



## COVID-19 CHILD AND YOUTH STUDY: Self-Reported Healthy Behaviours, Well-Being, and School Experiences of Young Canadians during the Pandemic

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# Introduction

In the spring and fall of 2020, Maximum City conducted pan-Canadian studies of the impacts of COVID-19 on the self-reported behaviours, school experiences, and feelings 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. A third phase of research and engagement is currently underway.

The outcomes, as of January 2021, include a series of [reports](#) and [articles](#), an academic paper under peer review, a [well-being assessment tool](#), and 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 overall recommendations for a child-friendly recovery plan that kids will have the opportunity to contribute to in the spring of 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](https://maximumcity.ca/wellbeing)

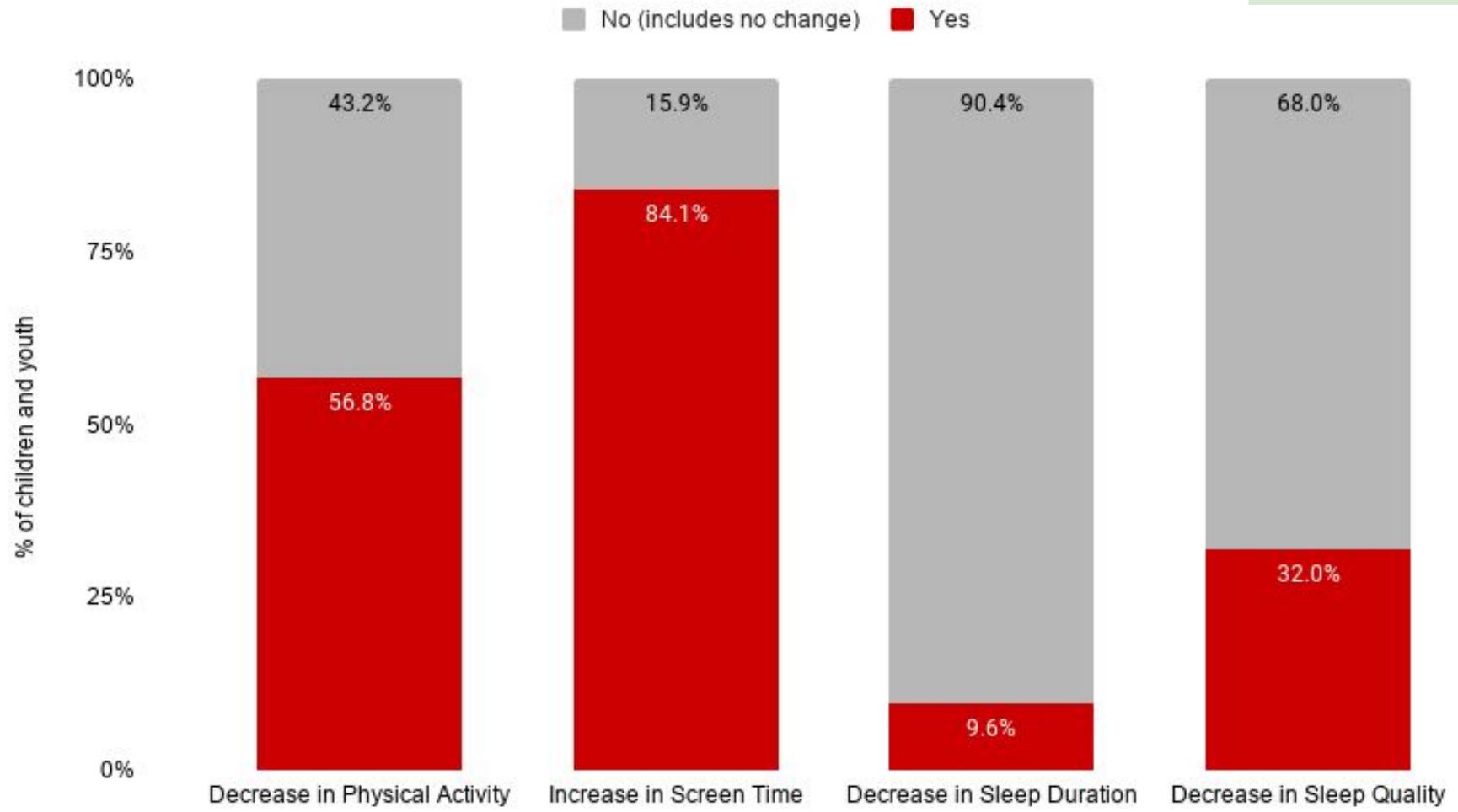
# A few key findings: spring 2020

- On average, physical activity declined, screen time increased significantly, sleep duration increased, sleep quality declined, and time outdoors declined compared to pre-pandemic.
- As a group, BIPOC children/youth were more likely to report a decrease in physical activity, having fewer places to play or exercise outside of home, and being worried about their family meeting basic needs such as food and shelter.
- Parents from lower income households were more likely to report a decrease in income due to COVID-19, along with a greater impact on the ability to meet daily costs compared to higher income parents.
- Children/youth in small municipalities were less likely to report a decrease in physical activity while those large municipalities were more likely to report decreases in sleep quality and time outdoors.
- Nearly half of respondents found school less interesting and a third found it more stressful.
- A quarter of children and youth reported that the pandemic was having some positive effects on their life, such as more independence or more quality family time.

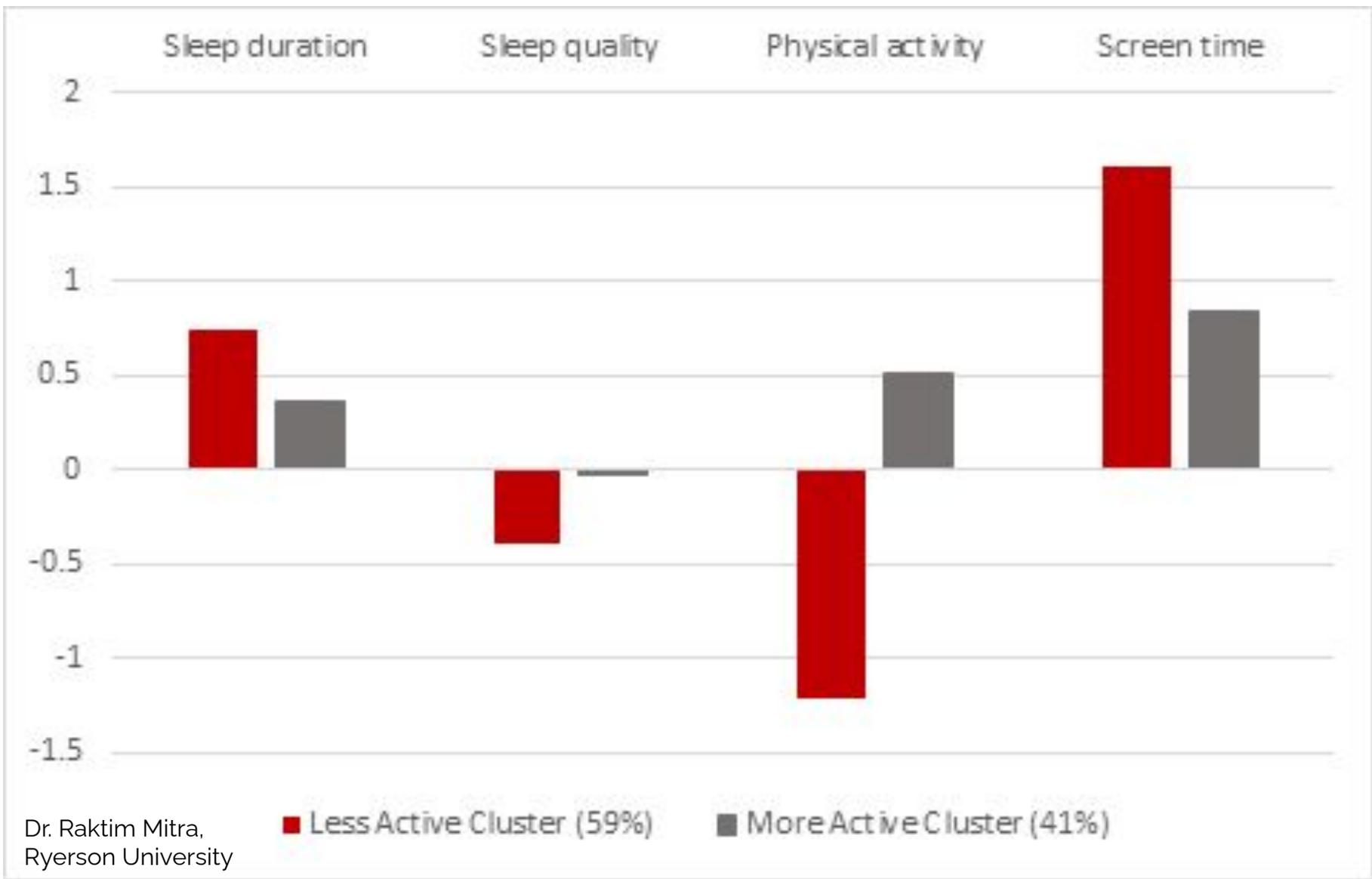
# Figure 1: Percentage of children and youth with changes in levels of healthy movement behaviours

Changes in Levels of Healthy Movement

Spring 2020 



# Figure 2: Statistical patterns in healthy behaviours

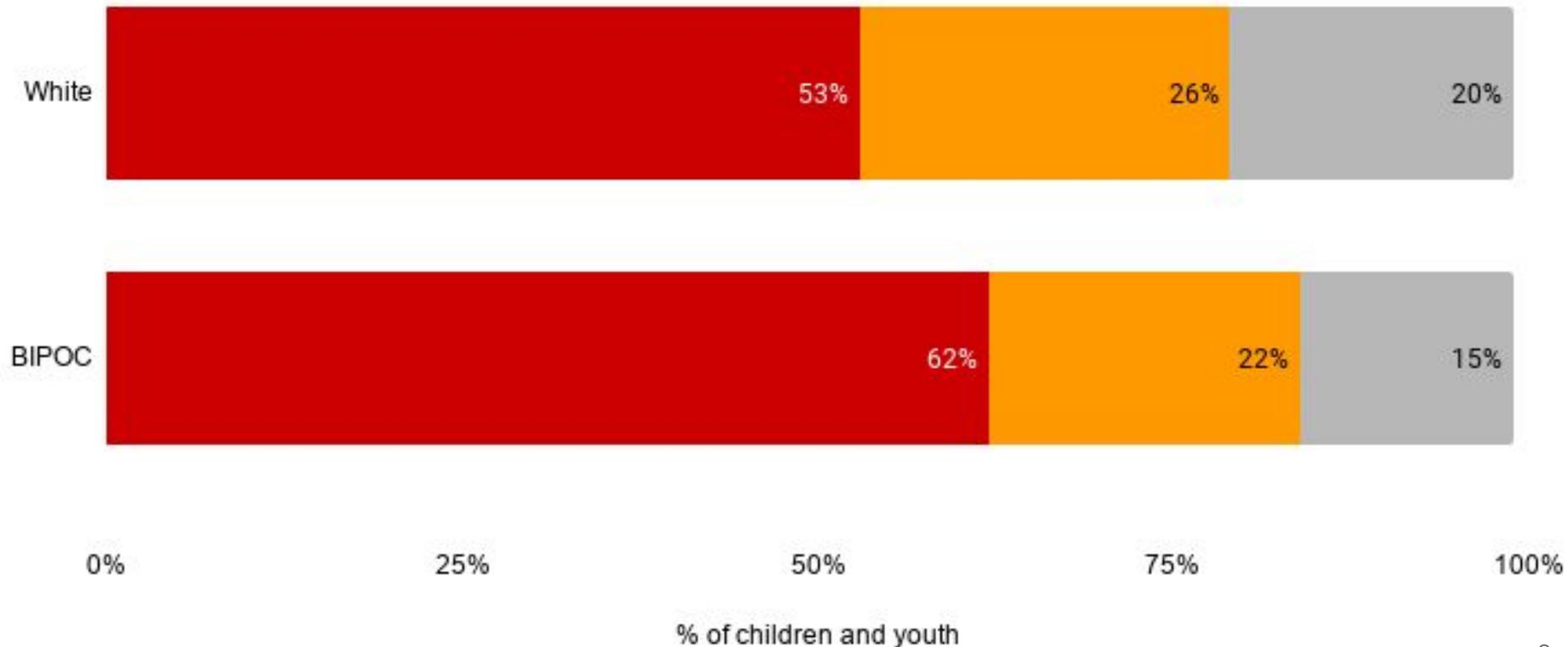


# Figure 3: Changes in physical activity by ethno-racial background

## Changes in Physical Activity by Ethno-Racial Background

Spring 2020 

■ Decrease in PA   ■ No Change in PA   ■ Increase in PA



# Table 1: Changes in physical activity by variables of difference

Variables Of Difference	No Decrease In Physical Activity (%)	Decrease In Physical Activity (%)	Chi-sq Test Significance (P)
<b>Parent's Age</b>			0.100
18 To 34 Years	52.9*	47.1*	
35 To 44 Years	42.3	57.7	
45 Years Or More	43.2	56.8	
<b>Ethnicity</b>			0.064
White European	46.1*	53.9*	
East Or South-East Asian	30.1*	69.9*	
South Asian	46.6	53.4	
Black	38.5	61.5	
Indigenous	45.5	54.5	
Middle Eastern	33.3	66.7	
Other	35.0	65.0	
<b>Child's Age</b>			0.024
9-11 Years	47.9	52.1	
12-16 Years	40.1	59.9	
<b>Municipal Population Size</b>			0.002
Less Than 100,000	52.1*	47.9*	
100,000 To 400,000	34.4*	65.6*	
More Than 400,000	41.5	58.5	Dr. Raktim Mitra, Ryerson University

# Associations between healthy behaviours and well-being: spring 2020

Analysis of the spring findings shows **strong correlation between not maintaining healthy movement behaviours and declines in subjective well-being** tied to negative emotions.

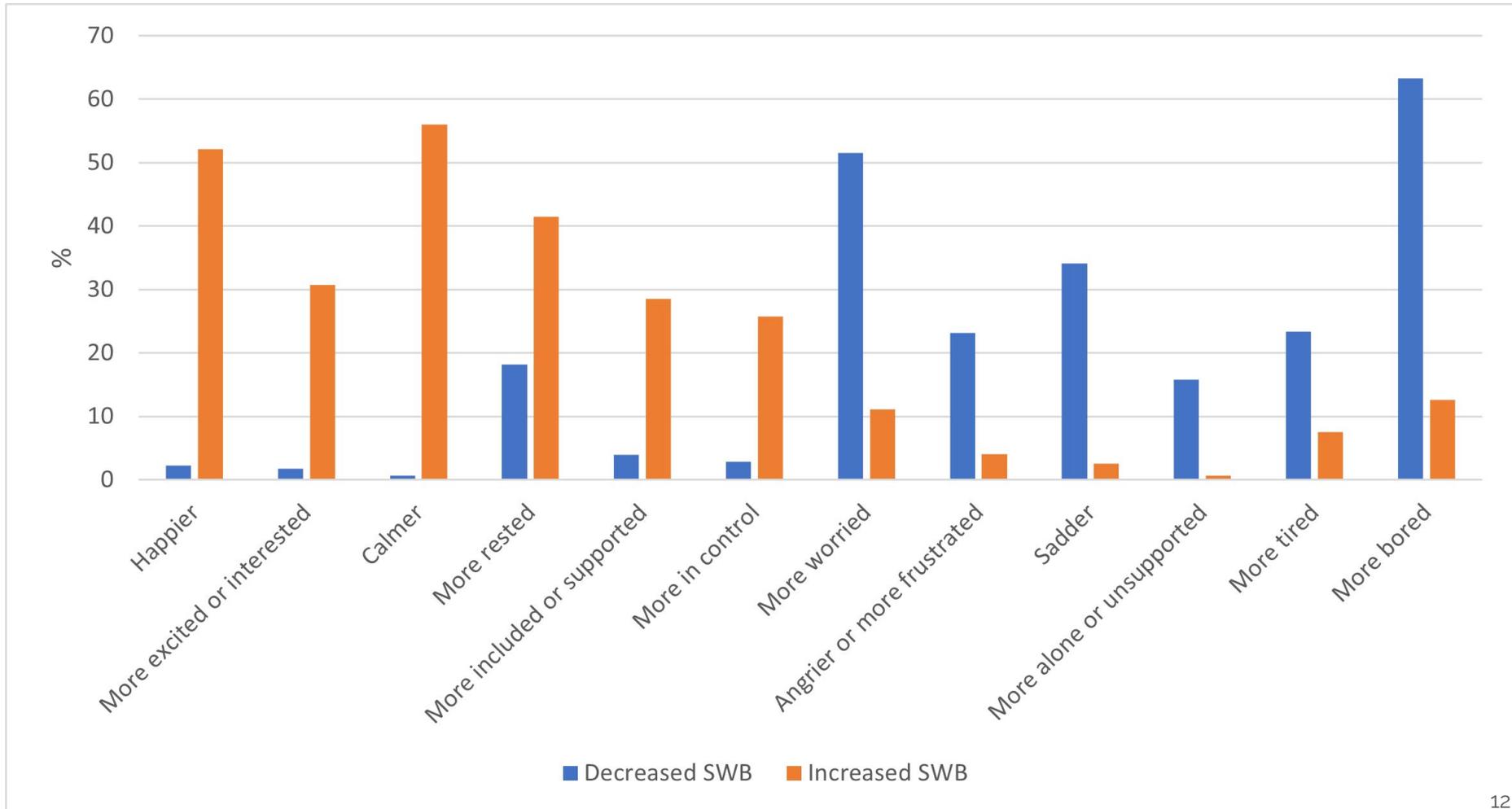
- Children/youth who were less physically active or spent more time on digital screens during the lockdown were more likely to belong to the group that evaluated their daily emotional life as worse than pre-COVID-19.
- Access to outdoor spaces to play or exercise (in addition to access to quality indoor spaces) was significantly associated with a lower likelihood of decreased subjective well-being.
- Having a friend to share feelings with reduced the likelihood of belonging to the group with decreased well-being.
- Socio-demographic characteristics and size of municipality size were not associated with a pandemic-time change in well-being.

# Table 2: Probability of reporting various feelings, by latent classes

Subjective well-being (SWB) dimensions	Variables	Class 1: Decreased SWB (49.4% of sample)  %	Class 2: Increased SWB (50.6% of sample)  %
<b>Pleasant + High activation</b>	Happier More excited or interested	2.2 1.7	52.1 30.7
<b>Pleasant + Low activation</b>	Calmer More Rested More included or supported More in control	7.1 18.2 3.9 2.8	56.0 41.5 28.5 25.7
<b>Unpleasant + High activation</b>	More worried Angrier or more frustrated	51.5 23.2	11.1 4.0
<b>Unpleasant + Low activation</b>	Sadder More alone or unsupported More tired More bored	34.1 15.8 23.4 63.3	2.5 0.7 7.5 12.6

# Figure 4: Summary of increased and decreased emotions or feelings, by latent classes

Spring 2020 

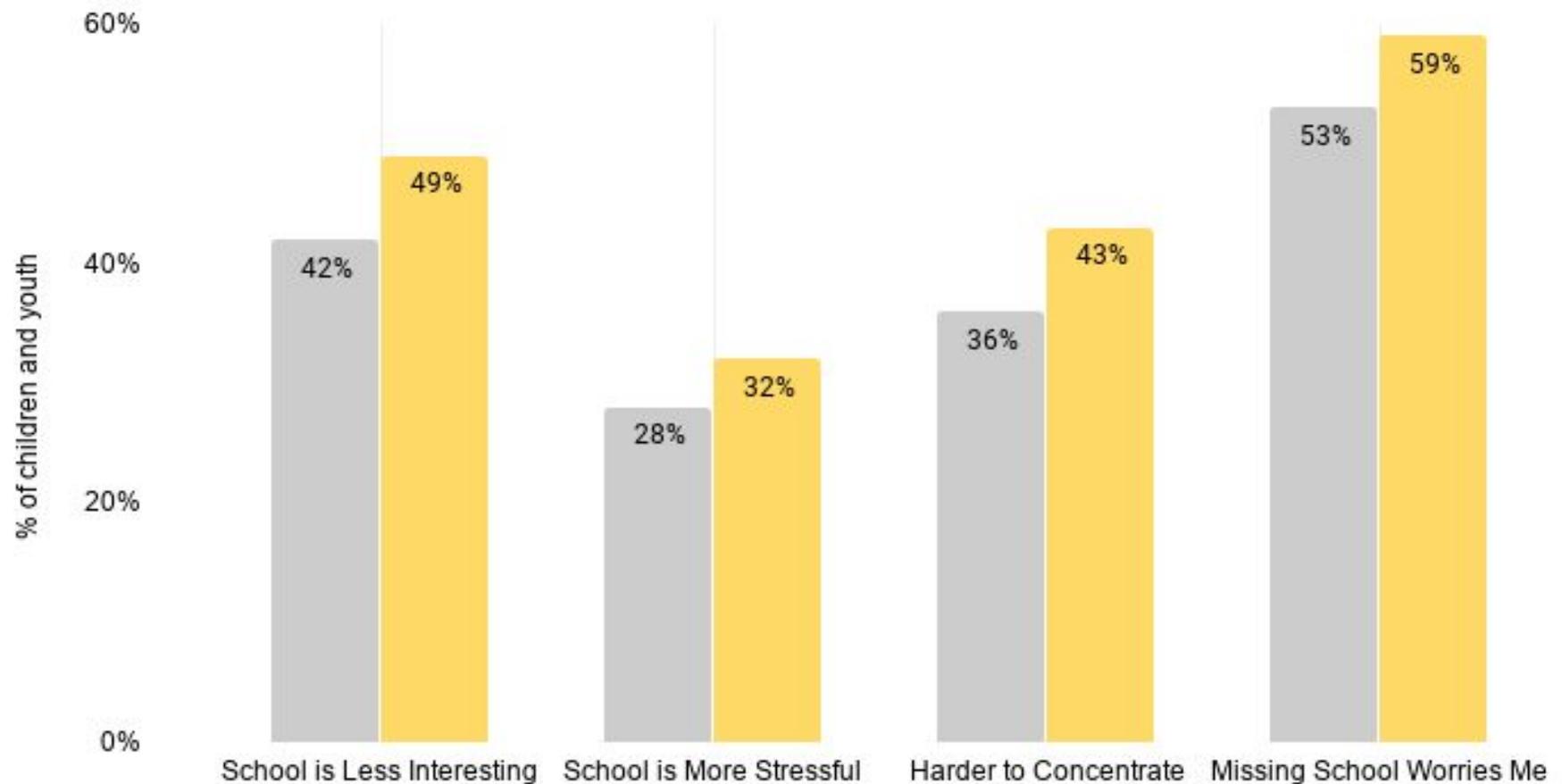


# Figure 5: School experience by household income

## School During the Pandemic by Household Income

Spring 2020 

■ \$50,000 And More   ■ Less Than \$50,000

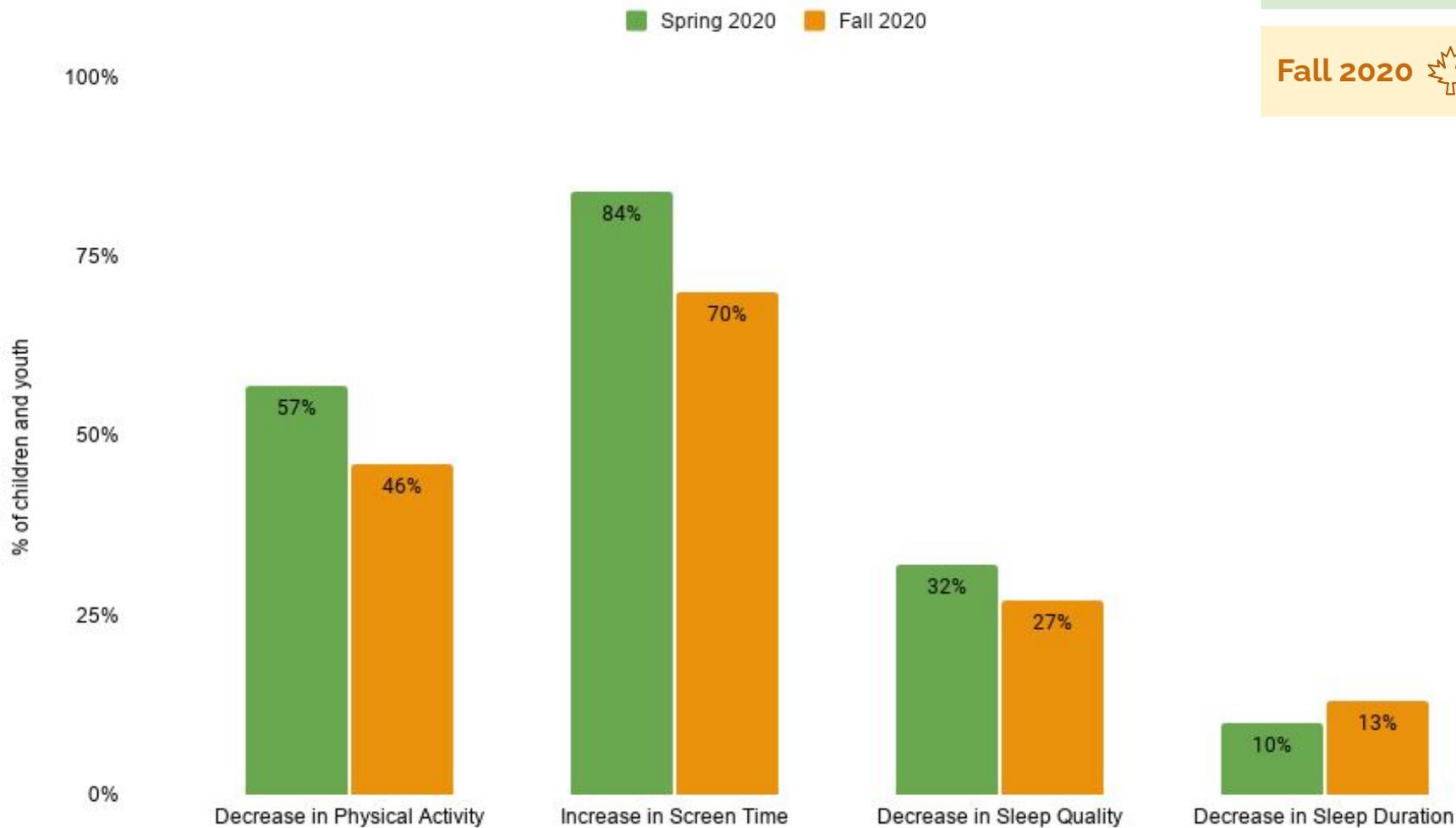


# A few key findings: fall 2020

- Compared to spring respondents, children/youth reported lower declines in their healthy movement levels but there was still a significant proportion reporting a decrease in physical activity, increase in screen time, decrease in time outdoors, and decrease in sleep quality compared to pre-COVID-19.
- Children/youth who live in apartment buildings report greater declines in physical activity, time outdoors, and play time vs. those who live in houses.
- Students who participate in school online or hybrid reported greater decreases in physical activity and time outdoors, and greater increase in recreational screen time compared to in-person peers.
- Subjective well-being improved compared to the spring; overall, the majority of children/youth demonstrated positive emotions
- Significantly more students who participate in school online or hybrid report worsened negative emotions (e.g. more worried, sadder, more alone), as well some positive emotions (e.g.
- Significantly more children/youth were worried about getting COVID-19 compared to the spring.
- A quarter of children and youth reported that the pandemic was having some positive effects on their life.

# Figure 6: Changes in healthy movement levels spring vs. fall

Changes in Healthy Movement Behaviours: Spring vs. Fall

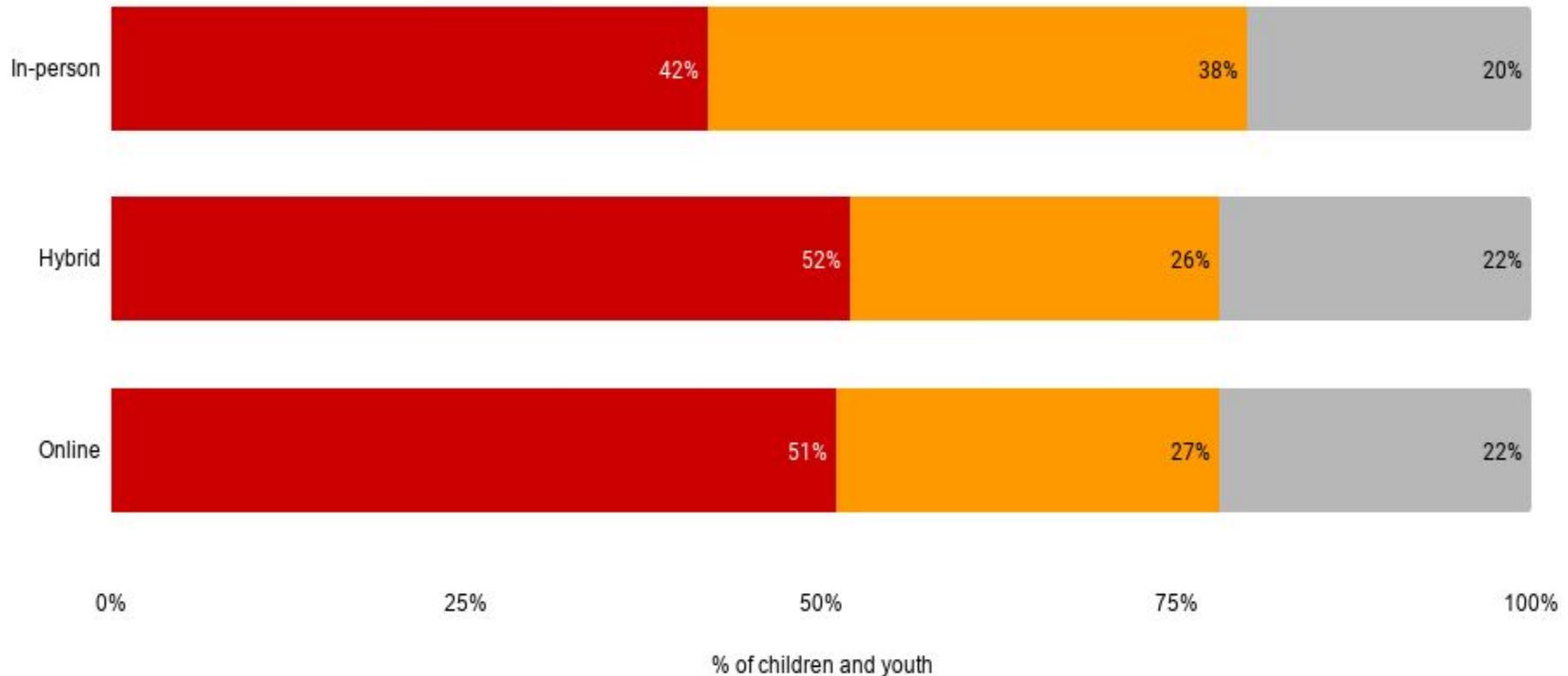


# Figure 7: Changes in physical activity by school type

Changes in Physical Activity by School Type Fall 2020

Fall 2020 

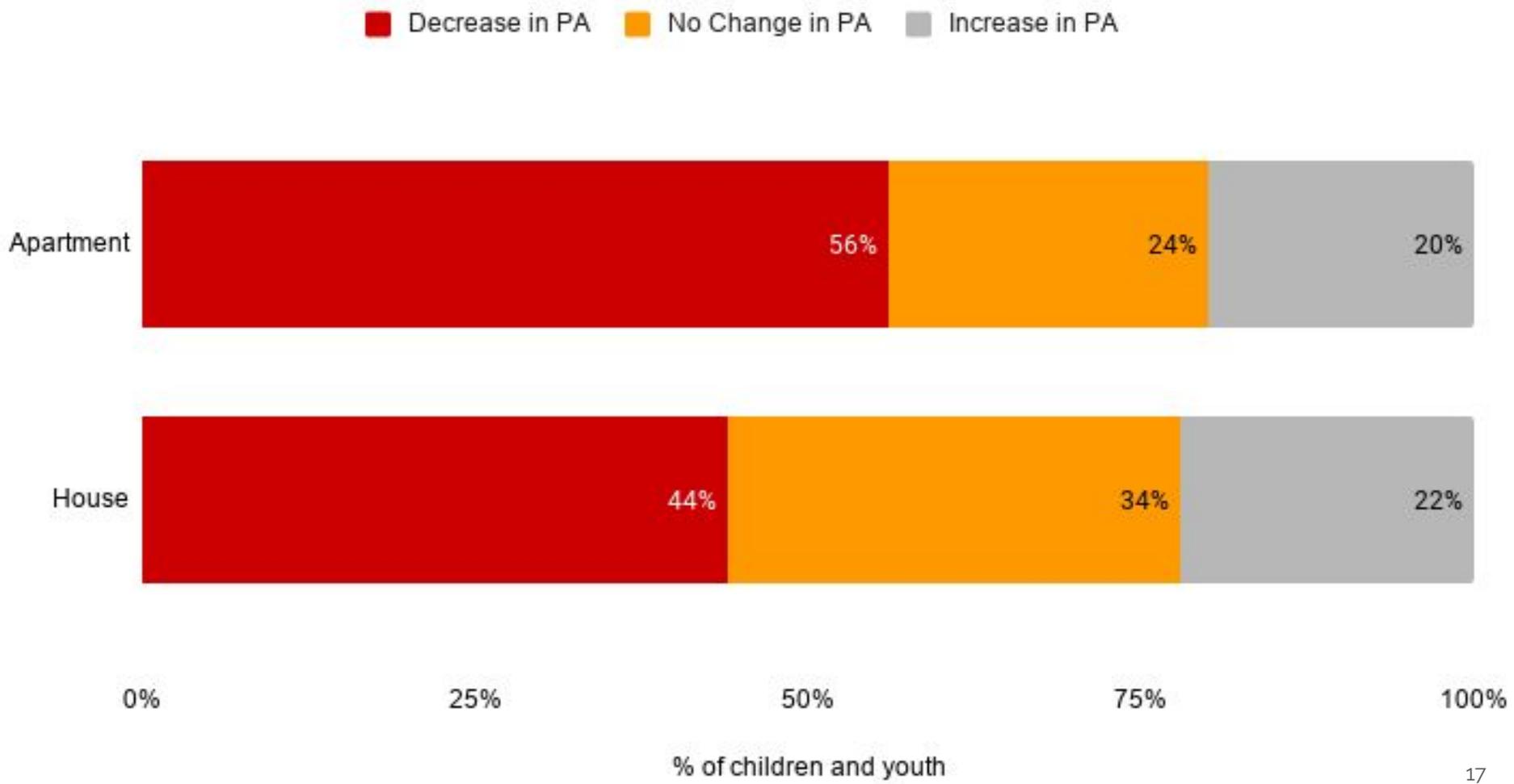
■ Decrease in PA   ■ No Change in PA   ■ Increase in PA



# Figure 8: Changes in physical activity by dwelling type

## Changes in Physical Activity by Dwelling Type Fall 2020

Fall 2020 

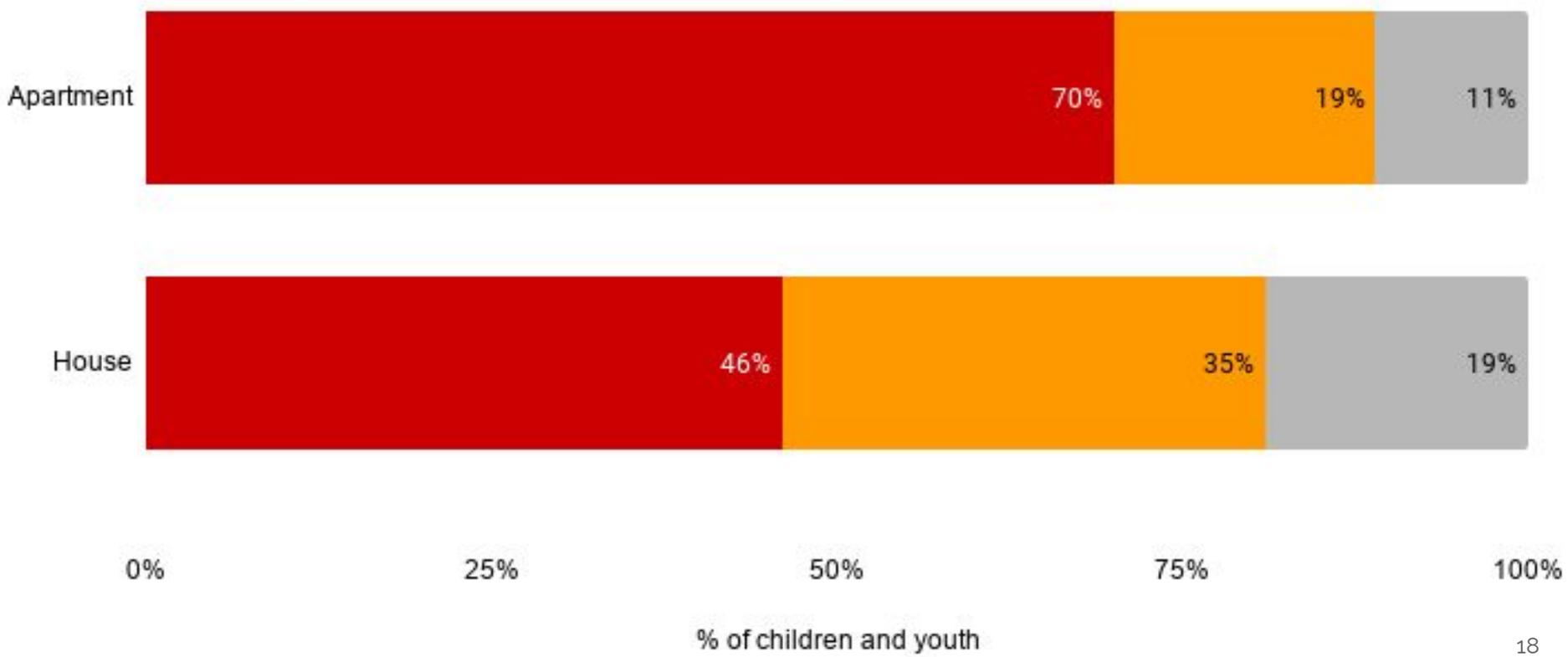


# Figure 9: Changes in time outdoors by dwelling type

## Changes in Time Outdoors by Dwelling Type Fall 2020

Fall 2020 

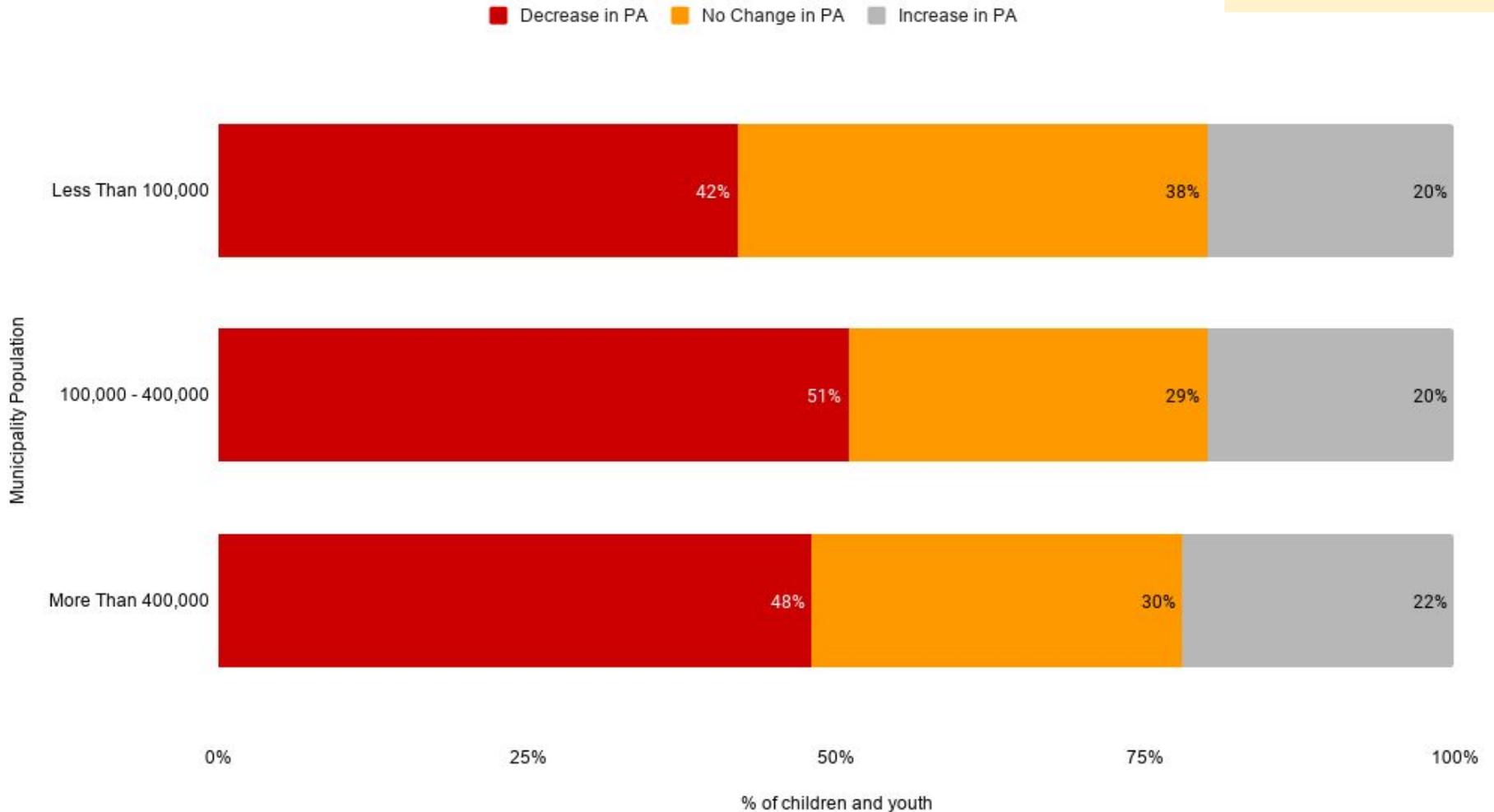
■ Decrease in TO   ■ No Change in TO   ■ Increase in TO



# Figure 10: Changes in physical activity by municipality size

Changes in Physical Activity by Municipality Size: Fall 2020

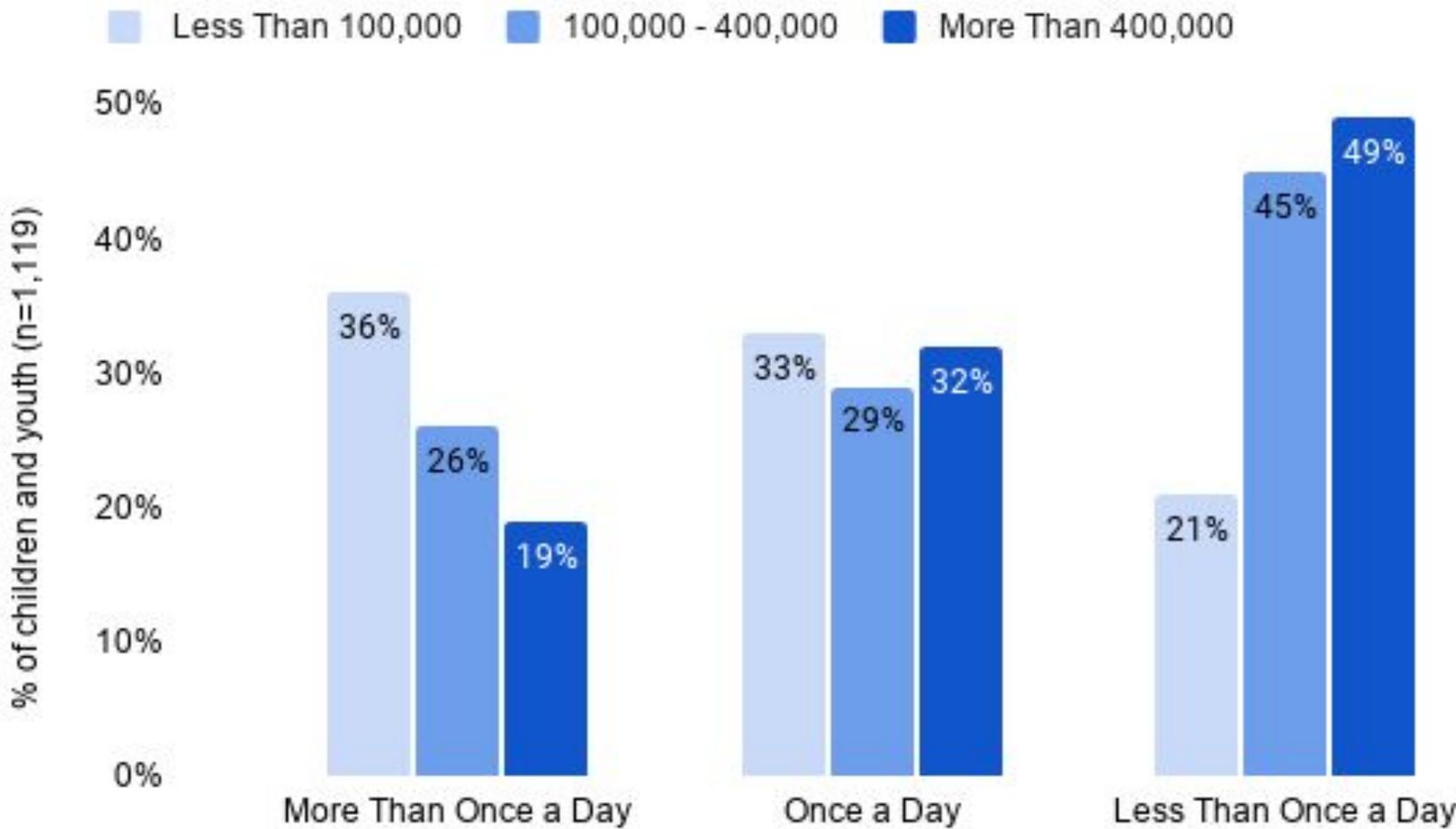
Fall 2020 



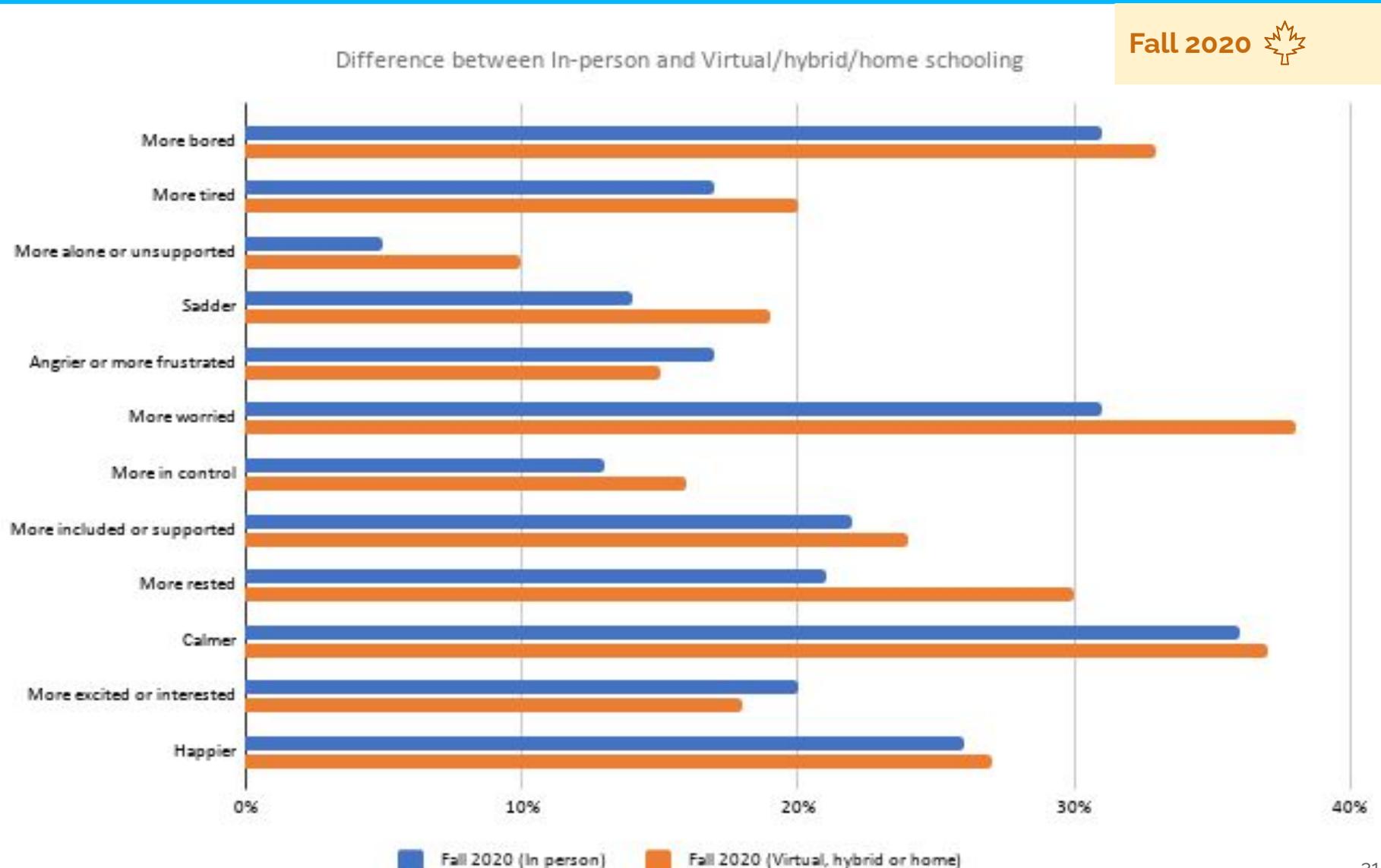
# Figure 11: Frequency of time outside by municipality size

Fall 2020 

## Frequency of Time Outside by Population Size: Fall 2020



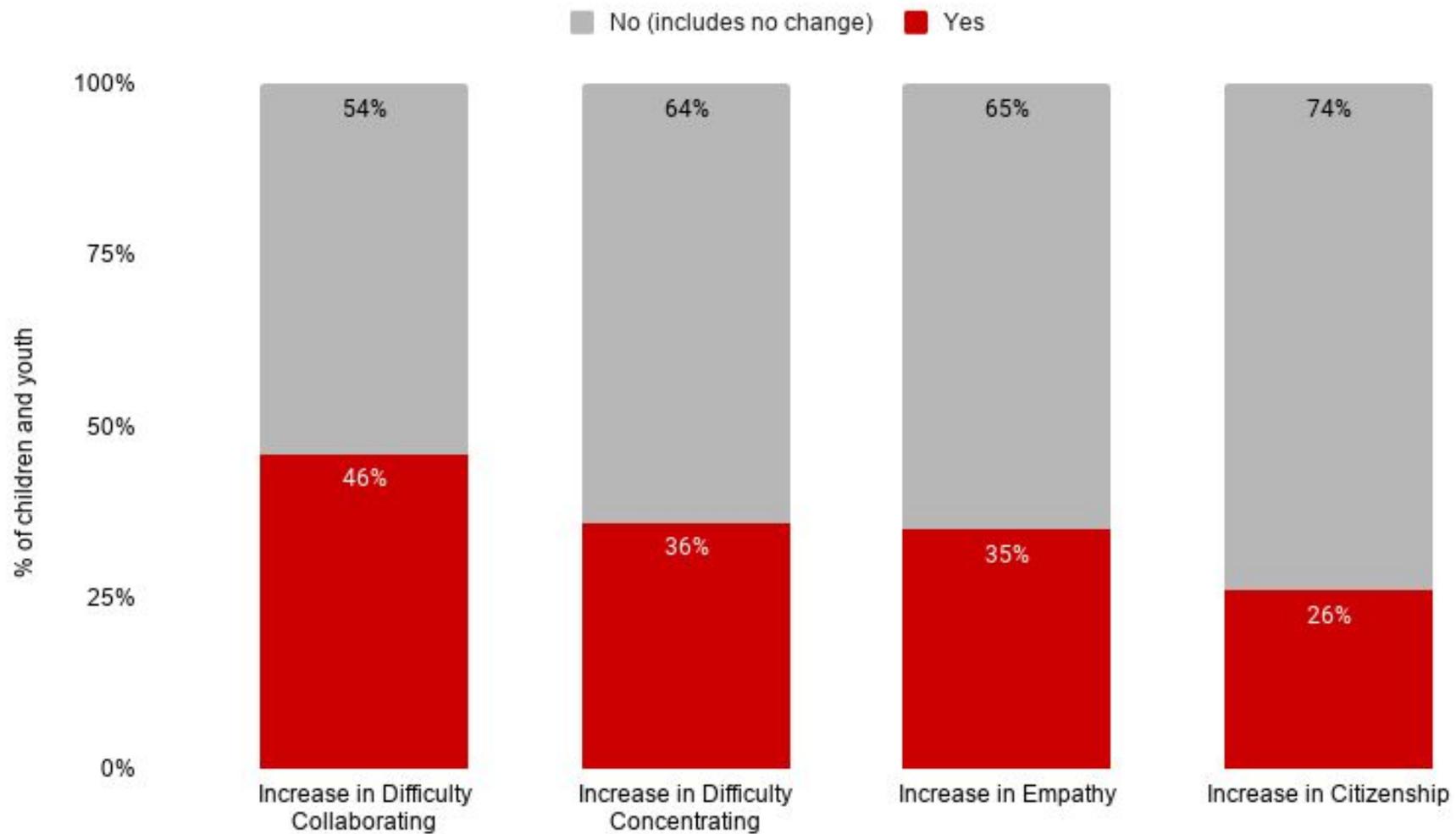
# Figure 12: Feelings experienced more strongly vs. pre-COVID by school type



# Figure 13: Changes in skills and competencies fall 2020

## Changes in Skills and Competencies

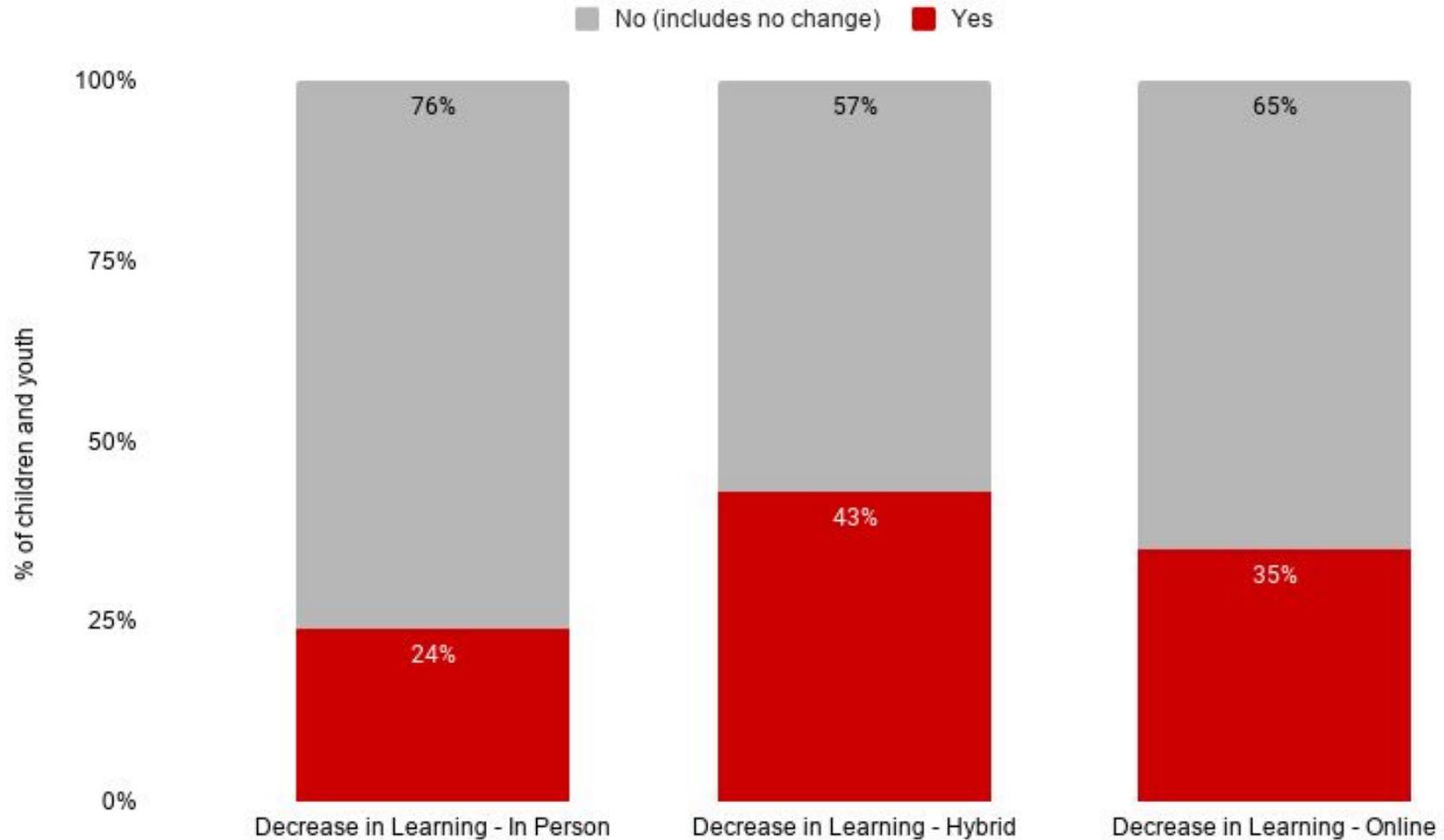
Fall 2020 



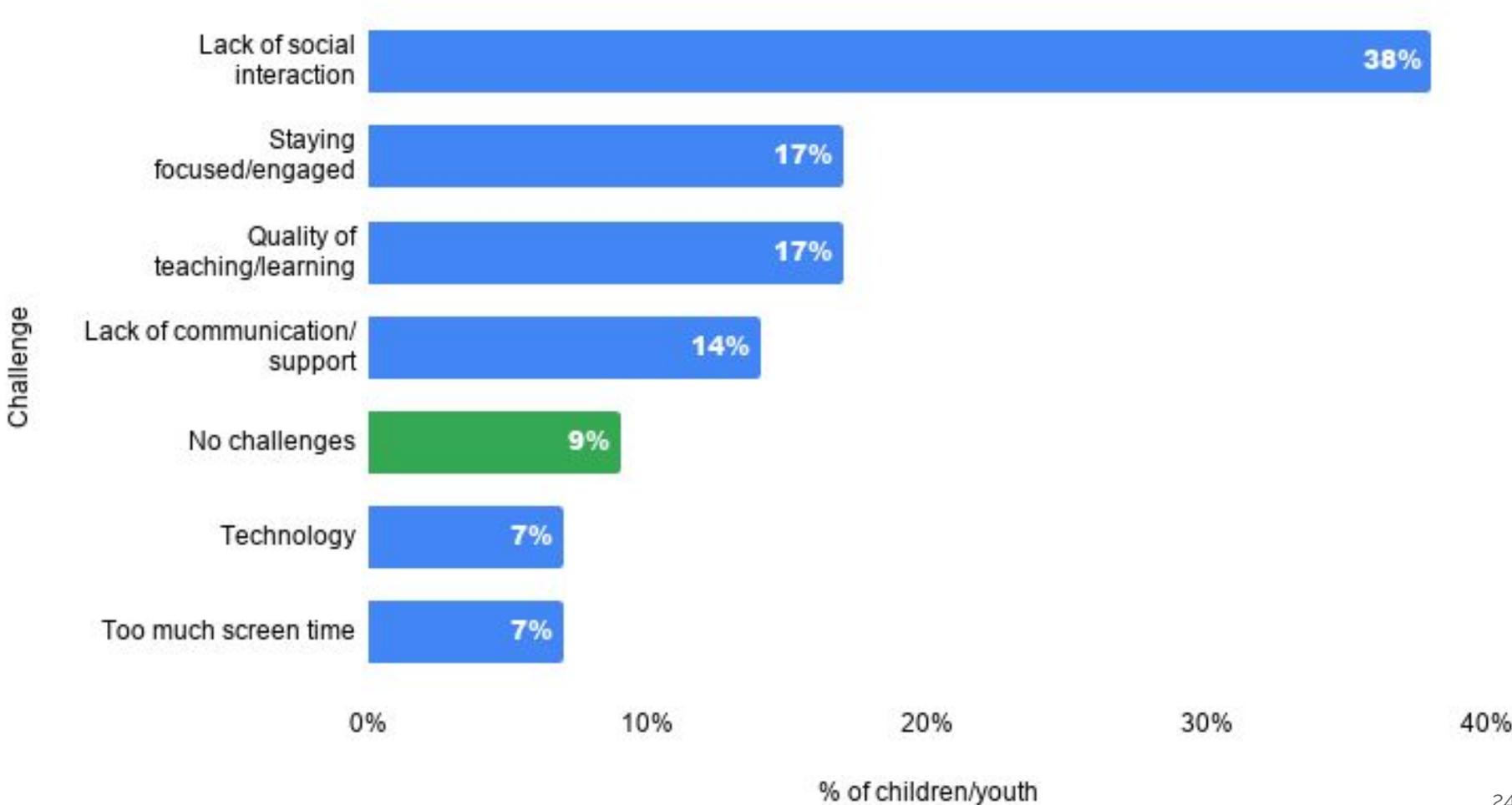
# Figure 14: Changes in self-reported learning by school type fall

## Changes in Self-Reported Learning by School Type

Fall 2020 



## Most Commonly Cited Challenges of Virtual School (GTA students)



# Phase Three: Winter/Spring 2021

## 3 MINUTES FOR YOUR HEALTH AND HAPPINESS

1. Complete the **COBRA quiz** (COVID Well-Being Risk Assessment) for ages 6-17
2. Find out your score and risk level for worsening well-being
3. Get targeted recommendations for boosting health and happiness

March 2021: contribute your ideas to a national child-friendly recovery plan

# COBRA: a risk assessment tool for children/youth during COVID

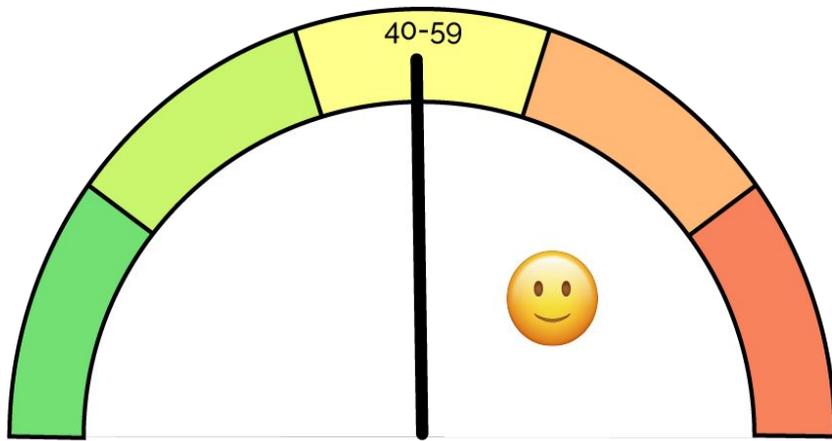
## Introduction

The COVID Well-Being Risk Assessment (COBRA quiz for short) asks children and youth about their daily life to assess risk and protective factors related to their health and happiness during the COVID-19 pandemic. It is based on research conducted during the spring and fall of 2020 with over 2,100 Canadian children and youth, [publicly available information](#), and the [Canadian 24-hour movement guidelines](#).

## Who is the assessment for and why does it matter?

The COBRA quiz is for young people ages 6-17 who live in Canada and are generally experiencing average or good health. It can be completed alone or with the help of a parent/caregiver in about three minutes. At the end of the short questionnaire, a “score” and risk level will be shown based on answers given, along with targeted recommendations to boost your health and happiness. We will use the results as part of our efforts to collect the lived experience of young Canadians during COVID and highlight their needs as part of a child-friendly recovery (more in Next Steps).

# COBRA: sample results screen



Risk Level: Medium

Some ways to give your health and happiness a boost are:

More light physical activity like walking or playing



More energetic physical activity like running or jumping



More time outside like going to the park or playground



Score	0-19	20-39	40-59	60-79	80-100
Risk Level	Very Low	Low	Medium	High	Very High

[maximumcity.ca/wellbeing](https://maximumcity.ca/wellbeing)



# Table 3: Self-reported behaviours and conditions associated with increased resilience (or lower declines in well-being) vs. risk factors

PROTECTIVE FACTOR	RISK FACTOR
Maintains or increases physical activity levels	Decreases physical activity levels
Spends less time on digital screens	Spends more time on digital screens
Maintains or increases sleep quality and duration	Decreases sleep quality or duration
Goes outside once or more per day	Goes outside less than once per day
Has access to indoor and outdoor space to play and exercise	Has limited access to indoor and outdoor space to play and exercise
Has a friend to talk to about how they are feeling	Does not have a friend to talk to about feelings
Participates in school in person	Participates in school virtually or hybrid
Lives in a house	Lives in an apartment
Lives outside an urban area	Lives in an urban area
Household members are in average or good health; lower household size	Household members are high-risk or frontline worker; higher household size
Has a pet	Has decreased feelings of safety outside
Increases in quality family time	Has decreased feelings of household harmony
Source: <a href="https://maximumcity.ca/wellbeing">maximumcity.ca/wellbeing</a>	<p><b><i>*does not include other socio-ecological factors to be included in analysis</i></b></p>

# Next Steps

Timeline	Actions
<b>January - March 2021</b>	<ul style="list-style-type: none"><li>● Promote COBRA assessment questionnaire through organizations and individuals who support child/youth development and well-being with a <b>goal of 3,000 submissions nationally by March 31, 2021.</b></li><li>● Conduct qualitative interviews in vulnerable GTA communities.</li></ul>
<b>January - February 2021</b>	<ul style="list-style-type: none"><li>● Layer socio-ecological data onto the questionnaire results <a href="#">map</a>, which currently focuses on individual factors related to health and well-being.</li></ul>
<b>March 2021</b>	<ul style="list-style-type: none"><li>● Share classroom activity with teachers at middle and high school level for students to analyze, synthesize, and report on aggregated COBRA data.</li><li>● As part of this activity, students will engage in SEL (Social-Emotional Learning) and problem-solving exercises to contribute their ideas, based on their findings and experiences, on how to best help young Canadians thrive as part of a child-friendly COVID recovery.</li></ul>
<b>May – September 2021</b>	<ul style="list-style-type: none"><li>● Report and present overall findings and recommendations to decision-makers.</li></ul>

# Research and Engagement Team

The Maximum City research and engagement team consists of:

- Josh Fullan, Project Lead [josh@maximumcity.ca](mailto:josh@maximumcity.ca)
- Hannah Miller, Research and Analysis
- Jaime Rosen, Graphic Design
- Meredith Gillespie, Research Assistant

Additional support and analysis provided by:

- Susie Saliola, Esri Canada
- Dr. Raktim Mitra, Ryerson University

To complete an assessment: <https://maximumcity.ca/cobra>