the City provide a platform for informed decision-making though they act strictly as influential documents—as they do not hold regulatory power as they are. Documents such as the city's Parks Plan, Ravine Strategy, and Parkland Strategy are created by the City of Toronto through its many silos (Parks, Forestry, and Recreation, Toronto Public Health, etc.) and act as informative tools for creating written policy. It is important to remember that these strategies and plans are not regulatory documents and do not hold the same amount of influence as the Toronto Official Plan, which planners and politicians *must* follow in order to function within the municipality (e.g. make decisions regarding development and land-use).

As such, it is very important that the City's objectives and goals are written in clear form and underlined with facts. In order to push for meaningful planning—specifically in this

case parks planning—in relation to the contributing benefits to mental health, this relationship must be included in the Official Plan with intent.

The Toronto Municipal Code

The Toronto Municipal Code is a collection of the City's by-laws, organized by subject, which are general in nature and application (City of Toronto, 2017). The main purpose of this document is to create a central point of reference for the public and staff alike for regular reference. The by-laws included in this document are frequented regularly and are applicable to most spaces and populations within the jurisdiction.

Chapter 145 of the Municipal Code is dedicated to the 'Development of Land', under which development charges, other fees, and parkland dedication is defined. Under this chapter, there is mention of the conveyance of land for parks purposes as a part of any new development applications- residential or otherwise.

Parkland Dedication requirements are identified in Section 3.2.3 of the City of Toronto's Official Plan and enacted in Municipal Code Chapter 415 Article III and IV and By-law 1020-2010. Parkland dedication requirements vary by type of development. *

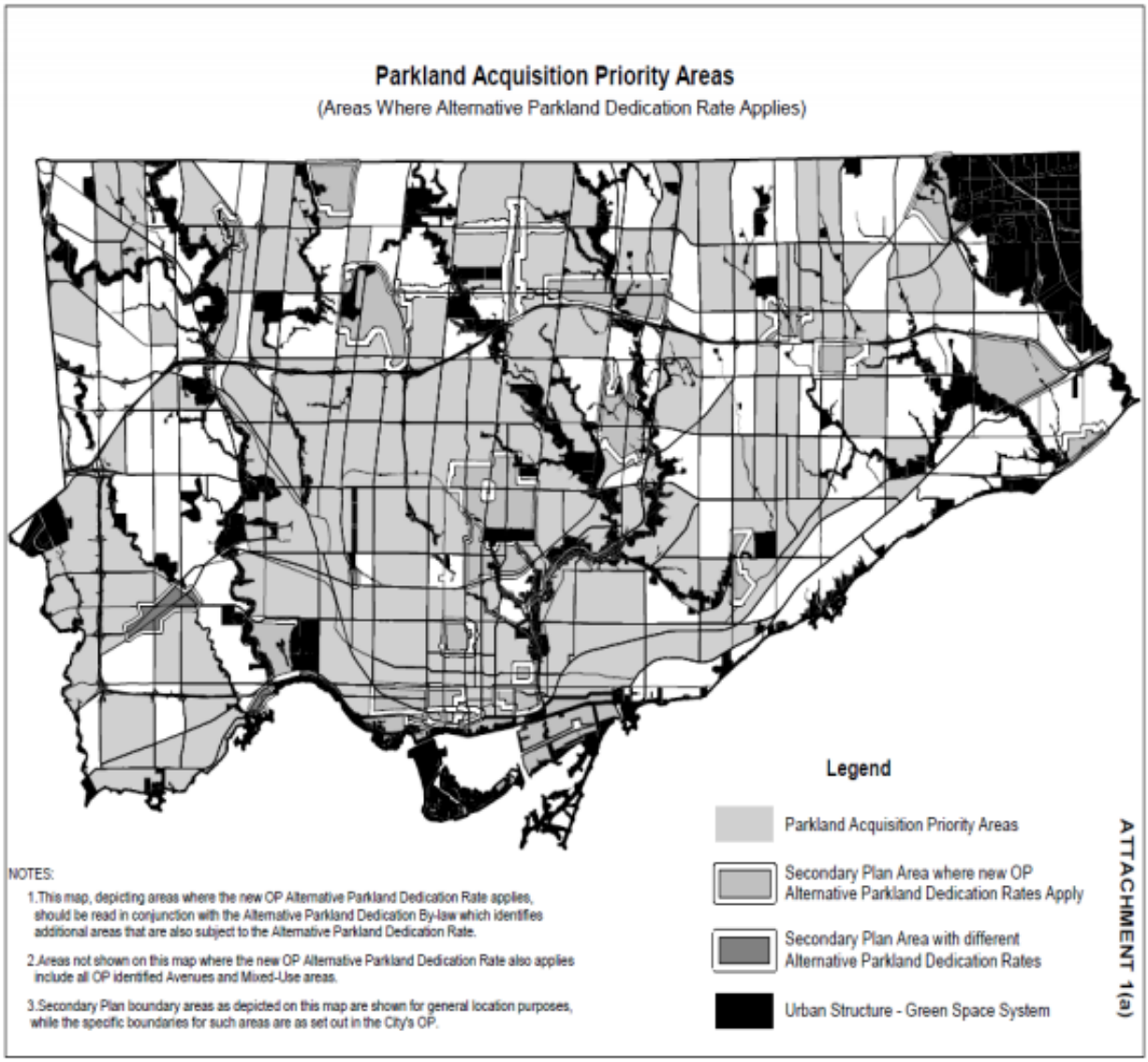
Type of Development	Parkland Dedication Requirement
Residential **---** **Residential *Alternative***	5% --- 0.4 ha/ 300 units
Non-Residential	2%
Industrial	Exempt

* Applicant incurs legal fees and land transfer taxes on all parkland dedications to the City.

Figure 11- City of Toronto Parkland Dedication Requirements, By Development Type

Source: City of Toronto. 2017

The lands to be conveyed as parkland can be within a close vicinity to the proposed development, on-site or- if the proposal is within a park deficient area- on specifically outlined parcels (See Map 5) (City of Toronto, 2017).



Map 5- City of Toronto Parkland Acquisition Priority Areas

Source: Toronto Municipal Code Chapter 415, 2017

As can be seen in Figure 11, the City of Toronto has an Alternative Parkland Dedication Rate of 0.4 hectares per every 300 residential units planned in a development.

This particular practice, where specific areas require alternative rates- whether for allocated parkland or cash-in-lieu payments- ensures proper due diligence on the City's part through the development approvals process in regards to adequate parkland acquisition and creation in areas which need it most.

Using this method, the City can promote the setting aside of land in relation to specific uses such as old age homes and daycare facilities- including dense residential areas to promote healthy minds and bodies. Including this sort of language in regulation- containing any conditions specific for developing services for vulnerable populations (such as a higher percentage of parkland set aside) would make use of these provisions in a meaningful way.

The City of Toronto is currently reviewing the Alternative Parkland Dedication Rate as it is believed to be out of date, at over 10 years old, and low- comparatively (City of Toronto, 2017). Being one of the lowest alternative rates in the province, there is much room to grow for the municipality and plenty of progress to be made in parkland dedication.

The current rate was approved in 2005, and since that year, the city-wide residential densities have risen by 205 per cent by project and 254 per cent in relation to the average units per hectare (City of Toronto, 2017). This intensity increase only underlines the necessity for parkland in the urban setting within Toronto. Growth is to pay for growth- as many economists and city builders believe, yet this growth is paying for an ever-diminishing share of the cost of higher density development (City of Toronto, 2017).

Precedents & Case Examples

The cases below outline examples of jurisdictions taking actions to incorporate the relationship between positive mental health and greenspace into municipal policy. Through their actions, the positive effects of this relationship have been able to be carried forward into planning through changes in policy on the part of the government.

San Diego, USA

San Diego is a coastal city with an understanding of the importance of preserving its natural heritage. With a wealth of 'green' and 'blue' (water features) spaces, the city is not deprived of natural views and vistas (See Map 6). The important notion pertaining to this area is its recognition of the effects which increased green space has on improved mental health.

The municipality has gone on to incorporate this correlation through the San Diego Park and Recreation Department with a call for the establishment of "open space parks" within communities as seen in Map 6 (City of San Diego, n.d.). This language translates into actionable goals and has provided for opportunities for residents to use their local greenspace interactively through biking, walking, and hiking (City of San Diego, n.d.). These efforts have been openly driven through a mandate which clearly outlines the effects that greenspaces have on mental health in the City of San Diego's General Plan:

> "The city's parks, open space, trails, and recreation facilities play an important role in the physical, mental, social, and environmental health of the city and its residents. They provide many benefits and can improve the quality of life by strengthening the body and assisting in maintaining physical well-being; providing the visual relief and relaxation that refreshes and restores the frame of mind…" (City of San Diego, 2006)

Map 6- City of San Diego Open Space Areas including greenspace

Source: The City of San Diego, 2017

As the relationship has been written into the City's General Plan, it is seen that the municipality has worked diligently to establish grounds for such intentional language within their policy. The City of San Diego has expressed the need for expansive

greenspace supporting mental health as stated by Allison Colman, Program Manager of the Parks and Recreation department:

- Take the lead on encouraging communities to strategically incorporate parks and green space into their initial design plans;
- Form partnerships within our local governing bodies and community agencies to collaborate on health-driven projects;
- Establish programming that encourages mental and physical health and well-being for all members of our communities; and
- Monitor progress and stay up-to-date on current trends in the health and wellness industry (City of San Diego, 2015)

Tokyo, Japan

Japan is progressive in its approach to greenspace and mental health with research centers and advocacy groups becoming popularized throughout the region (McCay et al., 2017). The Centre for Urban Design and Mental Health leads and encourages in the effective design of parks and greenspaces for conducive to good mental health. As well, the Centre works as an influential body in advocating for mental health awareness and its relationship to greenspace.

The Centre for Urban Design and Mental Health performs case studies to examine how cities apply “the key principles of urban design for good population mental health” (See Appendix A) (McCay et al., 2017). The Centre focuses on urbanized areas which could benefit most from policy reform pertaining to mental health integration into urban greenspaces. By identifying key takeaways in the city of Tokyo, Japan, along with opportunities for improvement, the Centre is able to pinpoint best practices and lessons for other cities as a learning platform.

Japan’s urban design and planning mandate has set an example in 6 major lessons which can be applied to cities around the world through the design of their communities and infrastructure. This mandate includes:

- **street parks** to constantly immerse the city and its residents in greenery wherever and however possible,
- **superblocks** which push vehicular traffic unto arterial roads to prioritize and support active transportation and pedestrian traffic,
- **active transportation** is promoted as the affordable, efficient, reliable, and convenient choice through the design of streets, sidewalks, and public realm,
- **social exercise** is exercising in public and with the community with plenty of opportunities and clubs which make this possible. Easy access to these programs is supported and changing and storage facilities are provided,
- **interior place making** is the ‘greening’ of indoor malls and other such facilities to promote active lifestyles and positive surroundings regardless of the weather, and;
- **suicide prevention design** which seeks to incorporate nature within the built form such as blue light in buildings and images of nature in train stations (as suicidal thoughts and actions have known to be lower in places with abundant greenspace).

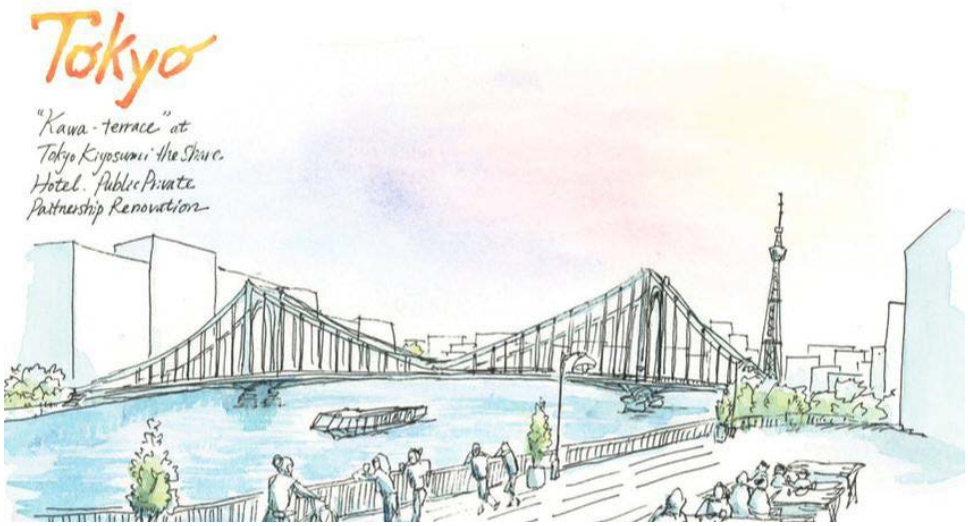
(McCay et al. 2017).

Japan's streets and neighbourhoods are designed with the residents in mind to promote green space, natural settings, and park access throughout its communities. Several actions taken on by the City are explained below, with a focus on Tokyo's downtown urban area:

1. **Designating green zones:** Written into the City's *Comprehensive Policy for Preserving Greenery (2010),* special districts and zones with Tokyo are outlined as having to promote greenery:
    i. **Special green space conservation districts** have an objective to ensure a "favourable urban environment" through the promotion and conservation of urban green spaces,
    ii. **Suburban green space conservation zones** are large scale zones found in the suburbs which are designated under the *Act for the Conservation of Suburban Green Zones* in the National Capital Region to prevent urban sprawl or unregulated urbanization. Specifically, this designation aims to maintain and improve healthy minds (and bodies) of residents living in urban and suburban settings. This language is explicit and intentional within the Act,
    iii. and **Scenic districts**, which aim to preserve natural heritage and scenic beauty within urban environments, and are subject to building restrictions through this Act

    (McCay et al. 2017).
2. **Incentivizing park development by private companies:** Providing incentives in return for park space and community benefits is a popular means of parkland

dedication currently. In some jurisdictions, such as The City of Toronto (See page 30 under *The* (Ontario) *Planning Act* or page 36 “cash-in-lieu” and “parkland dedication rate”), setting aside parkland is a condition of development. Public Private Partnerships are another way of making the dedication of greenspace and urban park creation more accessible and cost effective. This is done in Tokyo under the premise that open space is expensive to operate and maintain for the municipality, so the inclusion of private developers into the equation remedies this fact. As such, the number of privately run, publically owned parks in the city have increased dramatically since the first opened in 2009 (See Figures 12 & 13) (McCay et al., 2017).



Figures 12 & 13- Sumida River Terrace Park (created through a Public Private Partnership), rendering (top) and photo (bottom)

Sources: Figure X (top)- Artist, Ryoji Noritake

Figure Y (bottom)- Erwida Maulia, 2015

3. **Access to Shinrin Yoku (forest bathing):** The term *Shinrin yoku* is a concept developed by the Japanese Ministry of Agriculture, Forestry, and Fisheries in 1982, though it is grown to be world renowned for its healing qualities (McCay et al. 2017). This practice involves the therapeutic health practice which works to boost immunity, reduce stress, and promote wellbeing (See Figure 14) (McCay et al. 2017). The literal translation of *Shinrin yoku* is 'forest bathing' or more specifically 'taking in the forest atmosphere' as a way of escaping the city to a place of limited distractions and stressors (McCay et al. 2017).

   The effectiveness of this method of alleviating stress and mental anguish has been studied by Japanese researchers, returning positive results indicating that this practice improves physiological and psychological stress, mood hostility, fatigue, confusion and vitality (Park et al., 2010, McCay et al. 2017).

Figure 14- A group of forest bathers exploring a Japanese cypress forest. Source: Healthy Parks Healthy People Central, Parks Victoria, Autralia

Special routes designated for *Shinrin yoku* can be found throughout the Japan, with 48 currently, with 5 located within the Tokyo metropolis (McCay et al. 2017). This concept has even been adopted by some workplaces allowing this practice to be included as part of the company benefits health package. With approximately one quarter of the Tokyo population participating in *Shinrin yoku*, this practice is backed both by research and public opinion and experience (McCay et al. 2017).

Professional Best Practice Interviews

All information was collected on behalf of the professionals themselves and do not reflect the opinions of the corporations and bodies for whom they are employed. These interviews were used only for informative purposes where the goal was to collect impartial professional information on the field in question—no personal opinions were involved or obtained through these interviews.

Each interview was approximately between 30-45 minutes following a standard 10-question semi-structured format. The informants were asked questions pertaining to their current positions, exposure to the relationship between greenspaces and mental health, and finally any recommendations they would have for a best practices guide pertaining to the topic.

The interviewee profiles containing the participants' occupation, corporation, and relation to urban planning can be found in Appendix B. The interview guide used can be found in Appendix C.

Findings

This section contains the primary research findings resulting from the professional best practice interviews with planning staff in Toronto. The qualitative data were gathered and analyzed using a broad themes approach in order to discern the most accurate and applicable data. Commonalities between the data were found in order to extract and report on the most significant and influential feedback, as common themes pinpointed to real issues within the City of Toronto and the local urban planning realm.

Themes

Administrative Silos

The bureaucratic system is one made up of numerous departments and an interconnected system which can be difficult to operate within—even as a city worker (See Figure 17). The various silos, with City Council overseeing all processes and having the final say on decisions, makes the flow of a bureaucracy complex, yet structured.

The City's planning department is located within the silo that houses city services and its related processes. This silo is adjacent to the financial and public services silo- which can pose an issue as the communication between streams is notoriously disjointed. Therefore, working out the financials for a parks project can be difficult as the budget staff prioritize essential services and leave others on the back burner.

Several key informants mentioned that being adjacent to the planning department means that, as the periphery, other silos have limited power and potential to create change.

Toronto Public Health, for example, is an agency within the municipality which creates documents and health reports, with recommendations, of high importance to the city and its constituents. This department is located within the public services silo, meaning they lack regulatory power without partnerships from the middle, city services, silo. Without the backing of several other departments- ones with a direct feed into City Council, such as the middle city services silo- it can prove difficult to accomplish the simplest of tasks.

Lack of Exposure

Although the key informants were very much aware of the relationship between greenspaces and mental health, the idea of early interventions for students regarding this topic was mentioned.

As a few of the interviewees explained, the relationship between greenspaces and mental health is well-known in the field, but extensive knowledge on the topic is not far reaching within the field and informative tools are not commonly found or read. For example, Toronto Public Health released its Green City evidence review in 2015, and although the wealth of knowledge within this document is vast and new—its penetration rate into the field is unknown as reading this document is not mandatory, nor is it an integrated teaching tool within the municipality. As a resource, there are a number of tools, including the web where information can be found, but the key here is interest. If a person or professional is not seeking this information, it may never be conveyed or incorporated into projects, plans, or policy.

Development workshops, multi- and interdisciplinary courses on this topic, and other curriculum based changes could help to incorporate this relationship into planning school and impart this knowledge unto future planners.

As such, interventions within planning education were recommended as early relaying of this relationship could potentially prove to be beneficial to both the future professional and public who will benefit from a more well-rounded city servant and planner.

Power Imbalance

An interesting point raised in one interview was the idea of power imbalances within the municipal hierarchy in terms of access to finances. This point, although similar to the theme of “Administrative Silos”, looks at the potential disparity between departments and their budget allocations.

To put this into perspective, Toronto City Council currently has control over 43% of the 12.3 billion dollar 2017 budget, with local agencies, such as the Toronto Public Library and Heritage Toronto, overseeing a smaller piece at 29% (See Figure 15). The former encompasses City Planning and the department of Parks, Forestry, and Recreation- which means that a certain portion will be allocated towards these departments and

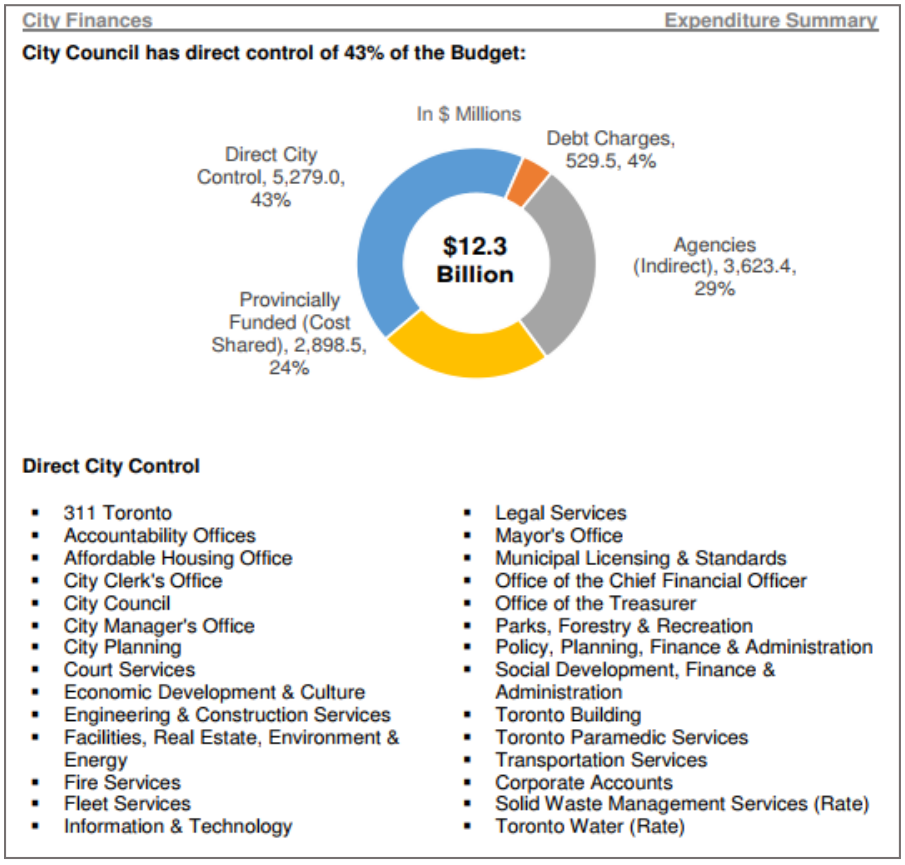
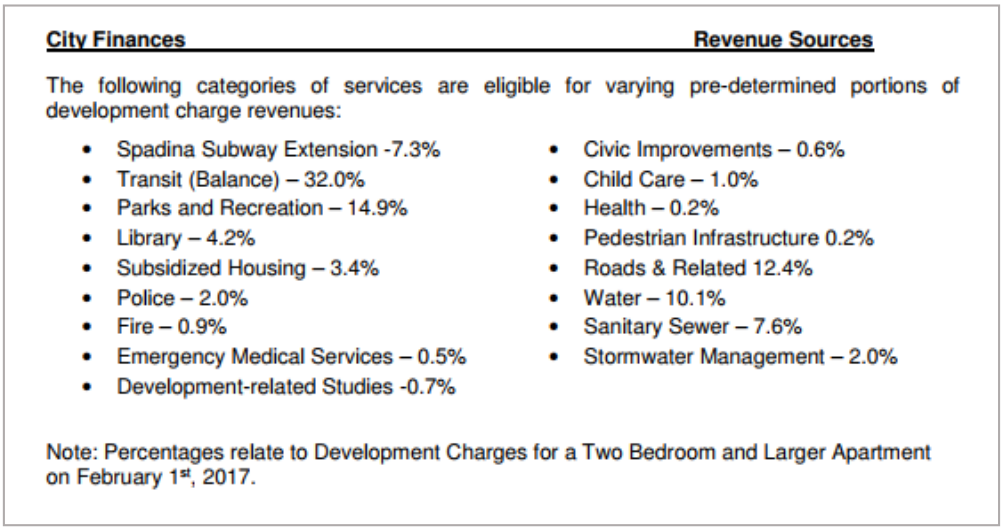


Figure 15- City Finances budget allocation for 2017

Source: City of Toronto Budget Public Book, 2017

their efforts, though the size of this portion is neither guaranteed nor specified (City of Toronto, 2017). Toronto City Council's influence over the budget is interpreted at "Direct City Control" whereby the municipality is the main director of 43% of the budget.

Parks, Forestry and Recreation, although entitled to a portion of the municipal budget, are often low on the priority list—only able to garner minimal attention as they are not high on the list of 'essential services' (See Figure 16) (Kitchen, 2017). Not only are these facets of the municipality often forgotten, their allocated funds have been found to be first on the chopping block when the budget is lacking in other departments (Kitchen, 2017).



City Finances **Revenue Sources**

The following categories of services are eligible for varying pre-determined portions of development charge revenues:

- Spadina Subway Extension -7.3%
- Transit (Balance) – 32.0%
- Parks and Recreation – 14.9%
- Library – 4.2%
- Subsidized Housing – 3.4%
- Police – 2.0%
- Fire – 0.9%
- Emergency Medical Services – 0.5%
- Development-related Studies -0.7%
- Civic Improvements – 0.6%
- Child Care – 1.0%
- Health – 0.2%
- Pedestrian Infrastructure 0.2%
- Roads & Related 12.4%
- Water – 10.1%
- Sanitary Sewer – 7.6%
- Stormwater Management – 2.0%

Note: Percentages relate to Development Charges for a Two Bedroom and Larger Apartment on February 1st, 2017.

Figure 16- A list of services classified as "essential" within the City of Toronto administration.

Source: City of Toronto Budget Public Book, 2017

Low prioritization can get in the way of accountability as the follow-through for initiatives involving multiple departments can become convoluted. For example, if an argument is made for more greenspace within the downtown core with a correlation-based assumption that hospital visits will go down alleviating stress on the economy and

healthcare in the country, who is the beneficiary in this relationship? The Parks, Forestry and Recreation department would feel the brunt of this ambitious action, but the benefits would go towards healthcare funding at the federal and provincial level, an imbalance of benefits allocation. It seems that the bodies who invest the money, are not the ones to realize the savings.

Professional Education

The city workers interviewed expressed a need for informative opportunities and materials pertaining to mental health and greenspace, more specifically: how to plan for this relationship. One informant mentioned that the Park, Forestry, and Recreation or Planning departments could help the incorporation of this relationship into the everyday working at City Hall through primers and informative handouts. The more education, the better was a running theme. If there are requirements set in place, or even guidelines—which could be optional, but directive—planners would feel more compelled to plan with this relationship in mind.

One key informant felt as though the outlook was somewhat short-sighted on the end of the planner, as if indifference was in play. If the urban planner saw themselves as part of a bigger social movement perhaps—one where the externalities coming out of their actions are helping the public at the local scale—they would be more inclined to open their minds to new ideas.

Intentional Language

A number of key informants had questions about whether or not the Official Plan (OP) delineated any relationship between greenspace and mental health. When the interviewer explained that there was no such language within Toronto's OP, most

participants were surprised at this fact. Most assumed that since this relationship is of common knowledge as of late—even at the superficial level—that it would naturally be mentioned within the Official Plan.

As such, most key informants suggested more intentional language within the OP which outlines the importance of this relationship and planning urban parks and greenspaces with mental health in mind.

Intentional language is important in this case as the Official Plan is a governing documents and one that directs local planning through its use. As many urban parks are planned on a site-by-site basis, sometimes as a part of a Section 37 agreement, it is up to the planner on the project to decide on location and design. If there is a lack of directive language guiding their actions, these issues can easily fall by the wayside.

BEST PRACTICES GUIDE

The culmination of the evidence-based literature, policy scan, and key informant interviews have lead to the creation of six (6) key recommendations for best practices. The interviews conducted with professionals within the field of urban planning and those who work with planners, were the main informants to these recommendations. The information yielded from these interviews was invaluable in its depth and understanding from within the field and workplace.

Therefore; the following 6 recommendations have been formed with help from a representative from the City of Toronto, Park People, City of Toronto Planning Department, and Toronto Public Health.

Interconnectivity

The idea that the mind and body work together, towards health, is embodied in the core assumptions of this work. A systems perspective, one that takes a holistic approach to health, was taken where the body's processes are complex, but work in synergy. In many instances, such as the Toronto Parks Plan, the relationship between 'health' and greenspace is mentioned—though briefly—leaving an opportunity for simple improvement.

Wherever the relationship between greenspace and overall health is mentioned will act as an opportunity to extend that language to include mental health. This is the simplest intervention to be made as it is simply the language that is changed—though it can make a significant impact on local planning and design.

Recommendation #1: Including a framework for parks planning which puts the relationship in practice through regulation. Any existing language which mentions the relationship, but only includes the idea of health and greenspace can be expanded on to encompass mental health as well. The important component to include is the ‘mental health’ aspect. Being written in plain language is the best way to ensure that action must take place to incorporate healthy design for healthy minds.

Mind in Design and Design in Mind

An urban planner’s role can consist of countless responsibilities while the field itself is undoubtedly interdisciplinary combining the social sciences, architecture, economics, and geography.

The most concrete association that many make is the tangible one concerning the built form of cities. Planners plan, so to speak—and even though the role of the planner includes a host of different roles and responsibilities, a fascination and focus on the built realm is always a priority in this field.

As such, the practical and tangible *design* of a park is always of interest to urban planners and their related professions, as well as a key point of entry in terms of influence on this relationship.

The literature points to issues of accessibility, maintenance, and cleanliness when it comes to the ‘ideal park’ for mental health.

Recommendation #2: A Parks Plan, or similar document, which includes design guidelines outlining parameters which support easy interaction and immersion for

mental health purposes. Whether through land-use controls stating the importance of greenspace proximity to seniors' facilities and daycares or schools, or design considerations of urban parks that are more conducive to mental health and alleviating stressors, design guidelines should be explicit and purposeful. Structure within design and intentional regulatory language are two key components within this recommendation.

Language and Market Penetration

Looking at the various and diverse planning strategies released at the municipal level to date, it is clear that the possible root to greenspace stagnation- and the failure to acknowledge the relationship with mental health- *is the language used*. Mention of the importance of green space in planning documents- whether they be in section 2.0 Natural Heritage of the Provincial Policy Statement or Section 2.3.1 Healthy Neighbourhoods in the Toronto Official Plan, the mention of improved mental health- and in many cases physical health- and its direct correlation with greenspace interaction is seldom or non-existent. Green space importance is underlined in various planning statements, documents, and new strategies, but only so far as environmental awareness and natural heritage. While both of these notions are important to conserving healthy ecosystems—and advocating for new ones, their importance to vulnerable populations and overall mental and physical health is usually left out of the conversation.

Recommendation #3: In order to increase public and professional awareness of this relationship, intentional language needs to be incorporated into the Official Plan and other regulatory documents. Explicitly stating that, for

example: “mental health is improved when greenspaces are within ‘x’ vicinity therefore a seniors’ facility must be within ‘x’ proximity in order to be built” is the more affirmative way to write policy.

Early Intervention-Education

An important addition to this best practices guide is education and information delivery through schooling. While the name of this recommendation suggests that *early* intervention in the school curriculum is suggested, this terminology refers to intervention at any time before entering the workforce. Most suitably, any urban planning, urban studies, political science degree, and degree within the fields of periphery should be able to obtain the knowledge of this relationship. Urban planning undergraduate and graduate level programs should incorporate the teachings from the literature associated with urban parks and mental health as a way to holistically introduce the concept for future use in the workforce. Planners may learn about the relationship and its importance during their careers, but stressing its effects on the public and people they plan for *early*-on can act as a pre-emptive measure.

Recommendation #4: Teaching interventions into the urban planning education system- and related fields. Incorporate it into the curriculum structure and inform future planners of the importance for planning healthy communities including greenspace for mental and physical health.

Breaking Out of the Silo- Integrated Planning

Bureaucratic administrative structures tend to have associated preconceptions tied to their name and nature. The term “red tape” is used to signify the over-complication of processes having to do with task accomplishment within governments, and the lengthy wait times and complex multi-step procedures within this sector.

The Toronto administrative structure breaks the different departments within the municipality into 3 vertical silos which feed into the top section or silo—that being City Council (See Figure 17).

The three vertical silos are split between public services, city services, and financial services. These 3 groups, as observed by the key informants, rarely break out of their own silos and seeming avoid working together on projects and initiatives. Many of the ideas and research put forth by the public services, such as Toronto Public Health and Parks, Forestry and Recreation, do not come to fruition as they stay within this silo and away from the city services division who would put it into practice. The implication here is that decision-making is more fragmented than it is integrated, leaving a gap between researched knowledge and policy implementation.

Recommendation #5: Urban planners should seek to break out of these silos and work with other departments within the City as a way to push new beneficial initiatives through the bureaucratic system. In order for projects to be approved, encouragement and action from multiple departments—especially planning— is

most beneficial. An approach which sees departmental synergy as a way to combat jurisdictional fragmentation and isolation is recommended.

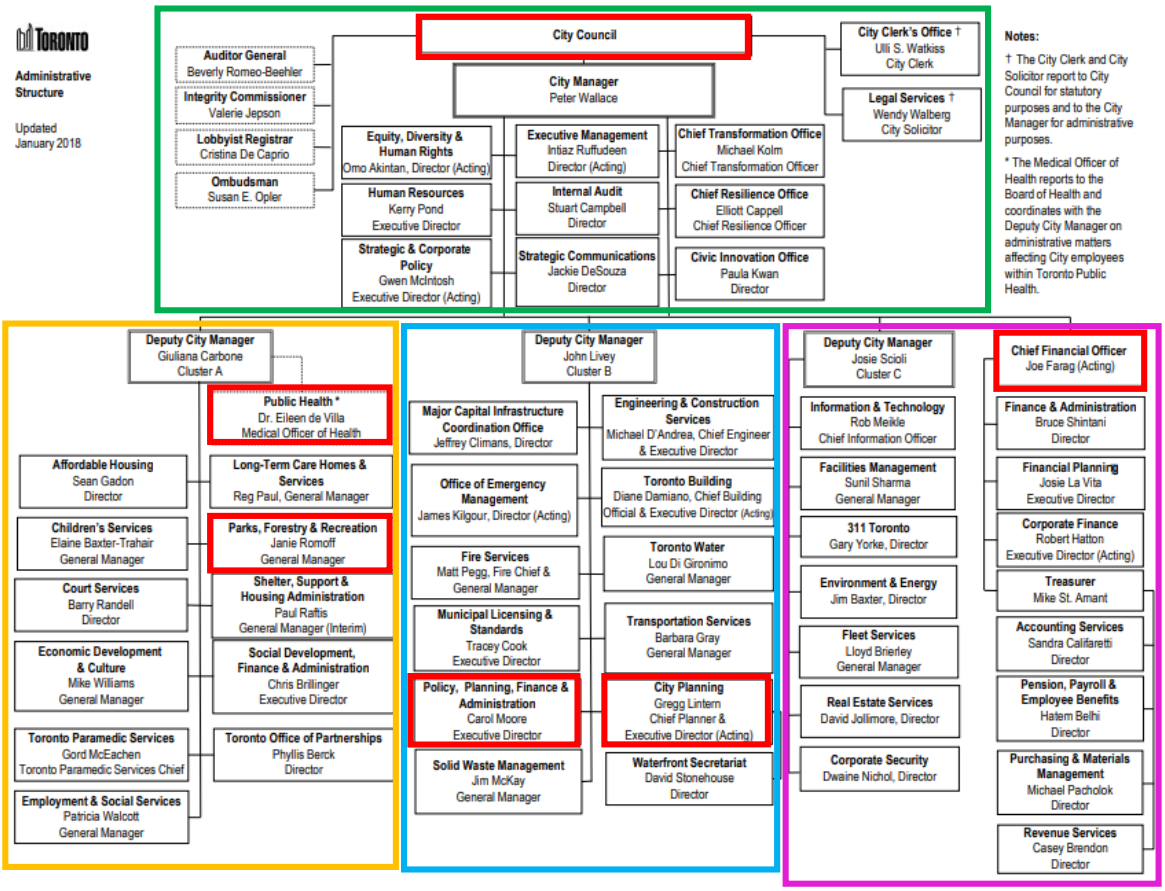


Figure 17: The administrative structure within the City of Toronto represented through 4 silos—with the bottom 3 all having to go through City Council/ the top silo.

Source: City of Toronto, updated in 2018. Modified by the author of this paper through the addition of coloured boxes which symbolize administrative silos and

Official Plan Review and Policy

A topic which often emerged during the key informant interviews was Official Plan Review, with a specific focus on the language used pertaining to mental health and greenspaces. This was a central recommendation, with a majority of the key

informants citing this intervention, as planners becoming involved in Official Plan review was seen a great way to influence change.

If a planner seeks to promote change in their local jurisdiction, becoming involved in a newer version of the Official Plan, in whichever amendments are implemented—is the way to do it. Becoming as informed as possible on the issues which matter to you is the key.

The policy itself is the *gap* this paper seeks to connect. The bridge between the relationship and the built form (greenspaces and urban parks) has not been built. There is a lack of directive language within the policy. Elaborating on what constitutes a “Healthy Community” in the Provincial Policy Statement, for example, as one where greenspace acts as an escape from the mental stressors of the city is a way to complete this task. Expanding further than natural heritage when it comes to greenspace and understanding that it serves a purpose much deeper and further than “limiting damage from flooding and soil erosion” or “offering unique tourism and entertainment destinations” as referred to in the Toronto Official Plan (City of Toronto, 2015).

Recommendation #6: Incorporating directive language which encourages greenspace planning with a focus on mental health throughout the planning hierarchy, including the Official Plan. Planners getting involved in the Official Plan review process can create change through their influence in this practice.

This best practices guide is meant to cover big themes and have them highlighted through the recommendations. It is clear what steps should be taken—regardless of the

role or position that an urban planner or other influential body holds. Being progressive and informed throughout the planning and policy writing process is a broad, but important finding in this guide. Working and living with intent and purpose is a clear way to earn respect in your field and truly make a difference in the lives of the public. As workers with and within the community, planners should strive to create change in their community and beyond. By activating and implementing greenspaces to improve citizens' mental health and wellbeing, this change can be realized.

CONCLUSIONS

The goal of this paper was to better understand and identify opportunities for the role of the urban planner in the relationship between healthy minds and greenspaces. One half of this relationship is governed by urban planners and politicians—yet their role was yet to be explored and enriched. Simply including reference to the relationship in supporting documents and public research is not enough. This can be concluded through the analysis of Toronto's greenspace per person, specifically in the core and in the case of the Toronto East York (TEY) area.

As mentioned earlier, the TEY area encompasses the downtown core of Toronto, the most densely built-up area within the bounds of the city (Statistics Canada, 2011). This census district is also experiencing the fastest population growth in the city (Statistics Canada, 2011). As the population and number of buildings continue to rise, a call for adequate public realm needs to be made now. Office buildings, towers, and high-rise residential cannot be the main inhabitants of a city—the residing population should be the focus. Understanding that constant mental stimulation is not a sustainable practice, the TEY area requires targeted change in its greening practices. Rapid growth statistics can act as a foundation for a case which outlines greenspace and mental health advocacy. If the greenspace per person does not increase with the population, the research shows that residents' mental health will only deteriorate in an urban setting (Bratman et al., 2015).

More park space, as a general notion, is a fair one, but design and location are important as well. Ensuring that vulnerable populations have equal access to parks, as

the research finds that children and the elderly benefit from greenspace considerably in terms of mental health, across the city- is vital (Gong et al., 2014) (Kardan et al., 2015).

Studies have shown that as few as just 10 additional trees on a city street can improve health perception (mental well-being) in ways comparable to a $10,000 increase in a person's annual salary or even being 7 years younger (Kardan et al., 2015). A number of studies conducted on this topic encompass mental health and wellness within a person's overall health status. Within their defining scope in terms of health metrics—many studies describe overall health as consisting of various components including general health perception, cardio-metabolic conditions, and mental illness and wellbeing (Kardan et al., 2015). The inclusion of mental health into the overall health of a person—the whole person as it were—is vital in incorporating mental health underpinnings into parks planning at the regulatory level.

REFERENCES

Bratman, G. N., Hamilton, P., Hahn, K., Daily, G., & Gross, J. (2015). Nature reduces rumination and sgPFC activation. *Proceedings of the National Academy of Sciences,112*(28), 8567-8572. doi:10.1073/pnas.1510459112

Cacioppo, J. T., & Patrick, B. (2008). Loneliness: human nature and the need for social connection. New York: W. W. Norton & Company.

Carey, I. (2017, August 08). The path to better mental health is a walk in the park. Retrieved March 22, 2018, from https://nowtoronto.com/news/better-mental-health-a-walk-in-the-park/

City of San Diego. (2015, April 1). Parks: Improving Mental Health and Well-Being. Retrieved April 2, 2018, from https://www.nrpa.org/parks-recreation-magazine/2015/april/parks-improving-mental-health-and-well-being/

City of San Diego. (2006). *The City of San Diego General Plan Recreation Element*(USA). Retrieved April 1, 2018.

City of San Diego. (n.d.). Parks and Recreation. Retrieved from: www.sandiego.gov/park-and-recreation

City of Toronto. (2017). *City of Toronto Budget Public Book*.

City of Toronto. (2017). Fact Sheet: Review of the City's Alternative Parkland Dedication Rate (Section 42 of the Planning Act). Retrieved March 22, 2018, from https://www.toronto.ca/home/media-room/backgrounders-other-resources/fact-sheet-review-of-the-citys-alternative-parkland-dedication-rate-section-42-of-the-planning-act-november-21-2017/

City of Toronto. (2017). *Parkland Strategy, Primer* (Parks, Forestry, and Recreation).

City of Toronto. (2017). *REPORT FOR ACTION: Status of Cash-In-Lieu of Parkland* (EX24.9) (Parks, Forestry, and Recreation & Chief Financial Officer). Retrieved March 22, 2018.

City of Toronto. (2017). *TORONTO MUNICIPAL CODE CHAPTER 415, DEVELOPMENT OF LAND* (City Council). Retrieved March 22, 2018.

City of Toronto (2015). *Toronto official plan*. Toronto: Urban Development Services.

City of Toronto. (2013). *Parks Plan 2013 – 2017* (Parks, Forestry, and Recreation). Retrieved April 24, 2018.

City of Toronto. (2010). *BY-LAW No. 1020-2010 To amend City of Toronto Municipal Code Chapter 415, Development of Land, Article III, Conveyance of Land for Parks Purposes as a Condition of Development to provide for the harmonization of*

parkland dedication requirements. (Executive Committee). Retrieved March 20, 2018.

City of Toronto. (2010). *City of Toronto Parkland Acquisitions from 1998-2009*(Parks, Forestry, and Recreation). Retrieved March 20, 2018.

Crompton, J. L. (2013). The health rationale for urban parks in the nineteenth century in the USA. World Leisure Journal, 55(4), 333-346.

Cvejić, R., Eler, K., Pintar, M., Železnikar, Š, Haase, D., Kabisch, N., & Kabisch, M. (2015). A TYPOLOGY OF URBAN GREEN SPACES, ECOSYSTEM SERVICES PROVISIONING SERVICES AND DEMANDS. Retrieved March 20, 2018.

Eisenman, T. S. (2016). Greening Cities in an Urbanizing Age: The Human Health Bases in the Nineteenth and Early Twenty-first Centuries. *Change Over Time,6*(2), 216-246. doi:10.1353/cot.2016.0014

Ekkel, E.D., de Vries, S. (2017). Nearby green space and human health: Evaluating accessibility metrics. Landscape and Urban Planning, 157, 214-220.

Gong, Y., Gallacher, J., Palmer, S., & Fone, D. (2014). Neighbourhood green space, physical function and participation in physical activities among elderly men: The Caerphilly Prospective study. *The International Journal of Behavioral Nutrition and Physical Activity*, *11*, 40. http://doi.org/10.1186/1479-5868-11-40

Hassen, N. (2016, February 04). Green Space in the City: How Toronto's Green Spaces Promote Mental Health. Retrieved March 22, 2018, from http://www.wellesleyinstitute.com/healthy-communities/green-space-in-the-city-how-torontos-green-spaces-promote-mental-health/

Hunter, A. J., & Luck, G. W. (2015). Defining and measuring the social-ecological quality of urban greenspace: A semi-systematic review. *Urban Ecosystems,18*(4), 1139-1163. doi:10.1007/s11252-015-0456-6

Johnson, T. P. (2014). Snowball Sampling: Introduction. In Wiley StatsRef: Statistics Reference Online (eds N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri and J. L. Teugels).

Kaplan, R. (1985). NATURE AT THE DOORSTEP: RESIDENTIAL SATISFACTION AND THE NEARBY ENVIRONMENT. *Journal of Architectural and Planning Research,2*(2), 115-127. Retrieved from http://www.jstor.org/stable/43029477

Kardan, O. et al. (2015). Neighborhood greenspace and health in a large urban center. *Science Reports. 5*(11610), doi: 10.1038/srep11610

Kitchen, H. (2017) Financing City Parks in Canada: What Might Be Done? Park People, parkpeople.ca/wp-content/uploads/2017/04/Park-People_Financing-City-Parks-2017-1.pdf

Kuo, F. (2010). Parks and other green environments: essential components of a healthy human habitat. National Recreation and Park Association.

Liu, H., Li, F., Li, J., Zhang, Y. (2017). The relationships between urban parks, residents' physical activity, and mental health benefits: A case study from Beijing, China. Journal of Environmental Management, 190, 223-230.

McCay, L., Suzuki, E., Chang, A. (2017). Urban Design and Mental Health in Tokyo: A City Case Study. Journal of Urban Design and Mental Health, 3(4).

Ministry of Municipal Affairs. (n.d.). ONTARIO'S LAND USE PLANNING SYSTEM. Retrieved March 20, 2018, from http://www.mah.gov.on.ca/Page15027.aspx

Morrison, K. (2017). LEVERAGING THE BENEFITS OF GREEN SPACE FOR ENVIRONMENTAL AND PUBLIC HEALTH BENEFITS. Retrieved March 22, 2018.

Park, B. J., Tsunetsugu, Y., Kasetani, T., Kagawa, T., & Miyazaki, Y. (2010). The physiological effects of *Shinrin-yoku* (taking in the forest atmosphere or forest bathing): evidence from field experiments in 24 forests across Japan. *Environmental Health and Preventive Medicine*, *15*(1), 18–26. http://doi.org/10.1007/s12199-009-0086-9

Park People, & Garrett, J. T. (2017, December 13). What is Toronto's Parkland Strategy and why does it matter? Retrieved March 20, 2018, from https://parkpeople.ca/archives/8533

Revell, S., & McLeod, J. (2017). Therapists' experience of walk and talk therapy: A descriptive phenomenological study. *European Journal of Psychotherapy & Counselling, 19*(3), 267-289. doi:10.1080/13642537.2017.1348377

Statistics Canada. (2016). *2016 Census*(Canada). Retrieved March 20, 2018.

Swanwick, C., Dunnett, N., & Woolley, H. (2003). Nature, Role and Value of Green Space in Towns and Cities: An Overview. *Built Environment (1978-), 29*(2), 94-106. Retrieved from http://www.jstor.org/stable/23288809

Taylor, A. F., Kuo, F., & Sullivan, W. (2001). Coping with ADD: The Surprising Connection to Green Play Settings. Environment & Behavior, 33(1), 54–77.

Taylor, A. and Kuo, F. E. (2011), Could Exposure to Everyday Green Spaces Help Treat ADHD? Evidence from Children's Play Settings. Applied Psychology: Health and Well-Being, 3: 281-303. doi:10.1111/j.1758-0854.2011.01052.x

Toronto and Region Conservation (TRCA). (2013). *Building the Living City*(Publication). Retrieved March 20, 2018, from https://trca.ca/about/governance-reports/building-the-living-city-10-year-strategic-plan-2013-2022/

Toronto Public Health. (2015). Green City: Why nature matters to health – An Evidence Review. Toronto, Ontario.

World Health Organization (WHO). (2018, March). Mental health: Strengthening our response. Retrieved March 20, 2018, from http://www.who.int/mediacentre/factsheets/fs220/en/

World Health Organization (WHO). (2002). What is Healthy Ageing? Retrieved March 25, 2018, from http://www.who.int/ageing/healthy-ageing/en/

York Region. (2016). *The Regional Municipality of York Official Plan*. Retrieved March 24, 2018.

APPENDIX

APPENDIX A – THE CENTRE FOR URBAN DESIGN AND MENTAL HEALTH: 'GAPS' IN URBAN DESIGN POLICY BRIEF

POLICY BRIEF

THE IMPACT OF URBAN DESIGN ON MENTAL HEALTH AND WELLBEING

UD/MH

THE CENTRE FOR URBAN DESIGN AND MENTAL HEALTH

Urban design impacts mental health and wellbeing

Good mental health is pivotal for individual wellbeing and a thriving, resilient society. The physical and social environments of urban life can contribute both positively and negatively to mental health and wellbeing. Good mental health can improve our enjoyment, coping skills, and relationships, our educational achievement, employment, housing and economic potential, help reduce physical health problems, ease healthcare and social care costs, builds social capital, and decrease suicides. Cities are associated with higher rates of most mental health problems compared to rural areas. City dwellers have an almost 40% higher risk of depression, over 20% more anxiety, and double the risk of schizophrenia, in addition to more loneliness, isolation and stress. Globally, 1 in 4 people will experience mental health problems: mental health disorders account for 7.4% of the burden of disease, and are now the leading cause of long-term disability worldwide. There can be **no health without mental health**, so given the influx of the population into urban settings, sustainable city design is needed to promote and support good mental health and wellbeing.

Mental health and wellbeing is within the remit of urban planners, managers, designers and developers, so mind the GAPS:

Green places – There are important relationships between accessible green spaces and mental health and wellbeing. Access to natural settings in neighbourhoods and in the course of people's daily routines is likely to improve and maintain mental health and wellbeing.

Active places – Positive, regular activity improves mood, wellbeing and many mental health outcomes. Embedding action opportunities from active transport to outdoor gyms into places helps integrate exercise, social interactions, and a sense of agency into daily routines.

Pro-Social places – Urban design should facilitate positive, safe and natural interactions among people and promote a sense of community, integration and belonging. This includes potentially vulnerable groups like refugees, migrants, young and older people, with multi-faceted engagement from passive observation to active participation. Creating interesting, flexible public places should involve citizens at each stage of design and development.

Safe places – A sense of safety and security is integral to people's mental health and wellbeing. Urban dangers include traffic, getting lost, environmental pollutants, and risks posed by other people. Appropriate street lighting and surveillance, distinct landmarks, and people-centric design of residential, commercial and industry routes are important. A balanced approach is necessary: a safe environment improves accessibility but risk-averse city design can reduce action opportunities and people's sense of agency and choice.

NEXT STEPS

Citymakers must consciously mind the GAPS for sustainable improvement of population mental health, putting the research into action through policies, plans, design, development and management. Meanwhile, funders need to invest in this high impact field. This is a moment of great opportunity, and action is needed today.

www.urbandesignmentalhealth.com

APPENDIX B – INTERVIEWEE PROFILES

Occupation: Program Manager
Company/Corporation: Park People (Toronto)
Time in current position: 2 years
Time in field (if applicable):
Relation to planning: Peripherally as this informant works with urban planners, mostly within the process of community engagement

Occupation: Health Policy Specialist
Company/Corporation: Toronto Public Health
Time in current position (if applicable): N/A
Time in field (if applicable): 15 years
Relation to planning: Any recommendations from Public Health can directly influence and shape how Urban Planners plan and implement their policy, including budget and finances.

Occupation: Toronto City Councillor, Board of Health member, Public Transit Board member, Anti-Poverty Advocate
Company/Corporation: City of Toronto
Time in current position (if applicable): N/A
Time in field (if applicable): 25 years
Relation to planning: This participant is deeply involved in the local planning within their ward. They are in constant communication with developers and residents looking to build and develop within their area. As well, City Councillors vote on and create policy pertaining to planning- therefore it is a closely affiliated field.

Occupation: Environmental Planner
Company/Corporation: City of Toronto, Planning Department
Time in current position: 15 years
Time in field (if applicable):
Relation to planning: Is an urban planner

APPENDIX C – INTERVIEW GUIDE

Interview Guide- Parks Planning and Mental Health, the Planner's Role

This research study received Ethics Board Approval for the interview of professionals on December 6th, 2017.

The goal of collecting this research:

This study requires the collection of primary research in the form of a formal interview with professionals in the field of planning and any such related fields. As urban planning is a diverse and interdisciplinary sector which ties in a number of different fields and topics, it is important to note that participants will come from a number of affiliated fields related to planning as they will have a breadth of knowledge on the topic and be able to offer fresh and diverse perspectives to the study.

The questions below will be administered as a part of a group of professional best practice interviews, collected using the snowball sampling method, from urban planners and professionals in any related fields to planning.

The data collected from these interviews will be of a professional nature, where the participants will provide answers based solely on their professional knowledge and background.

It is the content, in the form of professional facts and opinions, which is being used as primary research, not the person in this case.

PAGE ONE OF TWO

Questions:

Career-related questions:

1. What is your professional role/position?

2. How long have you been in your current role as (insert professional position)?

3. How does your role as (insert professional position) relate to the field of urban planning/parks planning?

Study-related questions:

4. Please describe the level of awareness, within the planning field, pertaining to the relationship between parks/green spaces and mental health.

5. What are the tools, if any, used to help raise awareness of this relationship in the urban planning field (informative workshops, print information, etc.)?

6. As a professional field, what sort of role, if any, should urban planners play in this relationship?

7. How does this relationship affect the work that planners do?

8. Do professional planners consider this relationship in a meaningful way, on the job? If yes, can you provide an example?

9. Are there areas of influence within the planning field that this relationship would fit in to (in terms of tools available to planners, the implementation of planning policy, etc.)?

10. In creating an urban planning guide for parks planning to positively support mental health and wellbeing, what factors should be considered- aside from anything mentioned previously (in this interview)?

PAGE TWO OF TWO