



#summerofplay

COVID-19 CHILD AND YOUTH STUDY: THE ROLE OF PLAY AND OUTDOOR SPACE



Prepared by Maximum City
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Introduction

In the spring and fall of 2020, Maximum City conducted pan-Canadian studies of the impacts of the COVID-19 pandemic on the self-reported behaviours, school experiences, and well-being of children (ages 9-12) and youth (13-16). A cross-sectional sample of over **2,100 pairs of children/youth and a parent/caregiver participated by completing an online survey in English or French**. A third phase of research and engagement is currently underway.

The outcomes, as of March 2021, include a series of [reports](#) and [articles](#), an academic paper and [conference presentations](#), collaborations with university faculty in four provinces, a [well-being assessment tool](#), and direct policy and planning impacts at the municipal and school board level in Ontario. Along with a deeper understanding of the experience of young Canadians during the pandemic, the final outcome will be series of targeted recommendations for **a just and sustainable child-friendly recovery plan** that kids will have the opportunity to contribute to in 2021.



 Fall 2020

**Listen to kids now
so we can help
them later.**

**TAKE THE COVID-19 SURVEY
BY NATIONAL CHILD DAY
ON NOVEMBER 20**

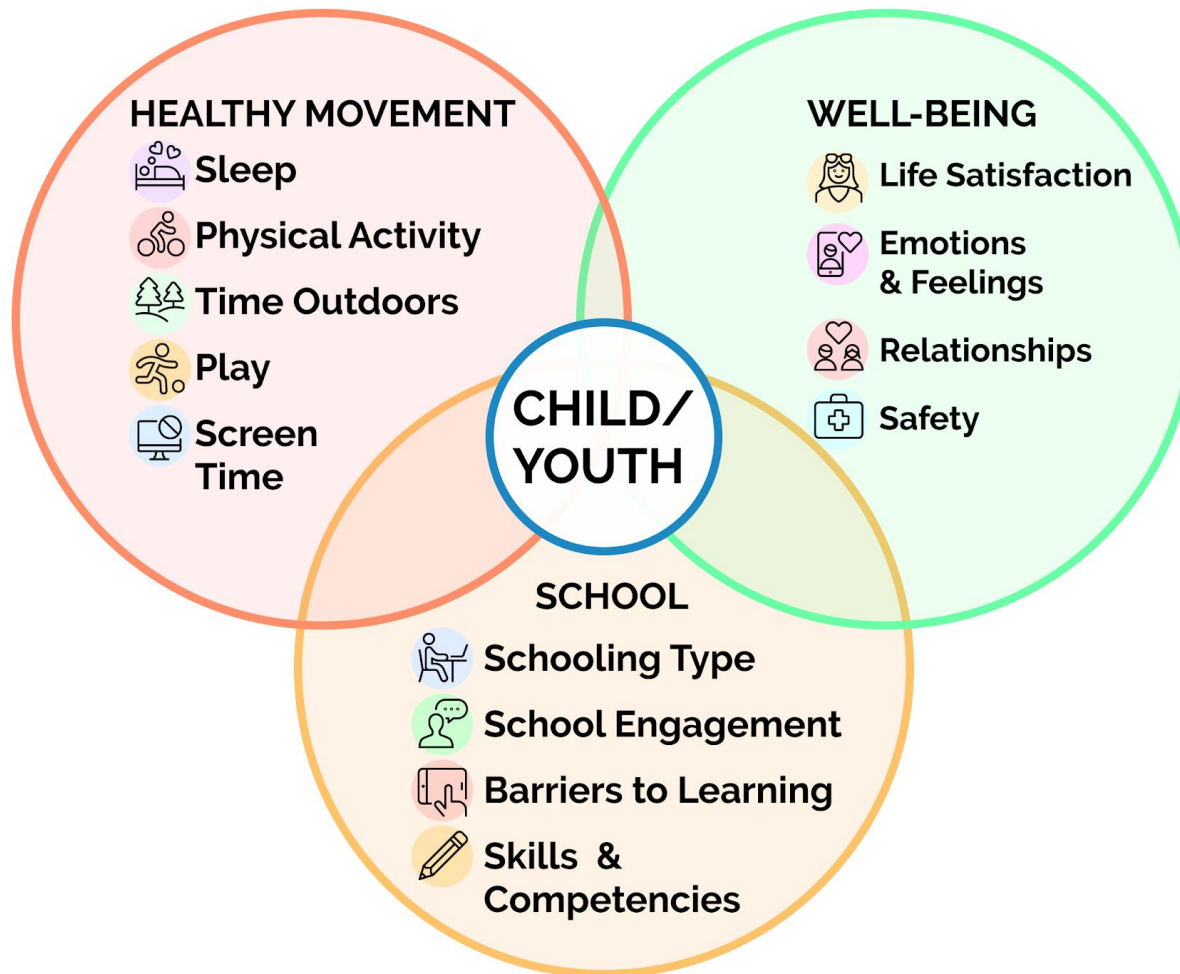


For ages 9-16 and a parent



maximumcity.ca/wellbeing

Areas of study



Emerging evidence on how Canadian children/youth are faring during COVID-19

The overall impacts are **mixed and uneven** but **some groups of kids/teens appear to be getting hit harder** by pandemic conditions, with the potential for worsening secondary health and well-being outcomes.



Groups who show some worse outcomes relative to peer groups...

This can include kids/teens who:

- Live in apartment buildings
- Live in large municipalities
- **Do not have access to outdoor space**
- Are BIPOC
- Come from lower income households
- Participate in school online/hybrid
- Have extra support needs
- **Report a decrease in play**



Some behaviours and conditions associated with better well-being and school experience...

Protective factors include:

- Physical activity 🚴
- Time outside 🌲
- Participating in school in person
- Having a pet

- Less time on screens 🖥️
- Having a friend or sibling to talk to
- Having access to outdoor space
- Parental engagement
- Time playing 🧒



The role of play

In our recent analysis, **play is emerging as a strong correlating factor** across all three study areas. Specifically, children/youth who reported maintaining or increasing their play time during the pandemic show significantly better well-being and school experiences, as well as lower declines in other healthy movement behaviours, compared to those who report a decrease in play.



*In ParticipACTION's pre-pandemic Report Card for 2020, Canadian children/youth reported playing outdoors for 15 minutes per day, on average, and **active play was graded F.***

Differences in children/youth with a decrease in play vs. those with no decrease in play

The following slides compare differences in findings across well-being, school experiences, and healthy movement between children/youth who reported a decrease in play time and those who maintained or increased their time playing in the fall of 2020 (relative to usual pre-pandemic levels).

- Of the 1,125 child/youth respondents for the fall, 301 reported a decrease in play and 814 reported no decrease in play (i.e. they maintained or increased play).
- **Play refers to all types of play**, indoor and outdoor. Our survey was not prescriptive about play and allowed children/youth to determine what it meant to them in order to be consistent with broad definitions of play as freely chosen, self-directed and fun (Faulkner et al., 2015; Gleave & Cole-Hamilton, 2012; Gray, 2011).



Associations between play and areas of study




- Associations between play and well-being 
 - Children/youth with no decrease in play reported significantly better well-being compared to peers with a decrease in play across several measures.
 - Children/youth with no decrease in play reported all improved positive emotions at a higher rate compared to children/youth with a decrease in play, who reported all worsened negative emotions at a higher rate.
- Associations between play and healthy movement 
 - Children/youth with no decrease in play reported significantly lower declines in healthy movement behaviours such as physical activity, walking and biking, time outdoors, and sleep quality.
 - Children/youth with no decrease in play reported lower increases in recreational screen time.
- Associations between play and school experience 
 - Children/youth with no decrease in play reported higher levels of school engagement, learning, and perseverance compared to those with a decrease in play.
 - Children/youth with no decrease in play reported lower declines in skills and competencies such as collaboration and concentration, and lower levels of school stress.

Figure 1: Associations between play and well-being



Difference in emotions between children/youth who report a decrease in play vs. no decrease in play

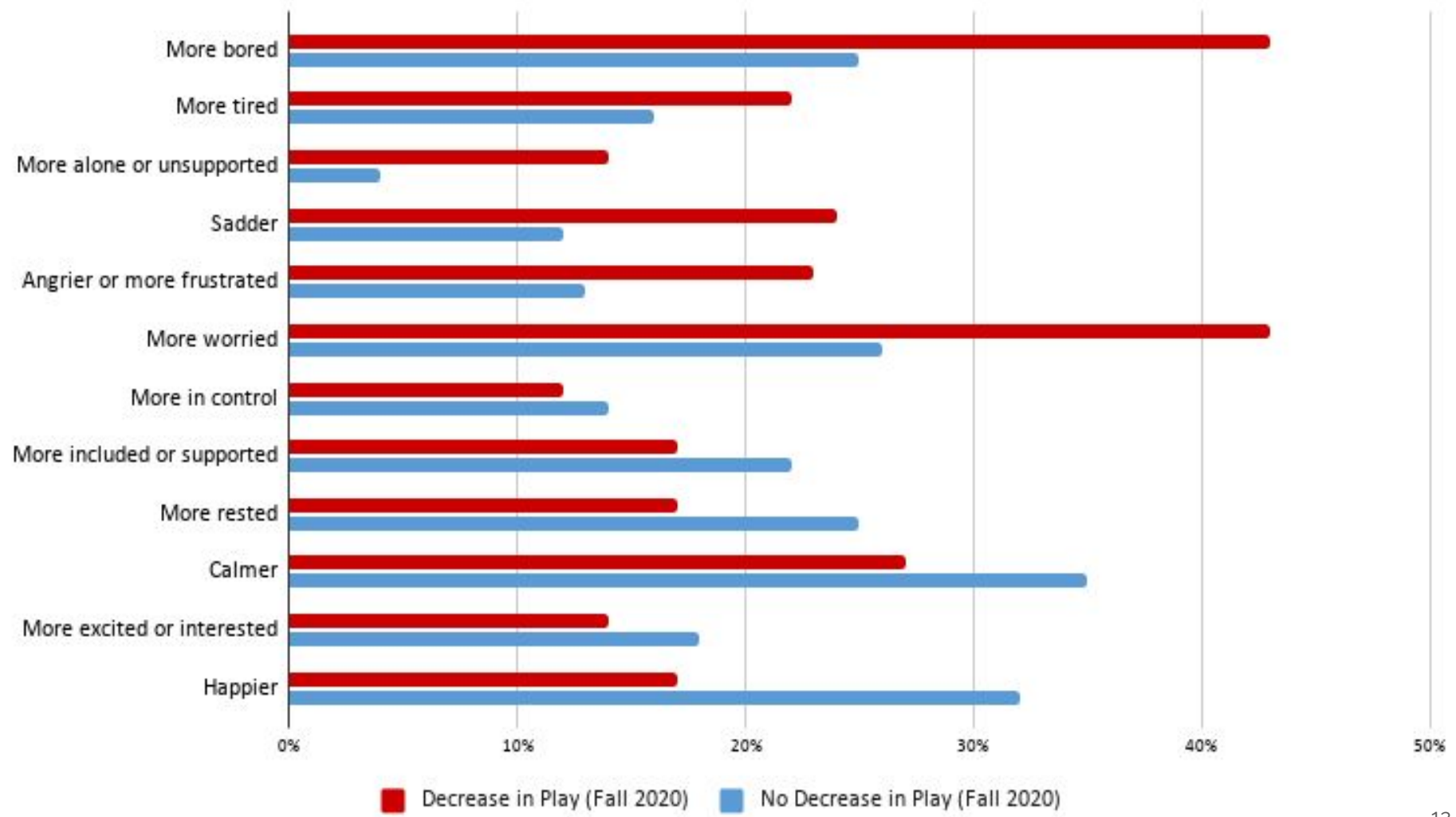


Figure 2: Associations between play and healthy movement

Difference in healthy movement between children/youth who report a decrease in play vs. no decrease in play

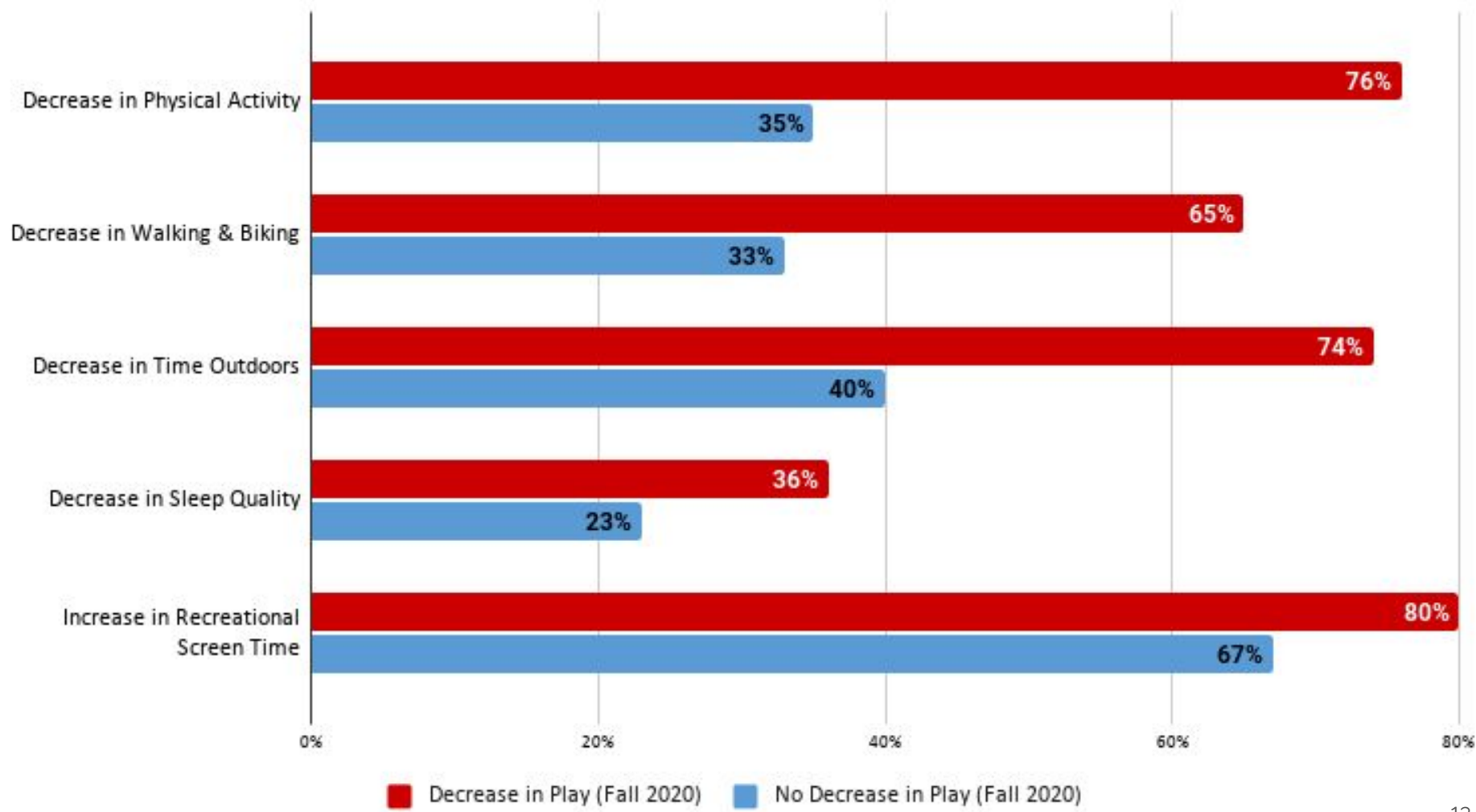
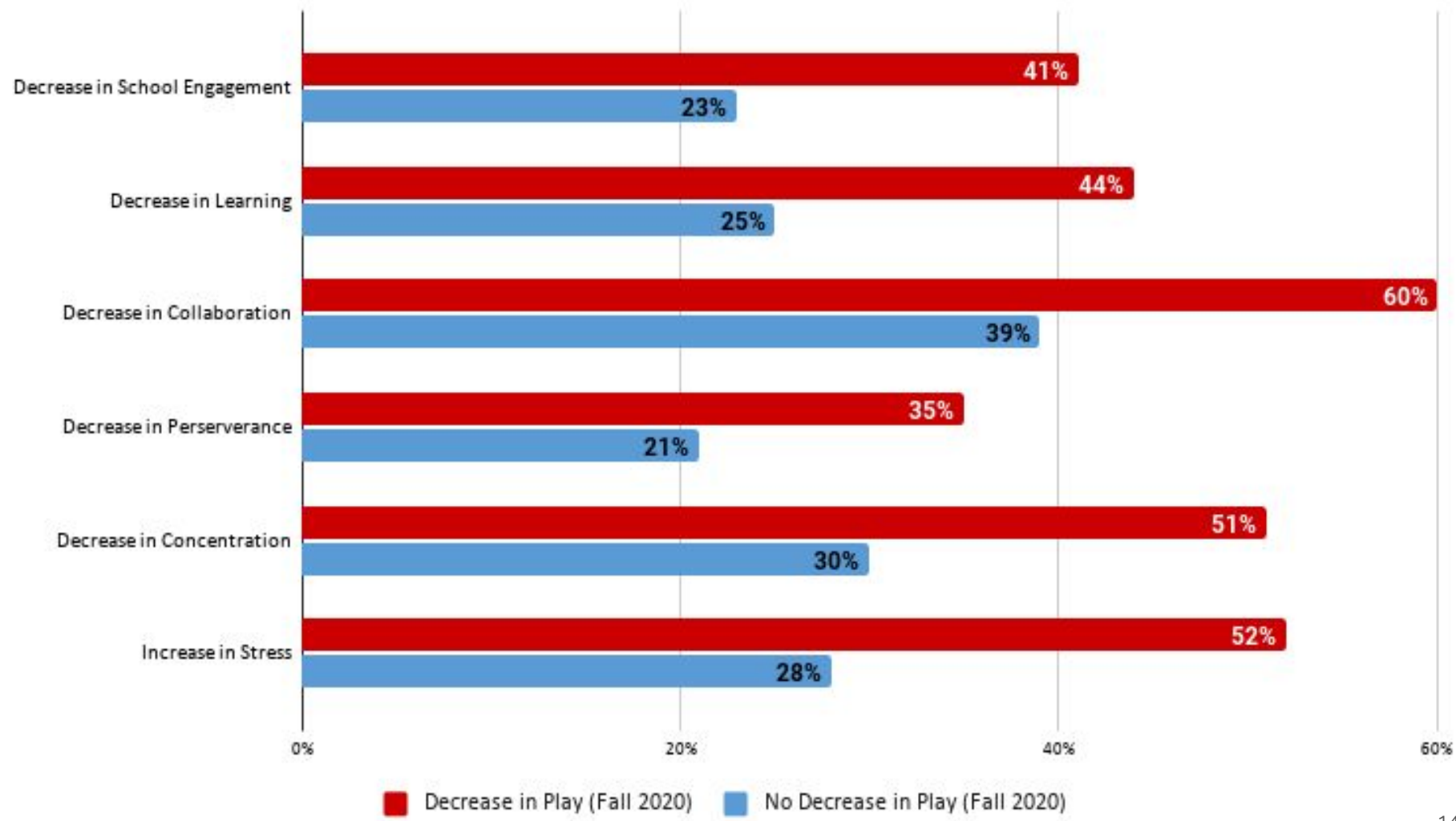


Figure 3: Associations between play and school experience

Difference in school experience between children/youth who report a decrease in play vs. no decrease in play



Other associations

- Children/youth who live in apartments were more likely to report a decrease in play compared to those who live in houses.
- Children/youth from lower income households were more likely to report a decrease in play compared to higher income households.
- Children/youth from households with pandemic-related income loss were more likely to report a decrease in play.
- BIPOC children/youth were more likely to report a decrease in play compared to white peers.
- Children/youth from households with a high-risk member, or who have had to isolate, were more likely to report a decrease in play.
- Children/youth with extra support needs were more likely to report a decrease in play.
- Children/youth who reported not having enough space to play inside and outside their homes were more likely to report a decrease in play
- Children/youth who reported not having a park or playground nearby were more likely to report a decrease in play.

Based on qualitative feedback in thousands of comments, children/youth across all groups miss play, and particularly active outdoor play with friends, during the pandemic. Even those who participate in school in person report that restrictions such as cohorting are having a negative impact on play time and quality. Play through screens, or in person when permitted, comes up frequently as an important way to stay connected with peers during the pandemic.

The role of shared outdoor space



Adopt-a-Park

**PLAYGROUND
CLOSED
UNTIL FURTHER NOTICE**

**Our public parks and
trails remain open.**

Please maintain social distancing,
avoid gathering in groups and practice
frequent hand washing at all times.



The City's priority is protecting the
health and safety of our residents and
continuing to serve you.

Access to outdoor space

Access to outdoor space is another strong correlating factor to better outcomes across healthy behaviours (including play) and well-being. Analysis of where children/youth report spending most of their outdoor time reveals the importance of shared outdoor space, especially streets and sidewalks, for maintaining healthy behaviours during and emerging from the pandemic. It also points to the holistic health benefits of making streets and sidewalks safer and more welcoming places for play, interaction and movement.

- During the fall, children/youth reported spending most of their outdoor time in private yards (29%), streets and sidewalks (22%), and schoolyards (19%).
- Removing private yards and schoolyards from the answer set (given that children/youth had unequal and irregular access to these), children and youth reported spending most of their outdoor time on streets and sidewalks (42%), and parks and playgrounds (35%).
- The most common write-in responses for preferred park/playground activities and amenities were swings (44%), basketball (19%), and monkey bars/climbing structures (18%).
- Children/youth whose parents reported encouraging physical activity show lower declines in some healthy movement behaviours compared to those whose parents reported no encouragement.
- 84% of children/youth reported that their parents/caregivers have been encouraging them to be physically active during the pandemic; 87% of parents/caregivers reported encouraging their children to be physically active.

Figure 4: Where children/youth spend outdoor time

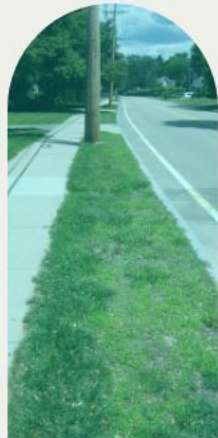
Where do you spend most of your outdoor time?

Fall 2020 



Private Yard

29%



Sidewalk/
Street/Trail

22%



Schoolyard

19%



Playground
/Park

18%



Driveway

7%

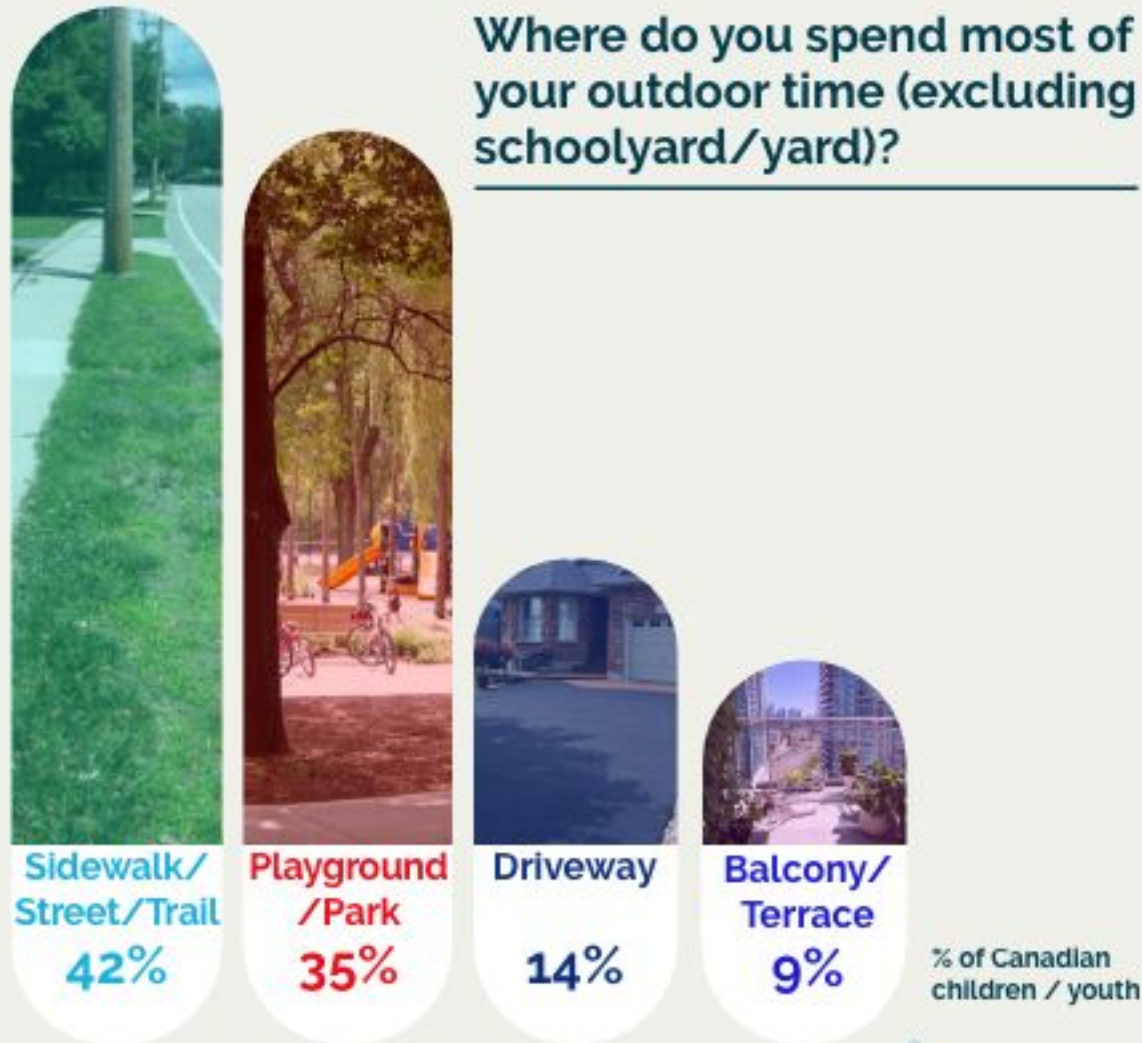


Balcony/
Terrace

5%

% of Canadian children / youth

Figure 5: Where children/youth spend outdoor time (excluding yards)



Fall 2020 🍁

Figure 6: Park/playground access and amenities

Park/playground access and amenities

Fall 2020 

 Yes  No/not sure

There is a park/playground nearby that I can get to safely/easily



The park/playground nearby has activities/equipment I like



0% 25% 50% 75% 100%
% of children and youth

Figure 7: Preferred park/playground amenities and activities

What are the park/playground activities you like?

Fall 2020 



Swings

44%



Basketball

19%



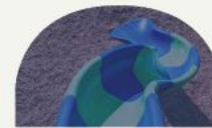
Monkey Bars/
Climbing
Structures

18%



Soccer

10%



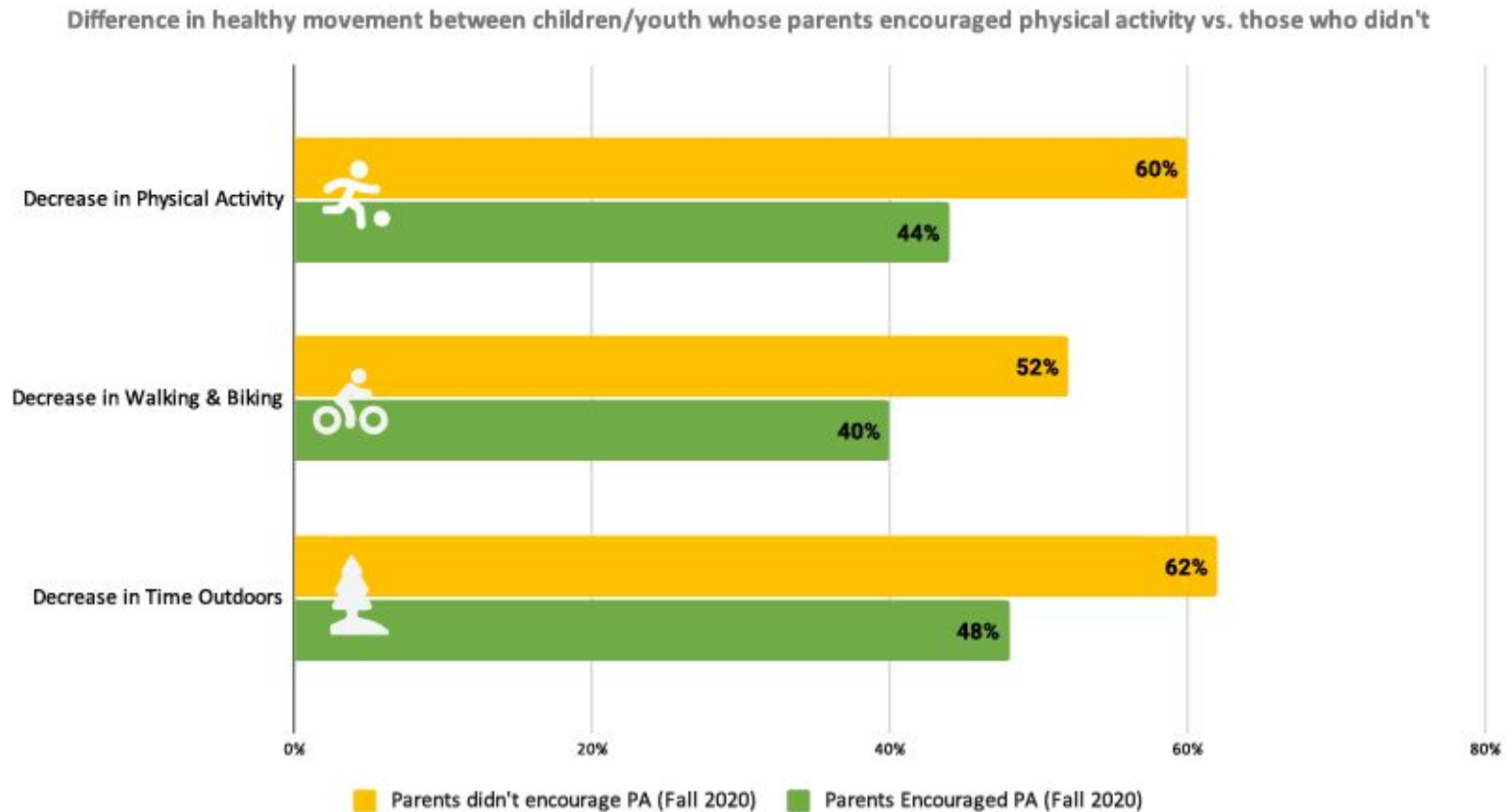
Slides

9%

Most common write-in responses of Canadian children/youth

Figure 8: Healthy movement and parental encouragement

Fall 2020 



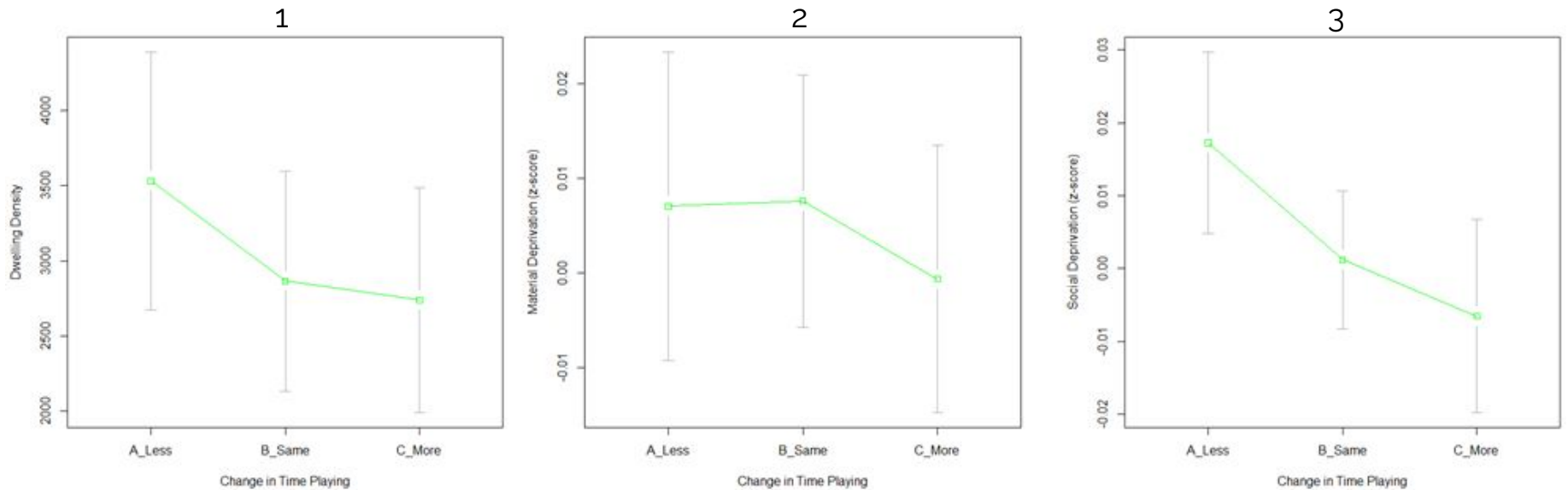
Neighbourhood Environment and Play Time

To examine the association between neighbourhood environment and pandemic-time play, we compared the average dwelling density, average material deprivation, and average social deprivation across three groups of children/youth—those who reported less play, those who reported similar levels of play, and those who reported increased play during the pandemic. These environmental conditions were measured within 1km of a child/youth's residence (DA).

High material deprivation indicates low high-school education rate; high unemployment rate; and low average household income. High social deprivation indicates high proportion of the population separated, divorced, or widowed; high proportion of the population that lives alone; and high proportion of the population that has moved in the past five years (Pampalon and Raymond, 2000).

This analysis was conducted for children/youth living within the City of Toronto only (n=140) and the environmental data came from CANUE (Canadian Urban Environmental Health Research Consortium), based on CanMap Postal Code Suite v2016.3 and Institut National de Santé Publique du Québec (INSPQ) (Pampalon et al. 2012; Ross et al., 2018).

Figure 9: Neighbourhood Environment and Play Time (Toronto)



These graphs compare changes in time playing to 1. Average Dwelling Density; 2. Average Material Deprivation; and Average Social Deprivation within 1km. Results indicate that average dwelling density of neighbourhoods was higher for children/youth who reported playing less during the pandemic, although the differences within groups were not statistically significant.

The results also show that there is a statistical difference in average neighbourhood social deprivation based on children/youths' reported levels of play during the pandemic. More specifically, children/youth reporting less play (than before pandemic), on average, were living in neighbourhoods with higher social deprivation, whereas children/youth who reported an increase in play, on average, were living in neighbourhoods with lower social deprivation.

Summer school or summer of play?

Some international jurisdictions have implemented or are planning for summer academies and catch-up classes over holiday periods to help address concerns and emerging evidence around “loss of learning” experienced by students during the pandemic. This is a complex topic requiring further investigation but until more evidence on learning outcomes in provinces is available, we do not recommend summer school at a population level as a reactive response to fill any learning gaps.

Based on our findings, we do recommend a **summer of play** for Canadian kids and teens as they emerge from pandemic conditions, provided public health guidelines permit.

Well-being and learning have strong evidential links that appear to be intensifying during the pandemic. A summer of play would enable learning and development within the context of play, help to restore and protect children's mental and physical health, and ultimately better prepare them for a return to school in September as happy, healthy, engaged students and peers.

Free play may be the most natural and effective form of learning and is also vital for children's happiness (Gleave & Cole-Hamilton, 2012).

Child and Youth Voice Map: Play

I live outside of town so the forest is my playground.
Radium Hot Springs, BC

Go online and play new games with friends as teams.
Vancouver, BC

Add sanitizing stations at each playground or park.
Spruce Grove, AB

I miss playing different games in gym class.
Winnipeg, MB

Just go outside and play.
Aldergrove, BC

I miss playing with my classmates and friends.
Saskatoon, SK

My advice to other kids is go outside and play. Play a lot.
Calgary, AB

It is hard not being able to play at recess and lunch.
Milton, ON

Play safe.
Sharon, ON

Try to have playdates with kids on your street.
Aurora, ON

Let us play.
Toronto, ON

Play more, learn less.
Toronto, ON

I wish we had smaller classes and more time to play outside.
Richmond Hill, ON

Open the school gyms so kids can play sports indoors.
Toronto, ON

I want my hockey arena to reopen so I can play on my girls hockey team. I really miss it and my hockey friends.
Newmarket, ON

I have no one to play with at school because my friends do online learning.
London, ON

Don't play electronics for too long.
Gatineau, QC

Take advantage of this time to play more with your family members.
Saint-Phillipe, QC

Remember that sometimes parents want to play too.
Oromocto, NB

Let us play with other kids outdoors and make cool masks for us to wear.
Halifax, NS

Stay connected with friends and get outside to play as much as you can.
Fredericton, NB

Research and Engagement Team

The Maximum City research and engagement team consists of:

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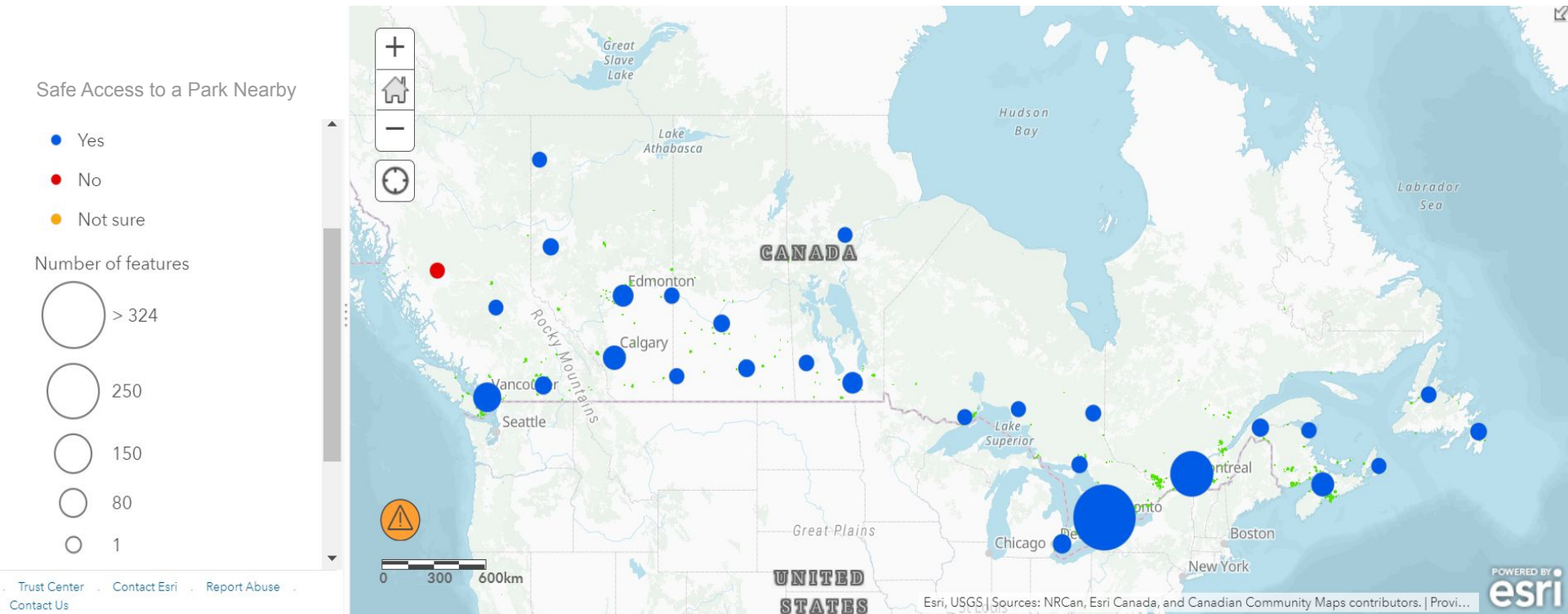
Appendix A: Relational Mapping Examples

To examine the relationship between various results, as well as to their spatial environment, we mapped changes in healthy movement behaviours (including Sleep Quality, Play Time, Time Outdoors, Walking and Biking, Physical Activity, and Screen Time), safe park/playground access, and schooling type by the postal codes of fall respondents (n=1,113) across Canada. We then added other environmental and census-level data such as parks/green space and household income. The parks and green space layer was provided by DMTI Spatial Inc. as part of their land use data layer.

This mapping allows for ongoing comparisons between results (e.g. changes in screen time vs. changes in physical activity), as well their relationship to social and environmental factors. The following maps provide a couple of examples, which can become more meaningful at the municipal or regional level.

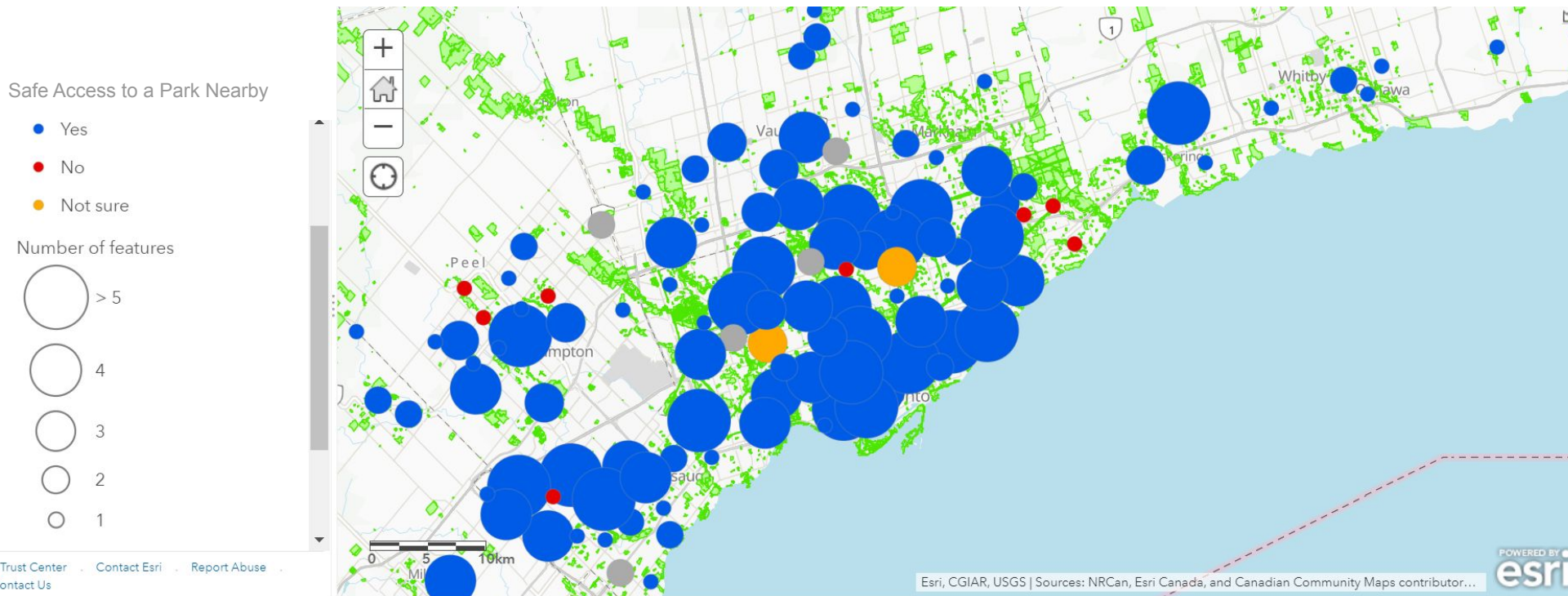
The first two maps illustrate the relationship between safe park/playground access and available parks/green space, and the next two maps show the relationship between self-reported recreational screen time and physical activity in Canada and the Greater Toronto Area. A longer series of maps will be published later in the spring of 2021 once further analysis has been completed.

Map 1: Safe park/playground access vs. parks/green space



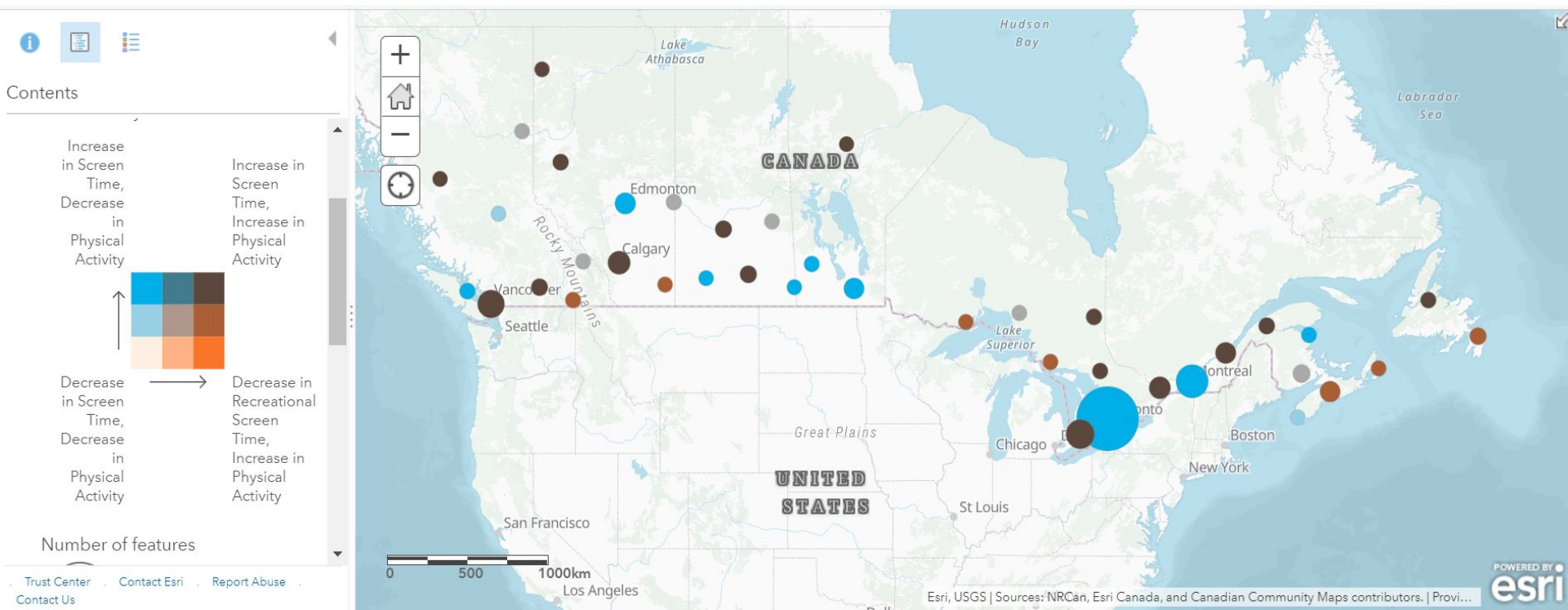
At a national level, close to 9 in 10 children/youth said that they have safe access to a park or playground nearby, represented by the blue clusters. About 6 in 10 say the park or playground nearby has the amenities or activities they like.

Map 1.1: Safe park/playground access vs. parks/green space GTA



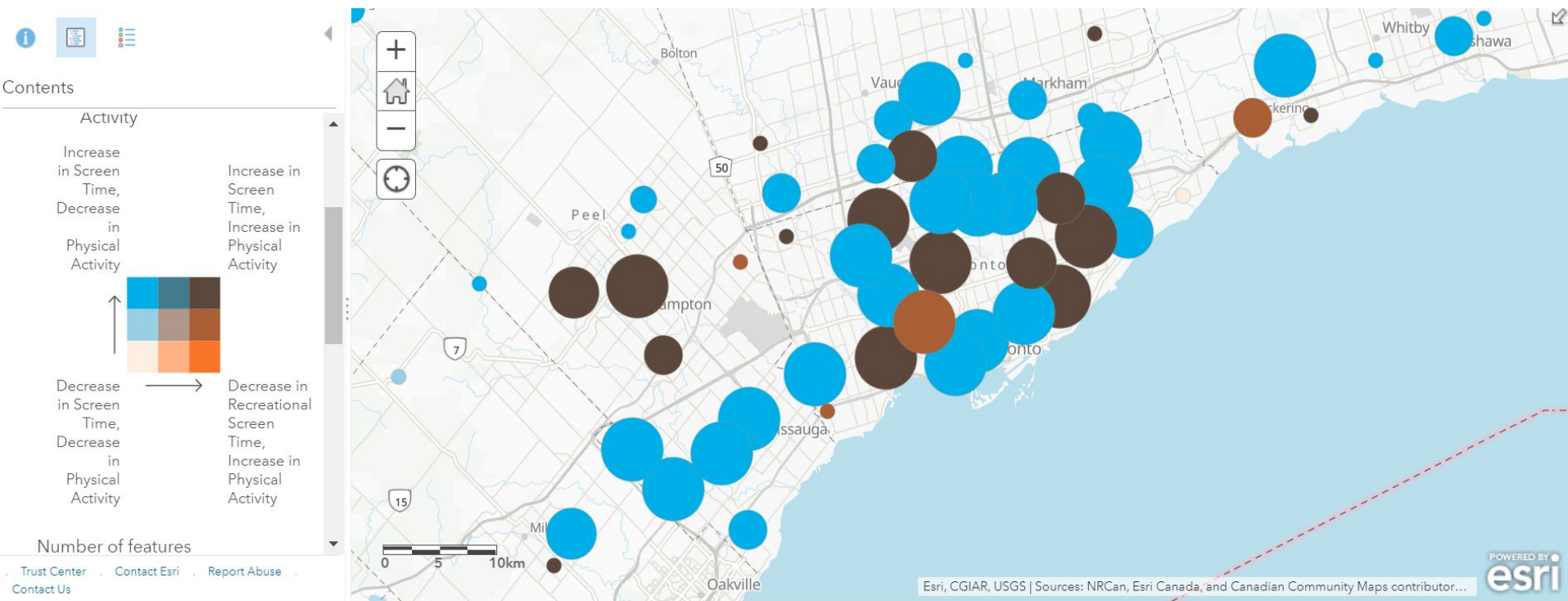
In the Greater Toronto Area most children and youth report having safe access to a park or playground nearby (represented by blue clusters), which is generally consistent with the bright green layer showing parks and green space spatial data.

Map 2: Recreational screen time vs. physical activity



This map shows the relationship between changes in screen time and physical activity, with the bright blue colour representing clusters where the predominant relationship value is an increase in screen time and a decrease in physical activity.

Map 2.1: Recreational screen time vs. physical activity GTA



In the Greater Toronto Area, many children/youth report an increase in screen time and decrease in physical activity, represented by the bright blue clusters. The dark brown colour represents clusters where the predominant relationship value is an increase in screen time and increase in physical activity.

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