Winter 2021

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

MAXIMUM CITY

Prepared by Maximum City

February 2021 Update

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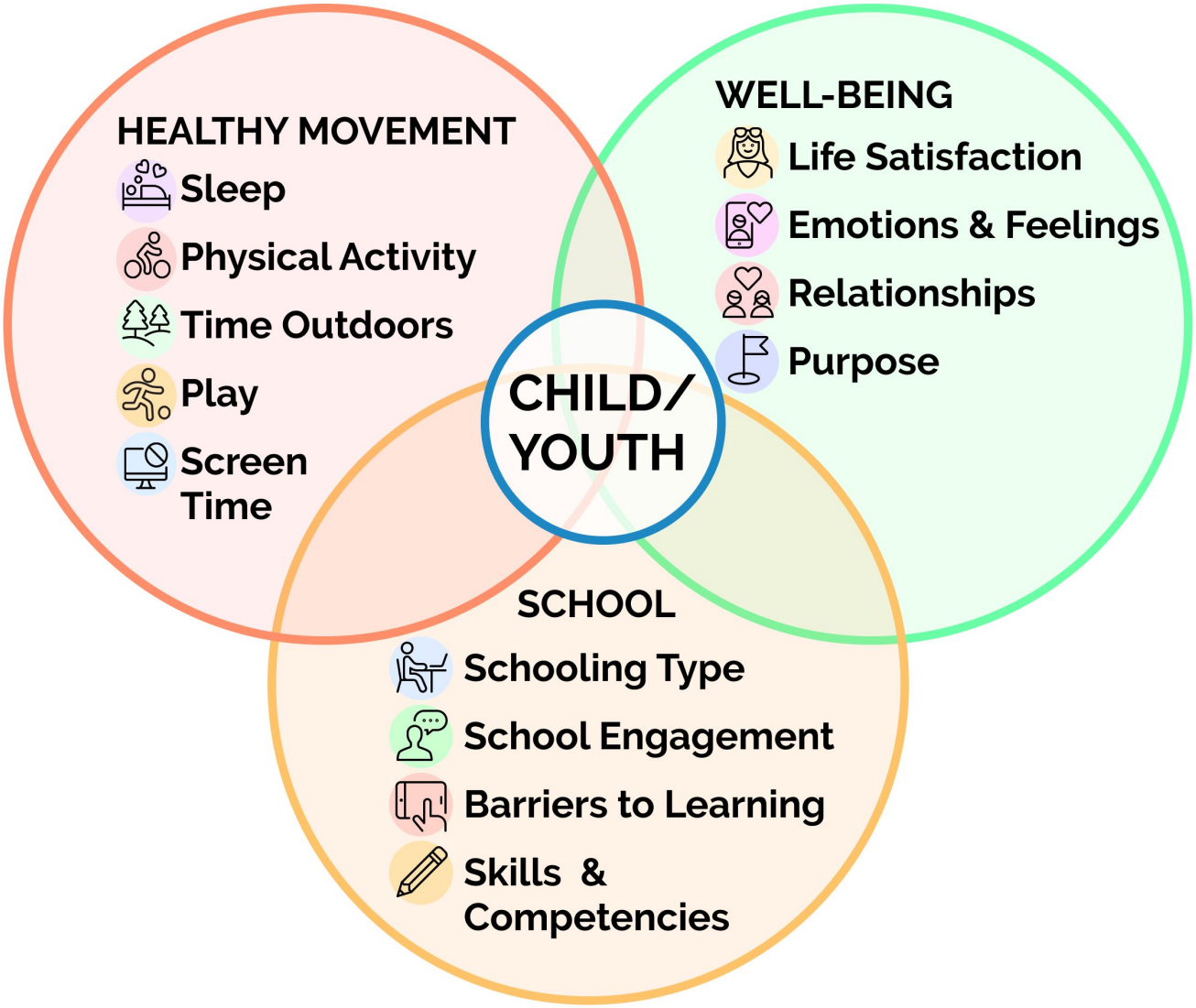
Introduction

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 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 French or English**. A third phase of research and engagement is currently underway.

The outcomes, as of February 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.

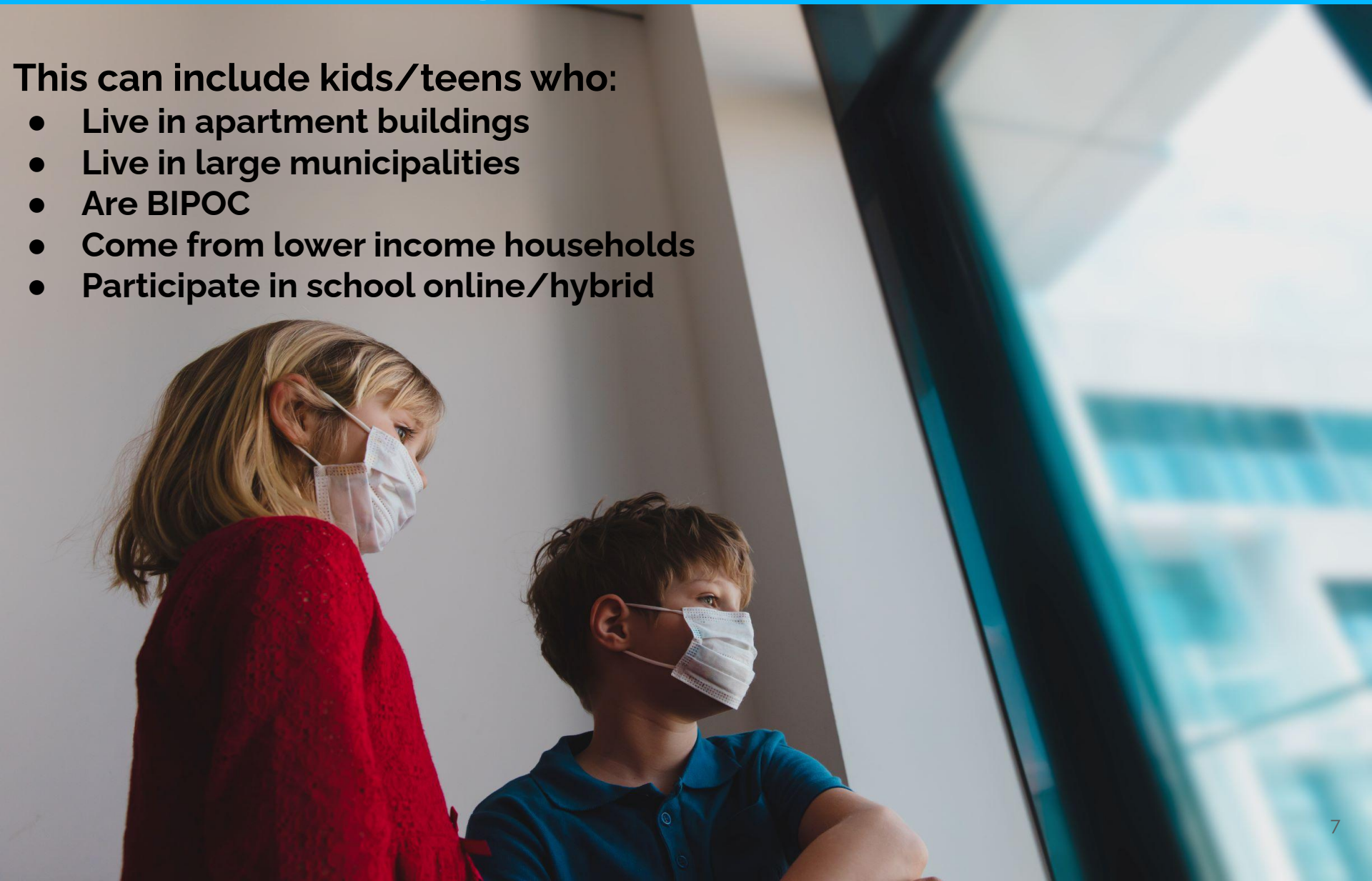
Areas of study



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

The 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**
- **Are BIPOC**
- **Come from lower income households**
- **Participate in school online/hybrid**

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

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

Promoting modifiable behaviours

- Go outside every day 🌲
- Maintain or 🔼 physical activity ⛷️
- All movement matters 💪 (play, chores, short walk)
- Take breaks from or ⬇️ time on digital screens 📱
- Make time to talk 😀 to a friend 👋
- Online students 💻 need extra care/support ❤️

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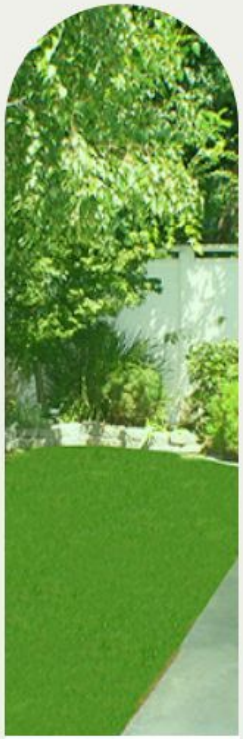
Structural and social barriers

- BIPOC children/youth were 2.5 times more likely than their white peers to say they are afraid to go outside during COVID-19.
- More than a third of East Asian children/youth reported experiencing COVID-related racism or discrimination in the fall.
- Lower income households were more likely to report not having access to enough indoor and outdoor space compared to higher income households.
- Children/youth who live in apartment buildings reported greater declines in physical activity, time outdoors, & play time compared to those who live in houses.
- Significantly more students who participate in school online or hybrid (compared to in person) reported worsened negative emotions (e.g. more worried, sadder, more alone).
- A third of children/youth feel like their concerns and opinions about COVID-19 are being overlooked
- Income loss due to the the pandemic, and its effect on the ability to meet daily needs, was more severe on lower income compared to higher income households.
- BIPOC children/youth are more worried about getting COVID-19, and more worried someone they care about will get it, compared to white children/youth.
- See Dr. Raktim Mitra's social and economic deprivation spatial analysis of Toronto results for more.
- Where children/youth spend most of their outdoor time reveals the importance of shared spaces like sidewalks and parks as an equity issue (see next slides).

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

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Where do you spend most of your outdoor time (excluding schoolyard/yard)?

Fall 2020

Sidewalk/ Street/Trail

42%

Playground /Park

35%

Driveway

14%

Balcony/ Terrace

9%

% of Canadian children / youth

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Select 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 before the 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 in 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/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

Spring 2020

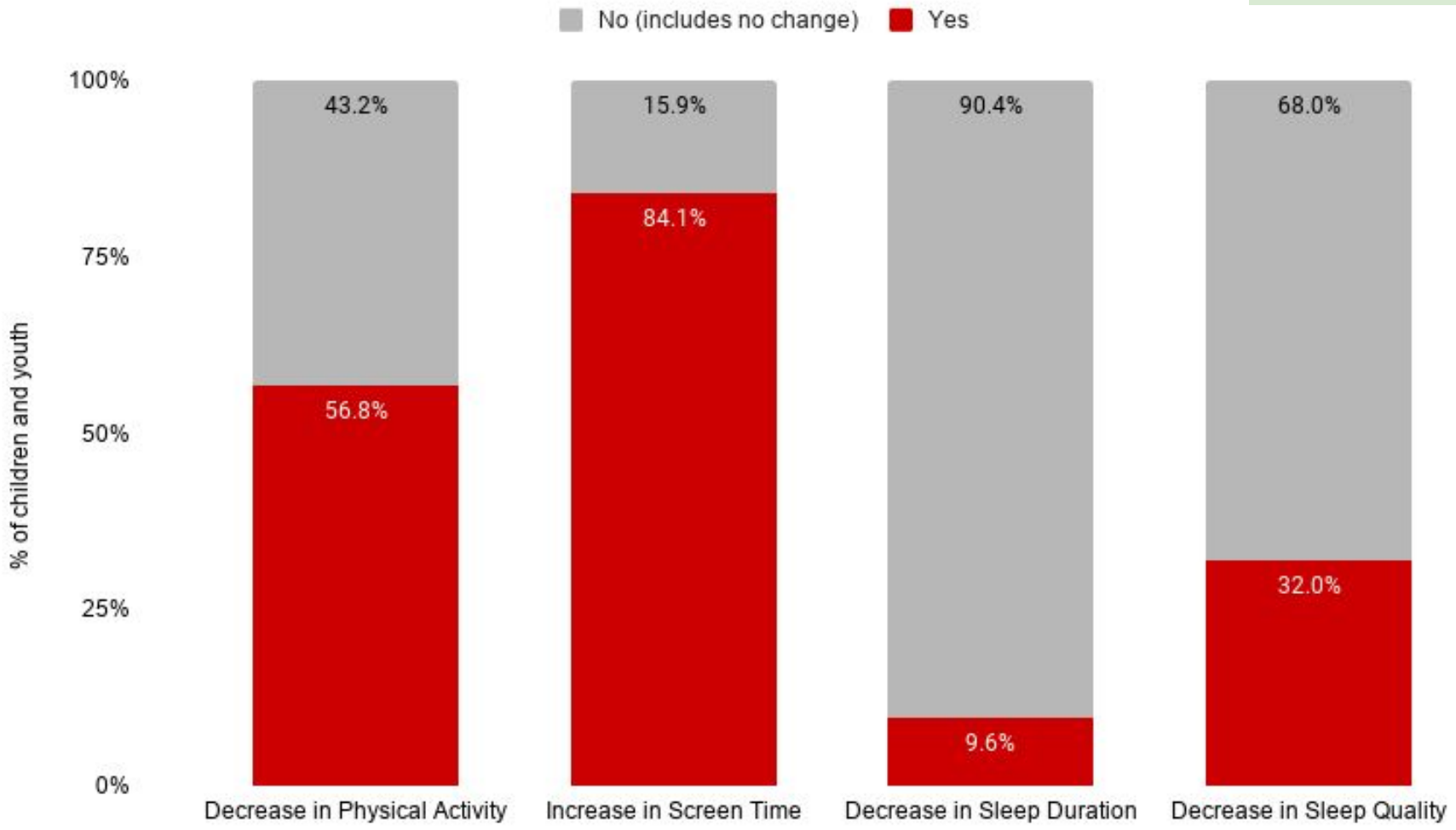
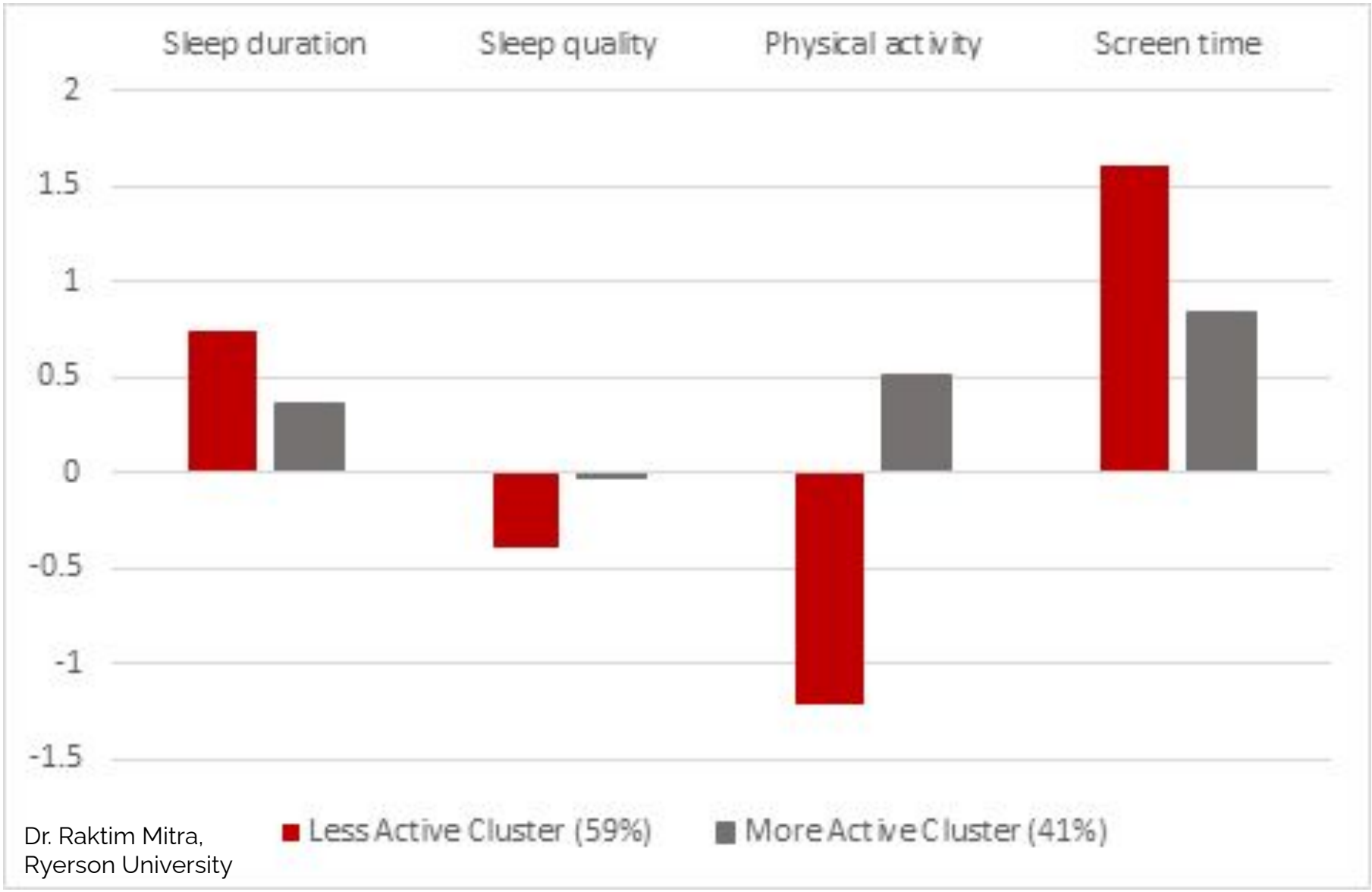


Figure 2: Statistical patterns in healthy behaviours



Dr. Raktim Mitra,
Ryerson University

Figure 3: Changes in physical activity by ethnoracial background

Spring 2020

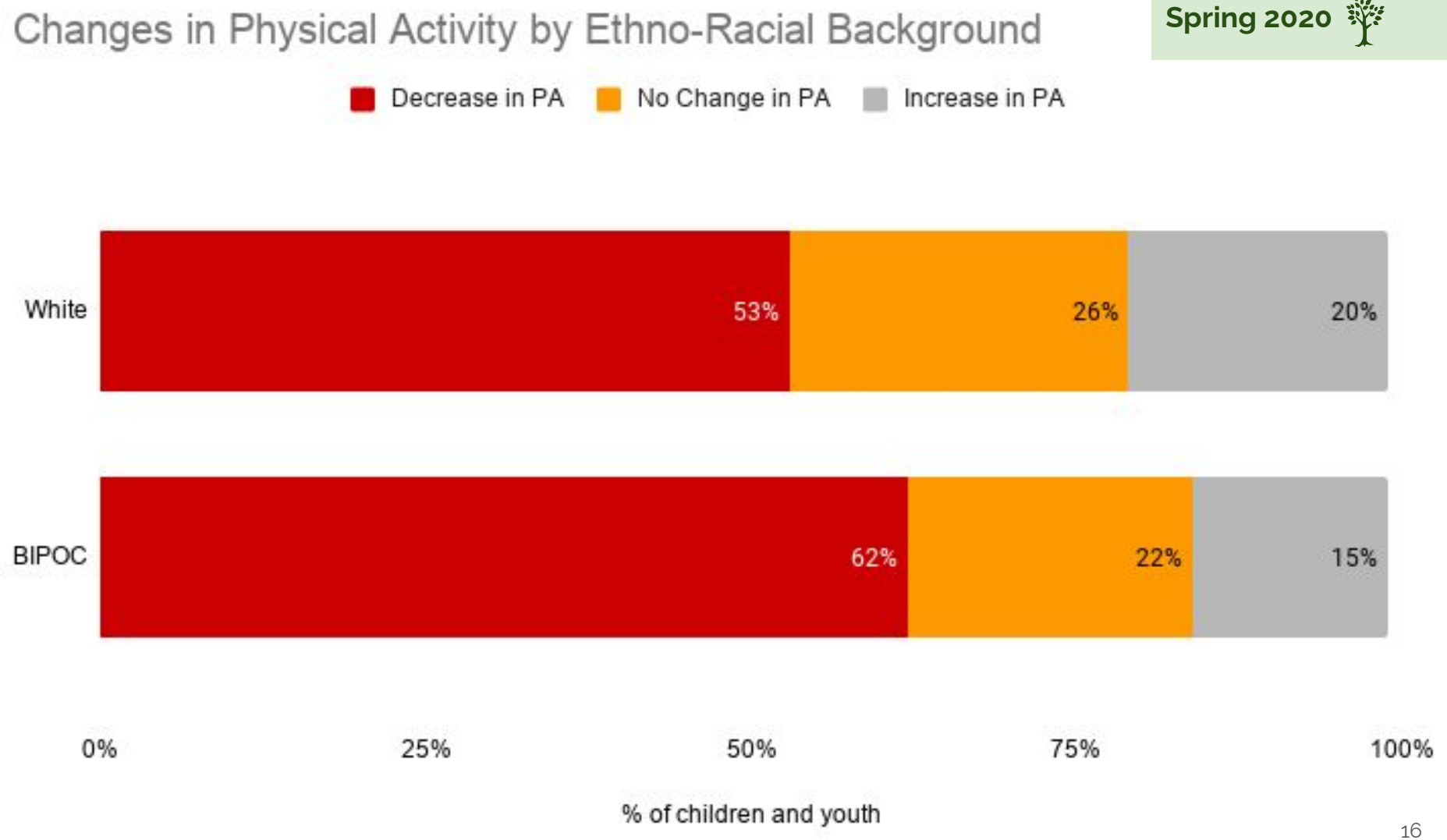


Table 1: Changes in physical activity by variables of difference

Variables Of Difference	No Decrease In Physical Activity (%)	Decrease In Physical Activity (%)	Chi-sq Test Significance (P)
Parent's Age			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	
Ethnicity			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	
Child's Age			0.024
9-11 Years	47.9	52.1	
12-16 Years	40.1	59.9	
Municipal Population Size			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) %
Pleasant + High activation	Happier More excited or interested	2.2 1.7	52.1 30.7
Pleasant + Low activation	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
Unpleasant + High activation	More worried Angrier or more frustrated	51.5 23.2	11.1 4.0
Unpleasant + Low activation	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

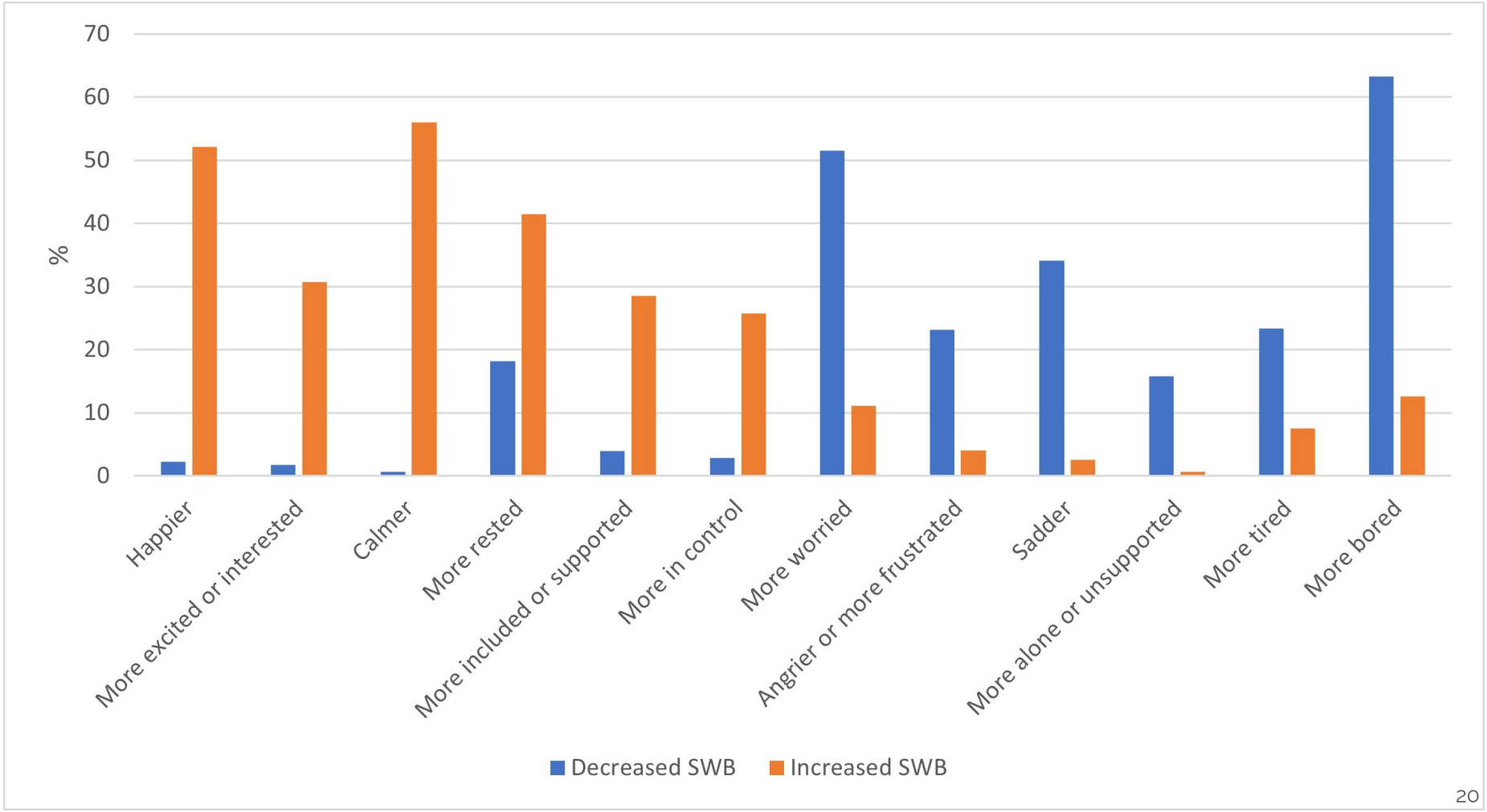
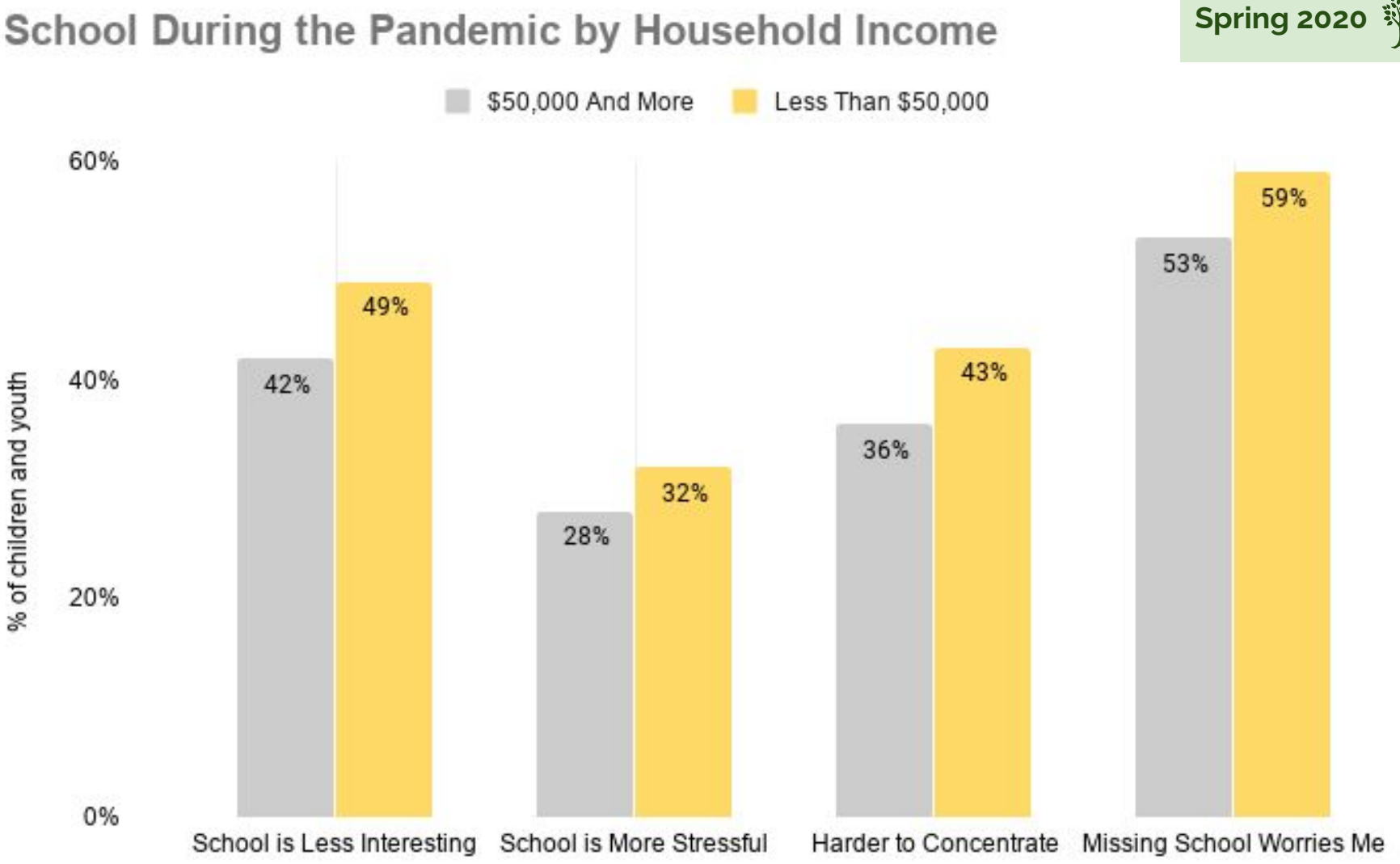


Figure 5: School experience by household income

Spring 2020



Select key findings: fall 2020

- Compared to spring respondents, children/youth in the fall 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 before the pandemic.
- Compared to the spring, children/youth were more worried about getting COVID-19 and falling behind at school because of the pandemic.
- Children/youth who live in apartment buildings reported 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 significantly greater increase in recreational screen time compared to in-person peers.
- Subjective well-being improved compared to the spring. The most common improved positive emotions were feeling calmer (33%) and happier (27%); the most common worsening negative emotions were feeling more worried (31%) and more bored (29%).
- More students who participate in school online/hybrid reported worsened negative emotions (e.g. more worried, sadder, more alone), as well some improved positive emotions.
- A quarter of children/youth reported that the pandemic was having some positive effects on their life.
- Over a third of children/youth reported higher levels of empathy and over a quarter report greater sense of social responsibility vs. before the pandemic.

Figure 6: Changes in healthy movement behaviors spring vs. fall

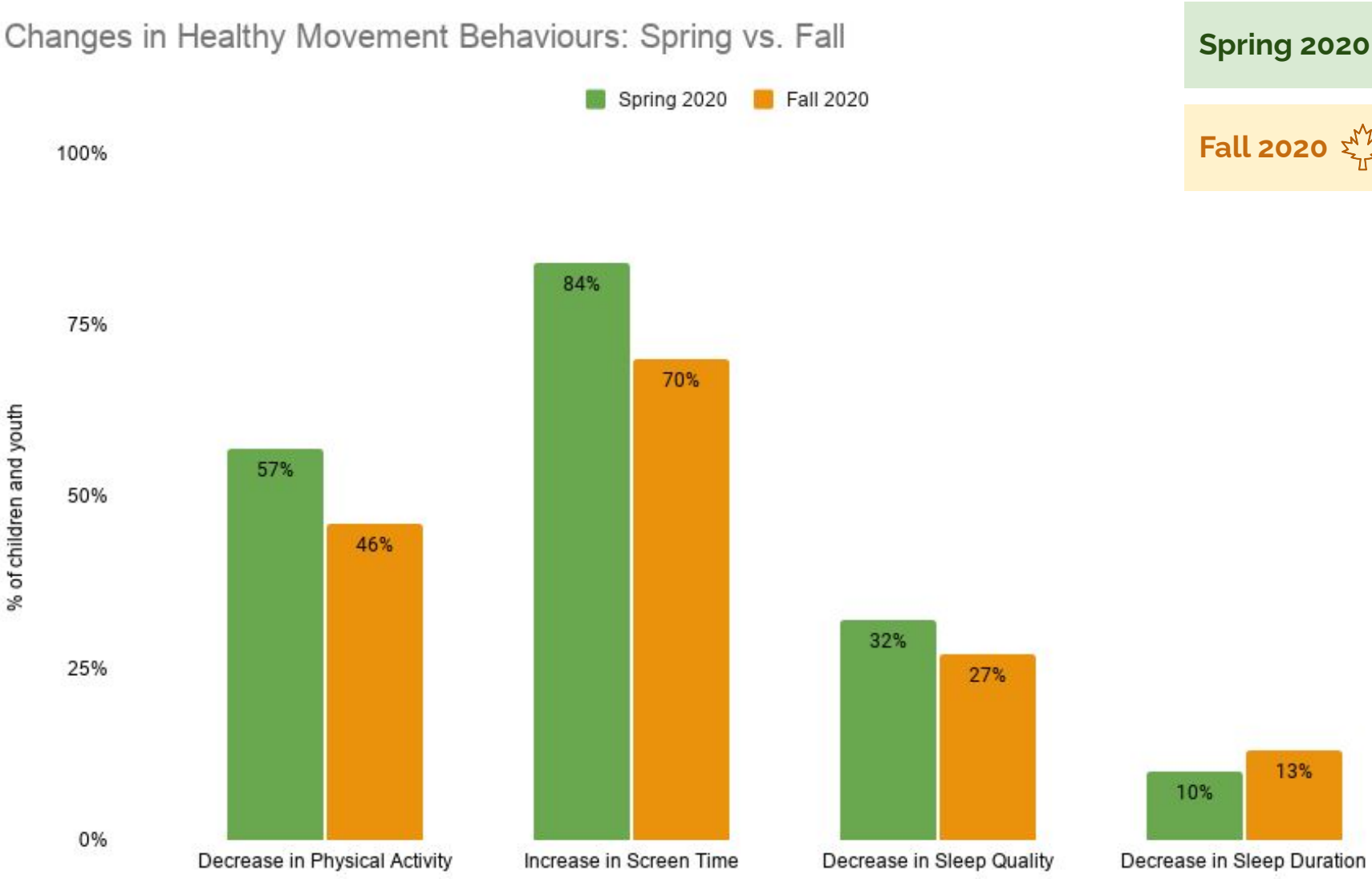


Figure 7: Decrease in healthy movement by ethnoracial background

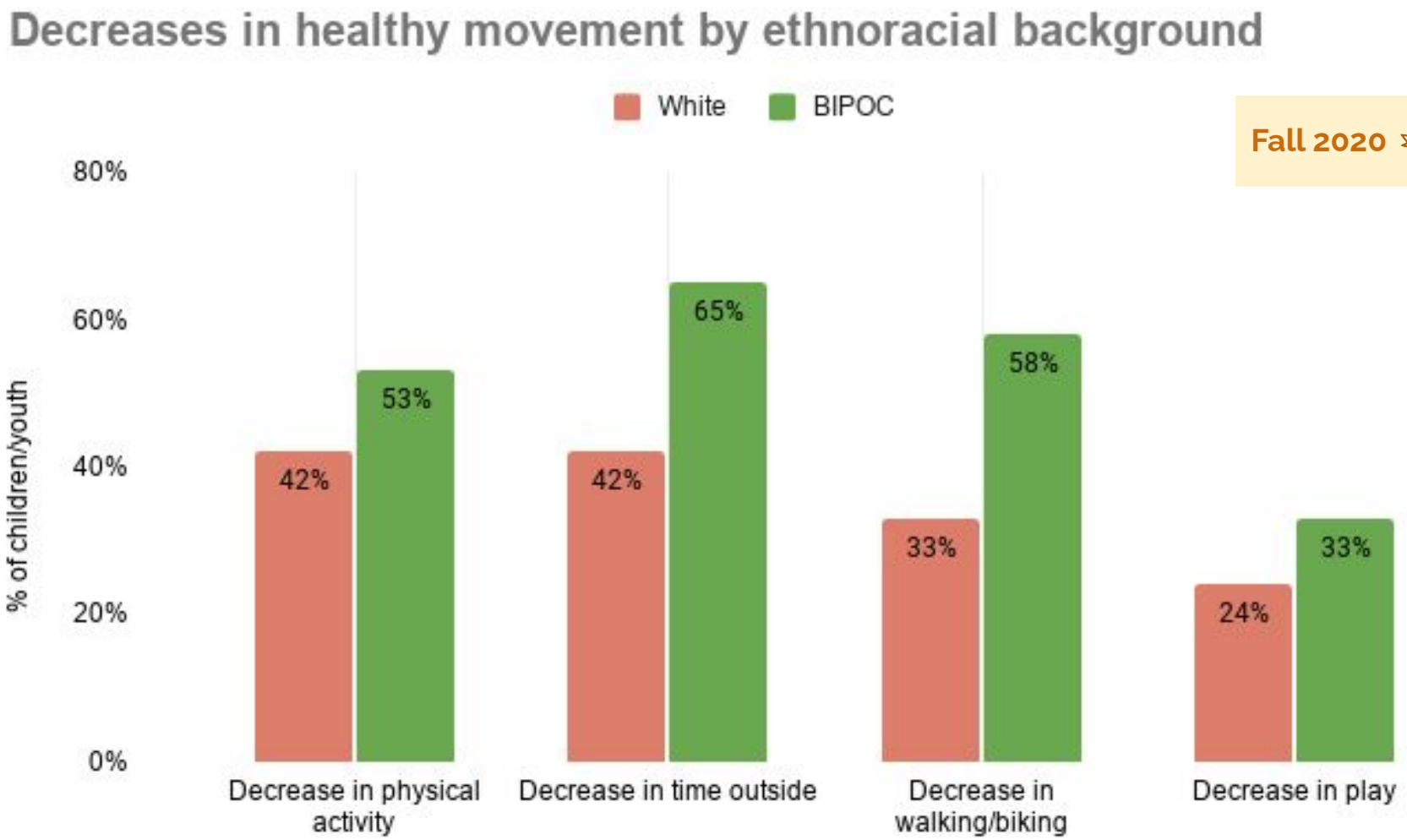


Figure 8: Secondary effects of pandemic spring vs. fall

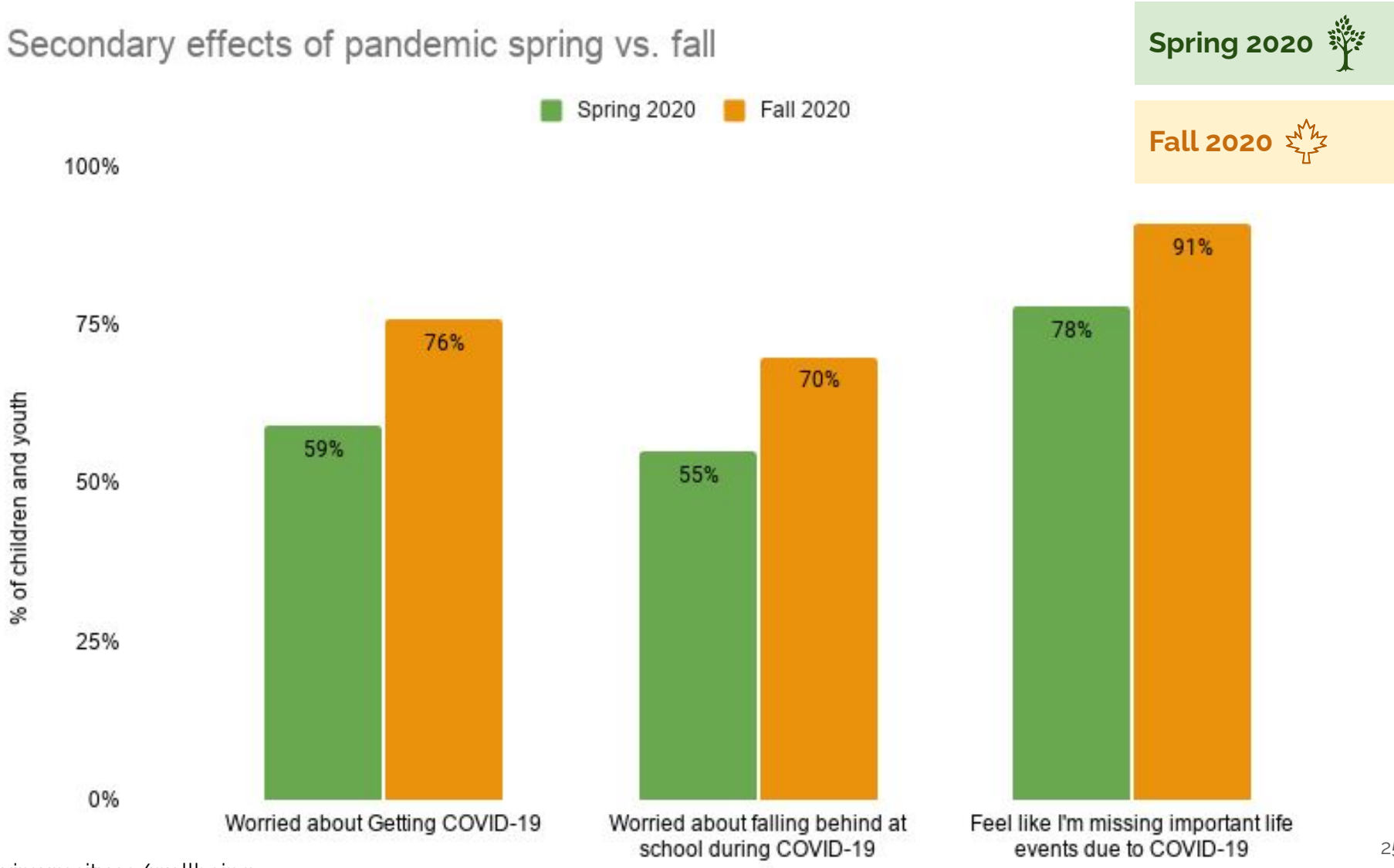


Figure 9: Secondary effects by ethnoracial background

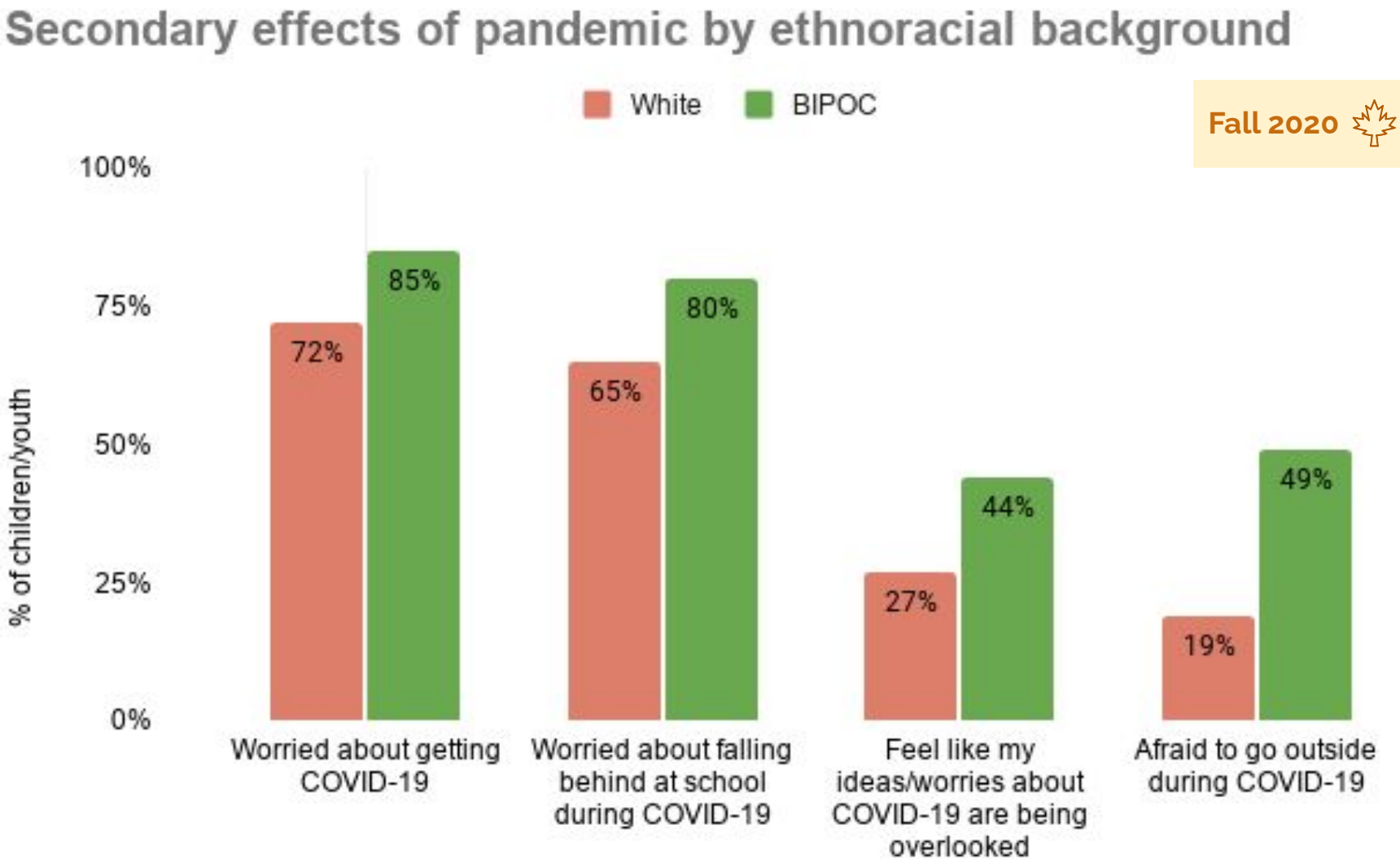


Figure 10: Changes in physical activity by school type

Fall 2020

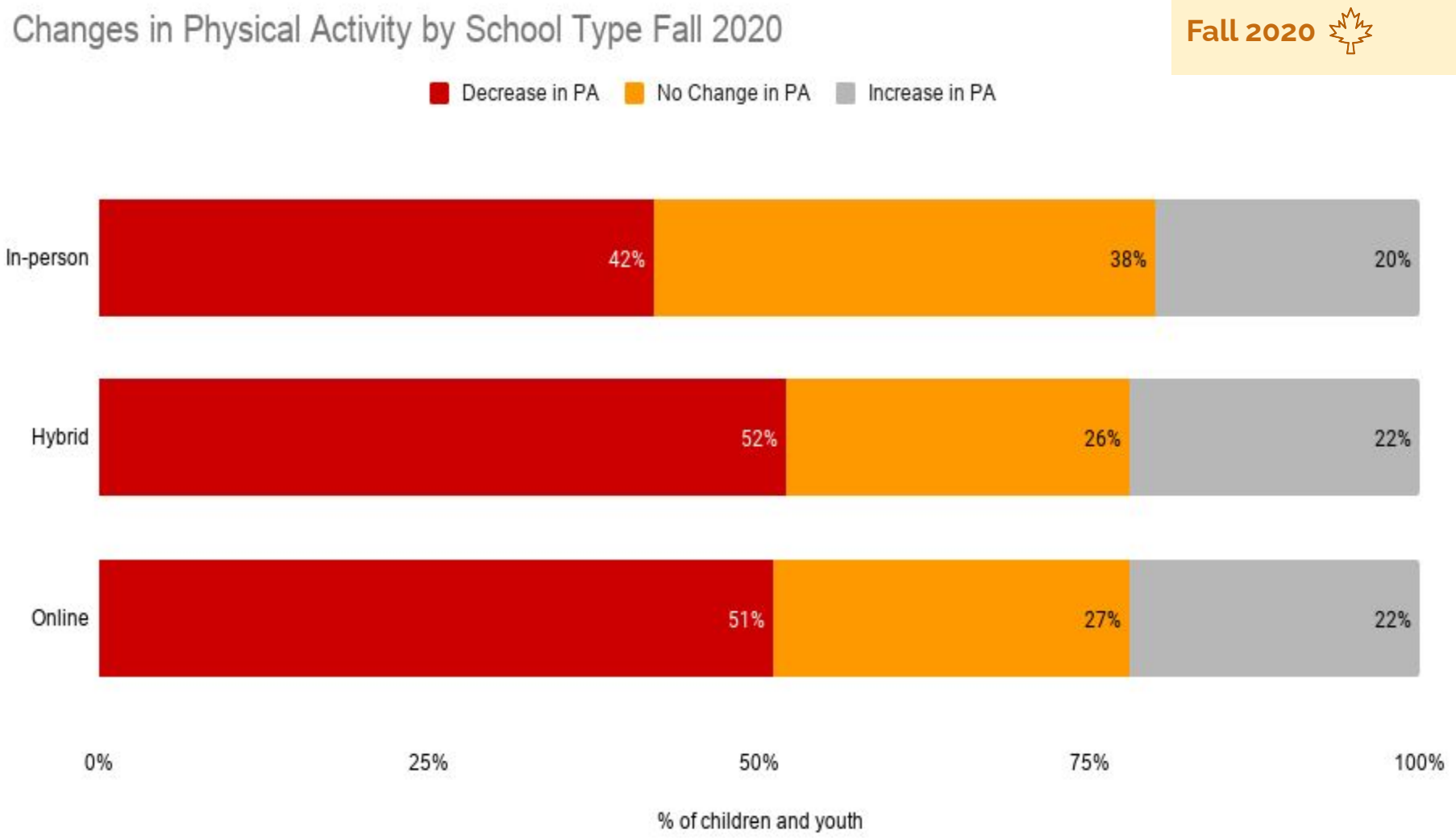


Figure 11: Changes in physical activity by dwelling type

Fall 2020

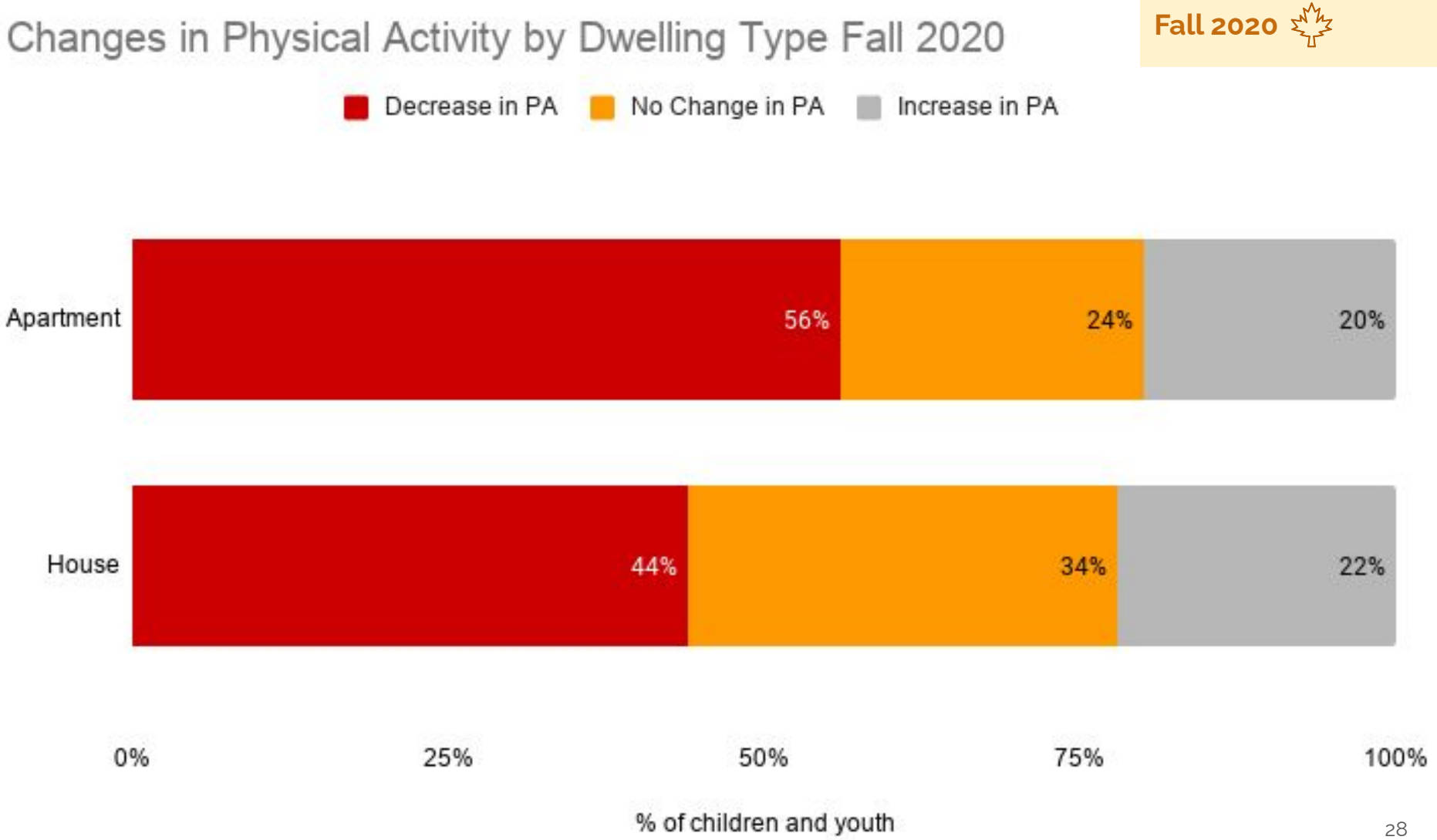


Figure 12: Changes in time outdoors by dwelling type

Fall 2020

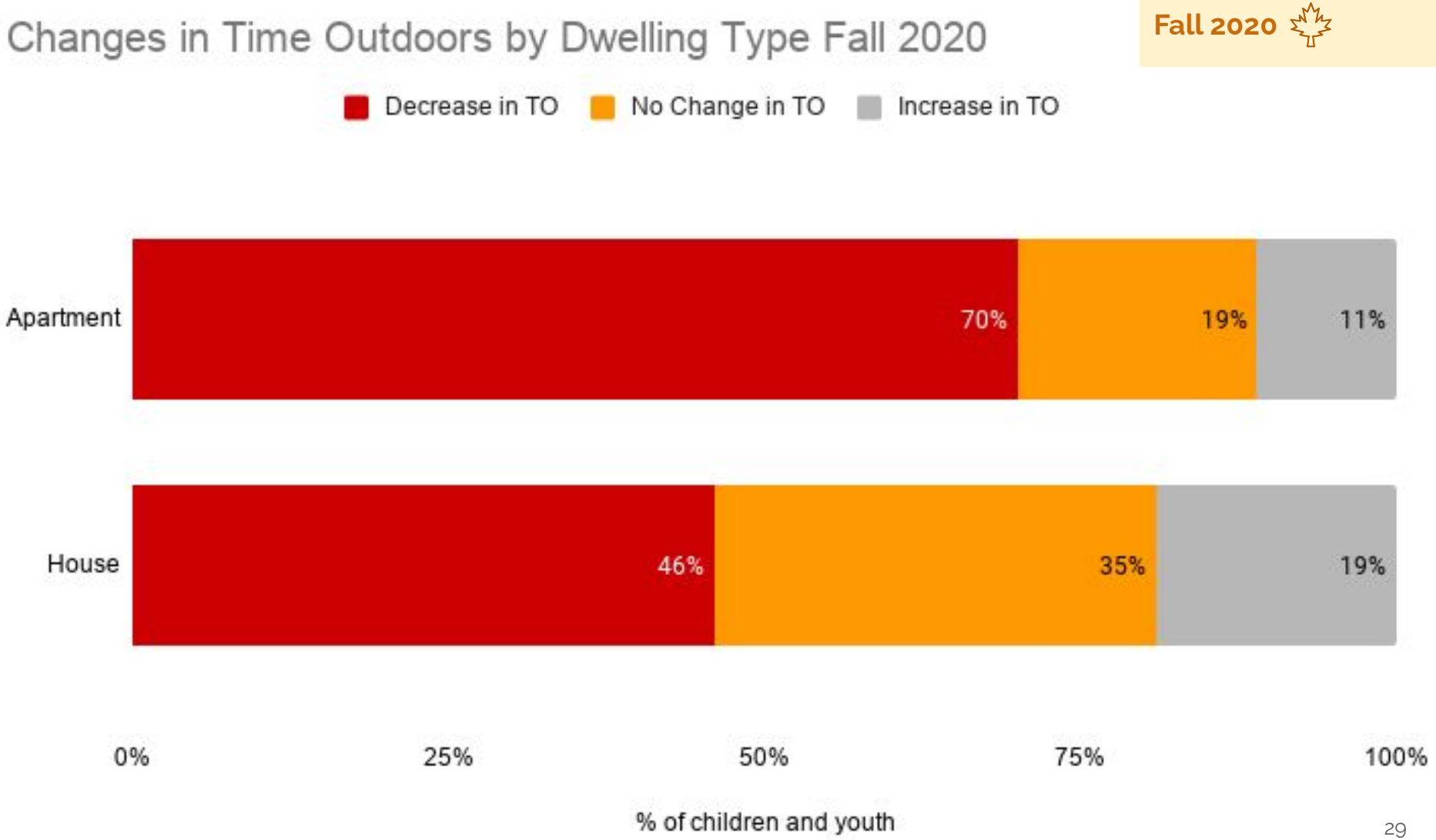


Figure 13: Changes in physical activity by municipality size

Fall 2020

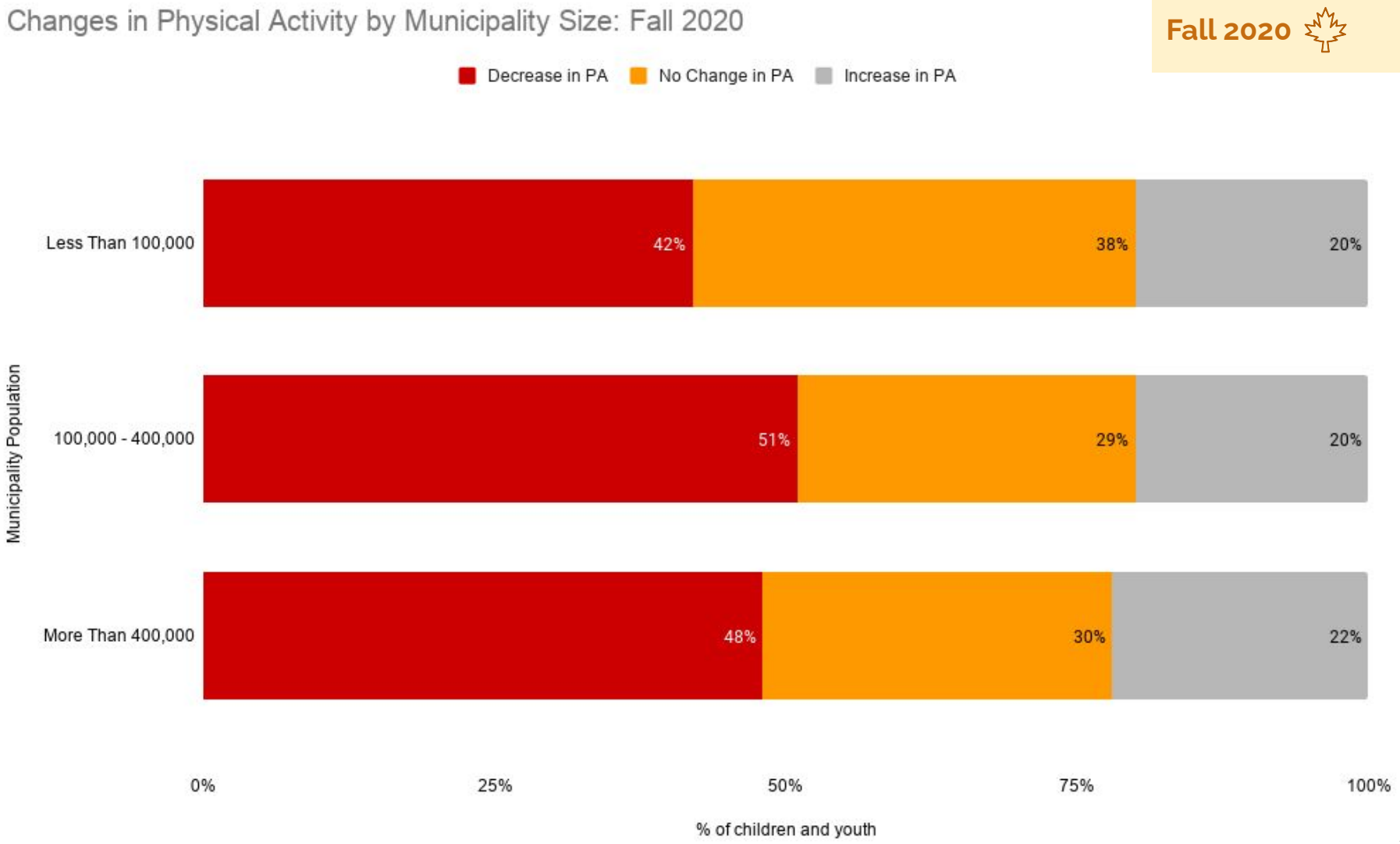


Figure 14: Frequency of time outside by municipality size

Fall 2020

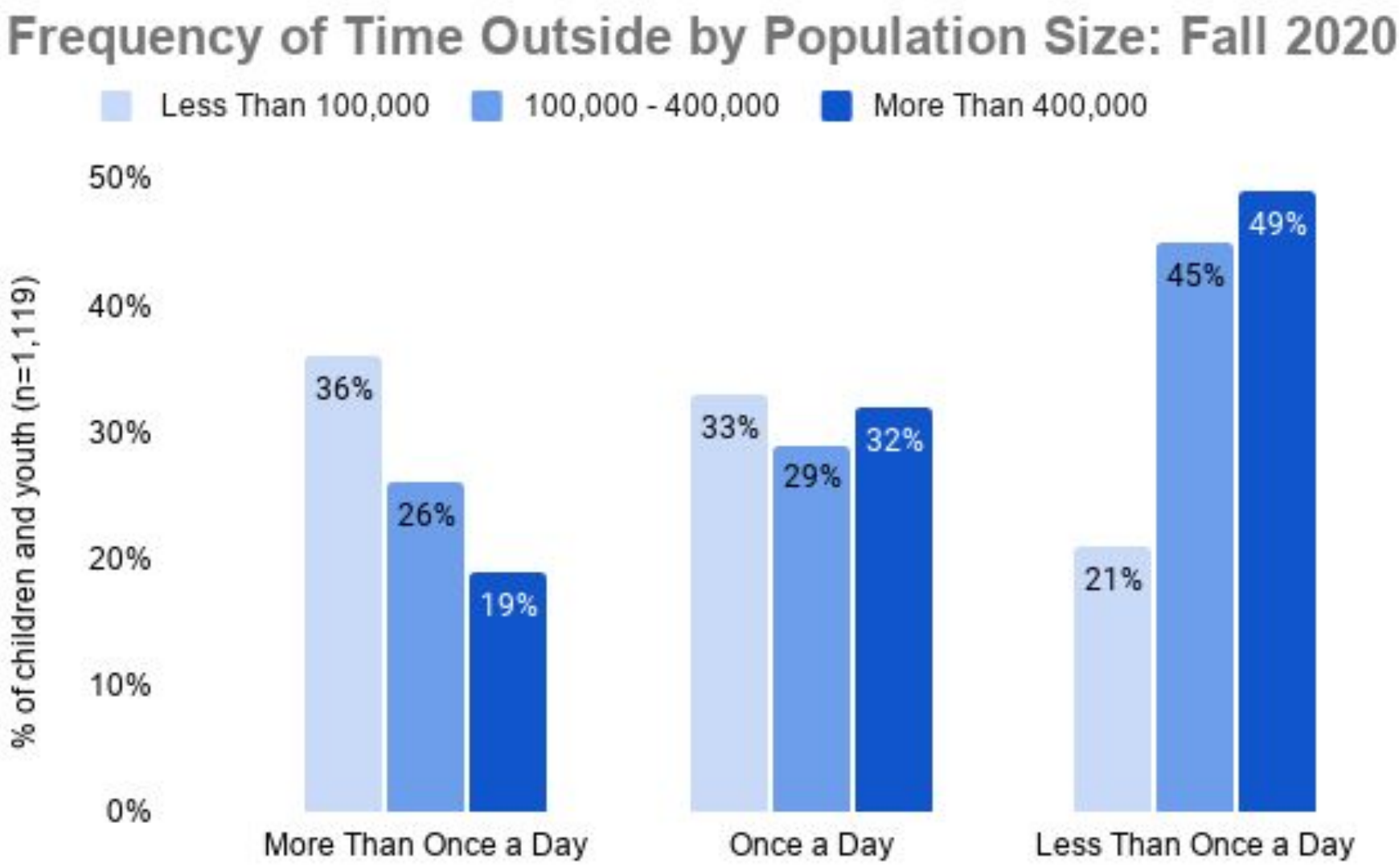
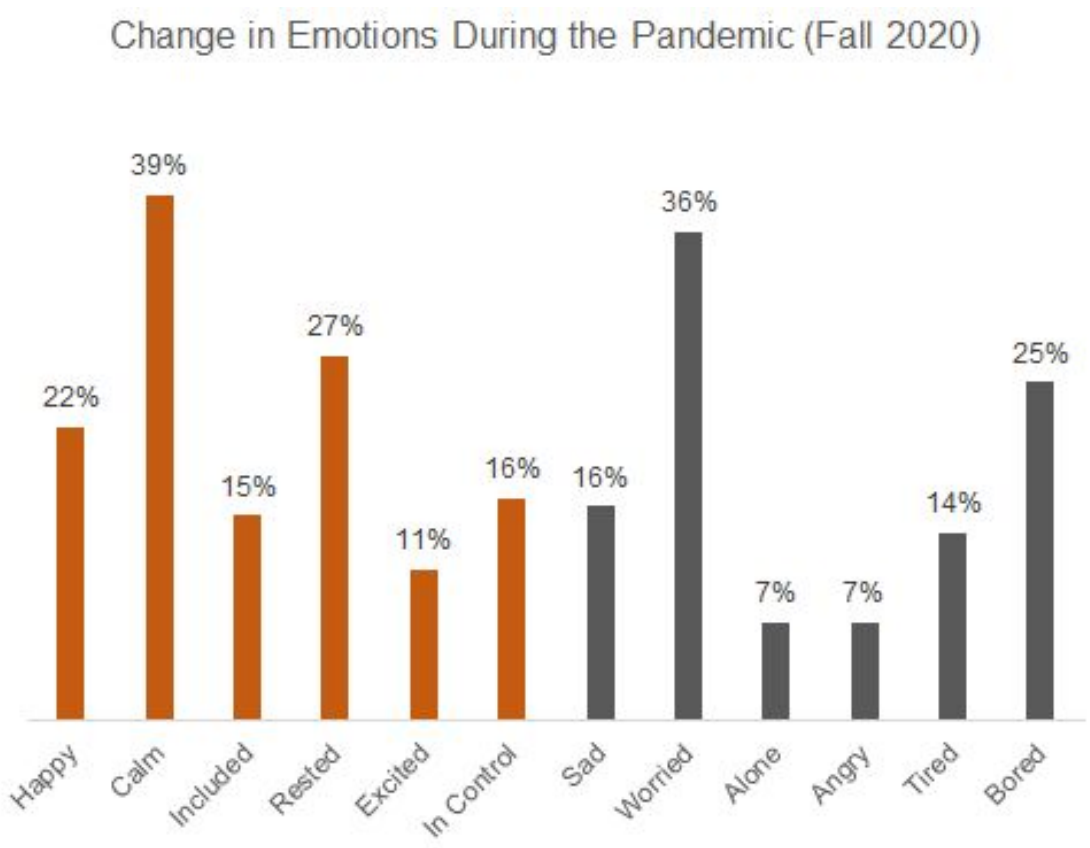
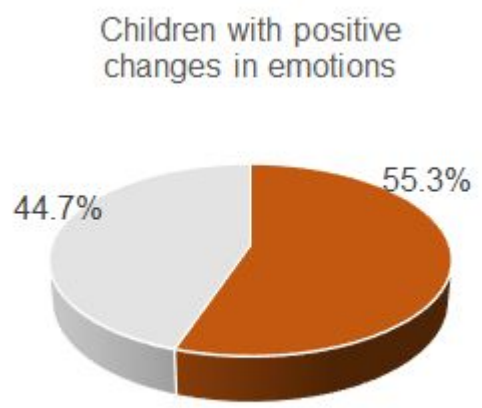
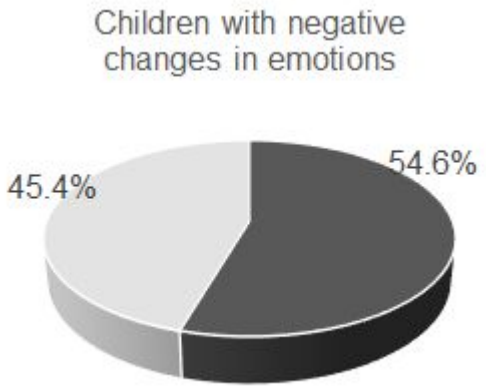


Figure 15: Pandemic-time changes in emotions (Toronto only)

Fall 2020







Dr. Raktim Mitra, Ryerson University

Figure 16: Feelings experienced more strongly vs. pre-COVID by school type

Fall 2020

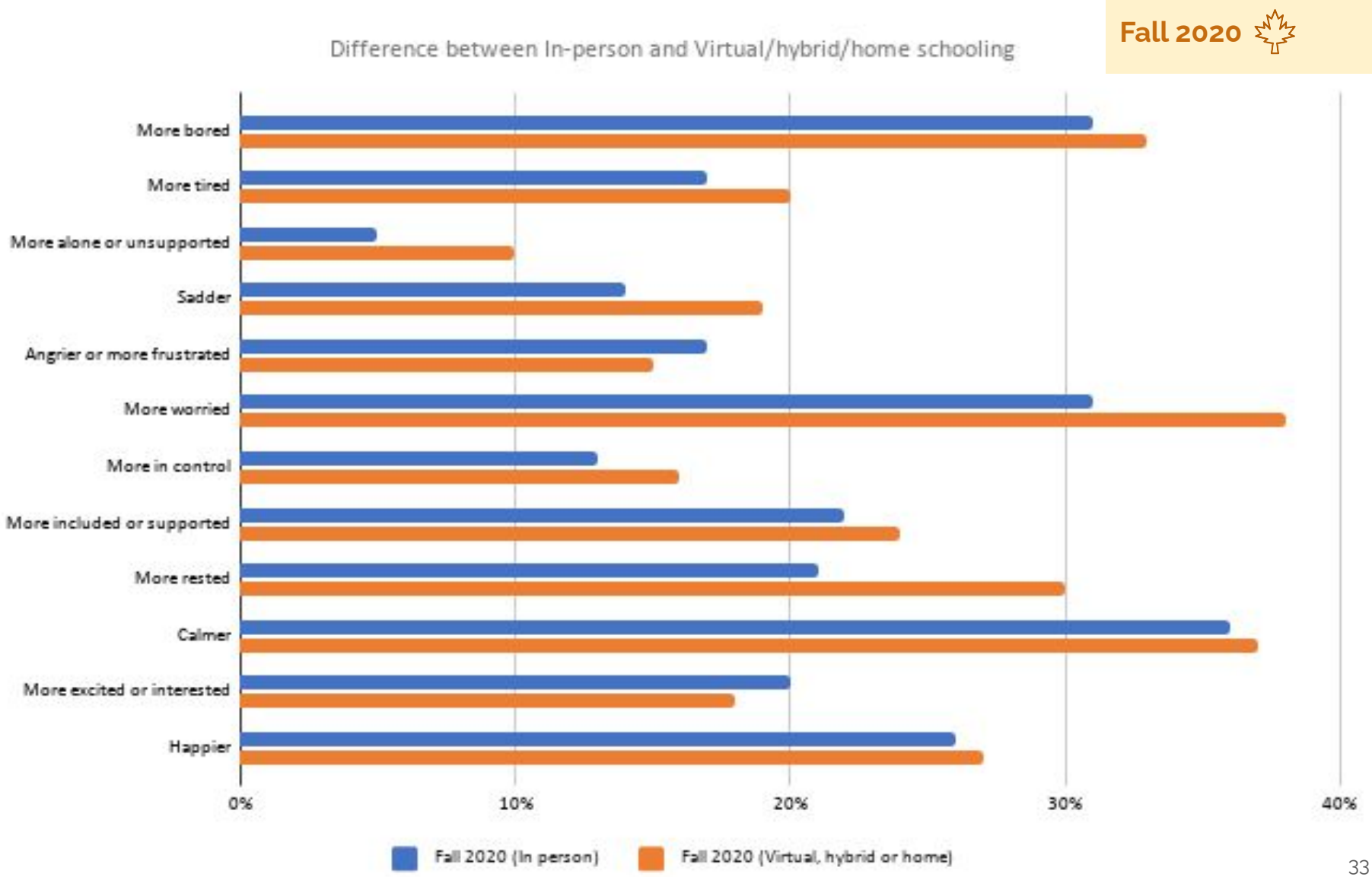


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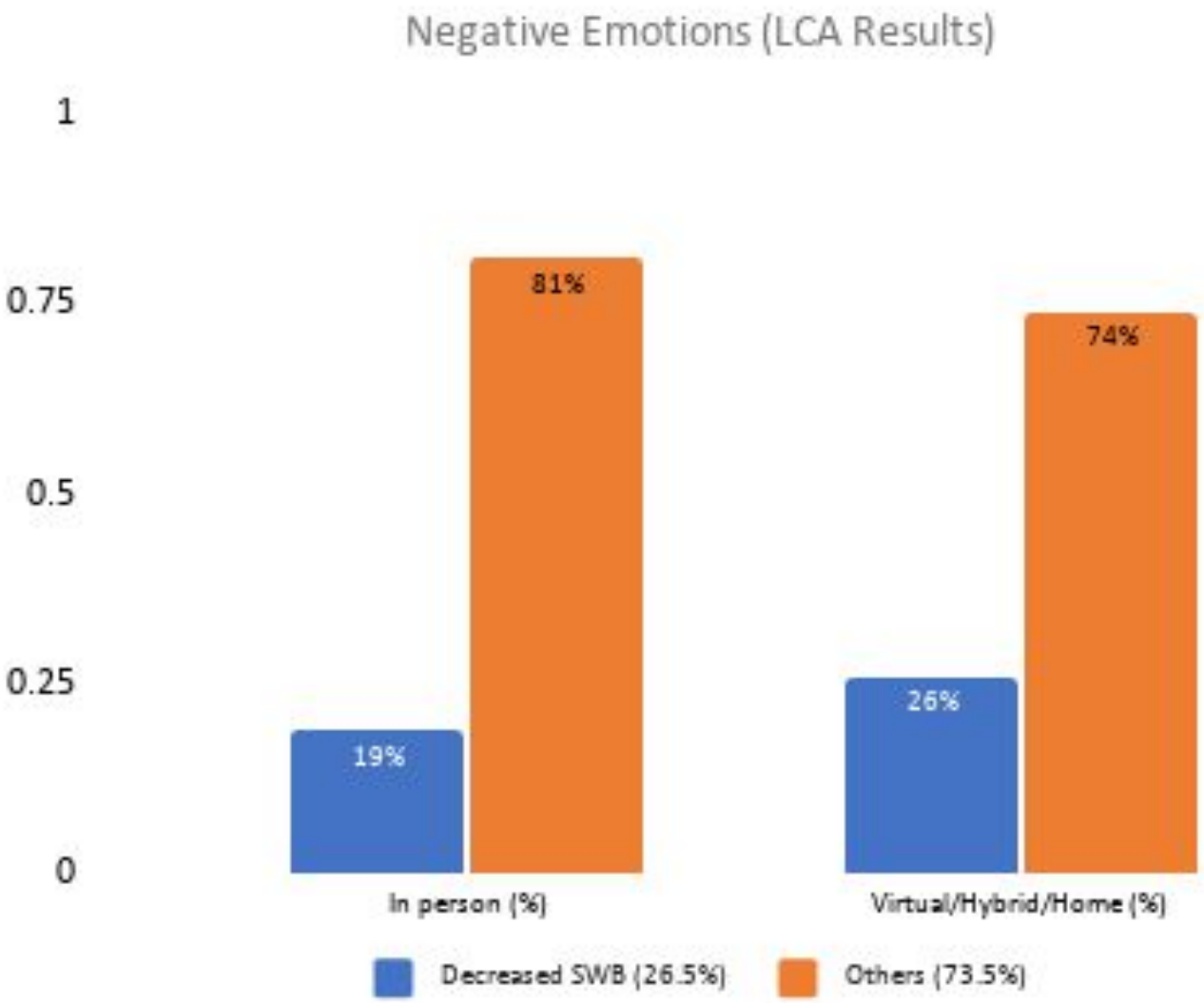
Figure 17: Negative Emotions Latent Class Analysis by school type

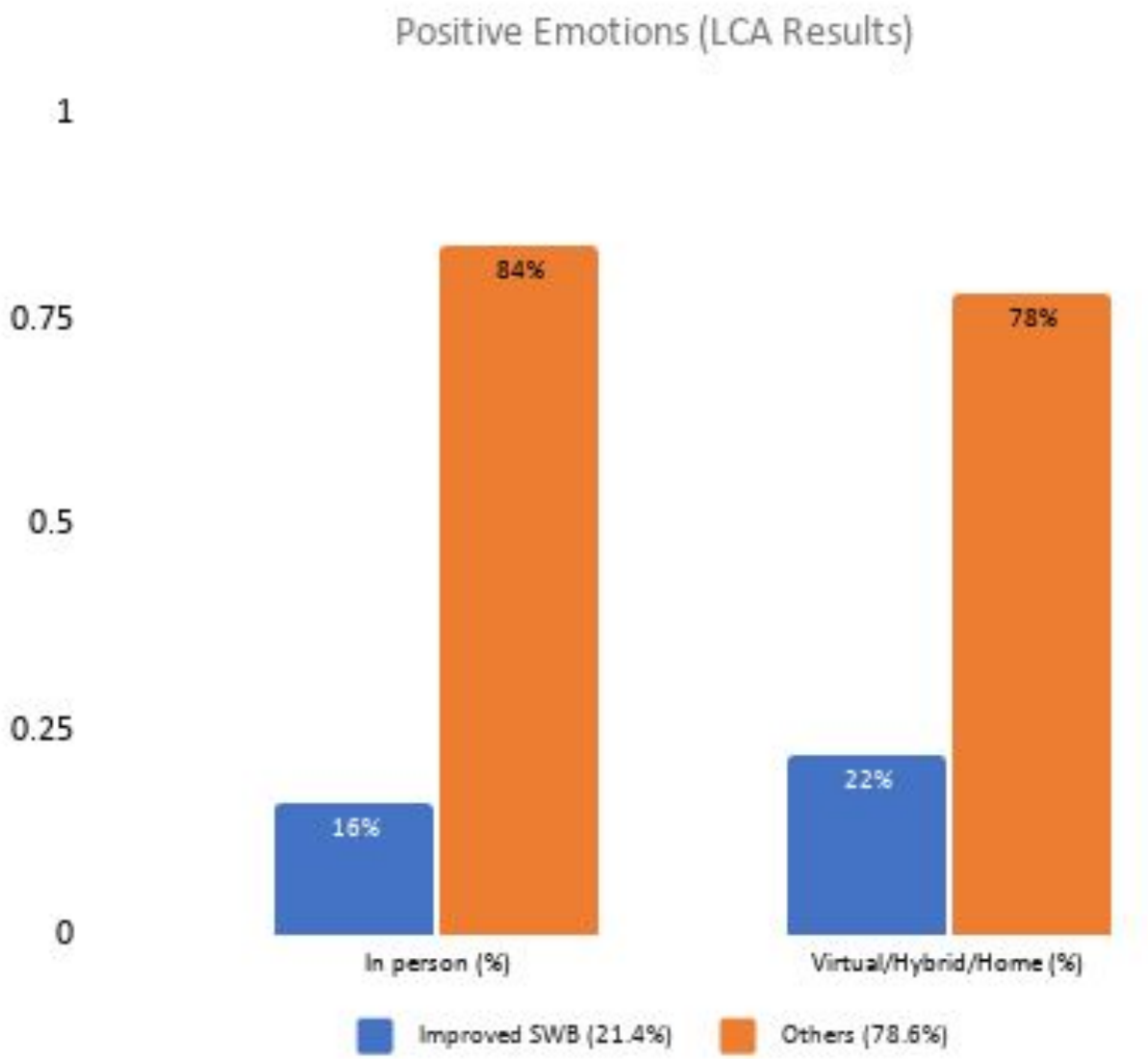
Fall 2020



Dr. Raktim Mitra, Ryerson University

Figure 18: Positive Emotions Latent Class Analysis by school type

Fall 2020



Dr. Raktim Mitra, Ryerson University

Figure 19: Changes in skills and competencies

Fall 2020

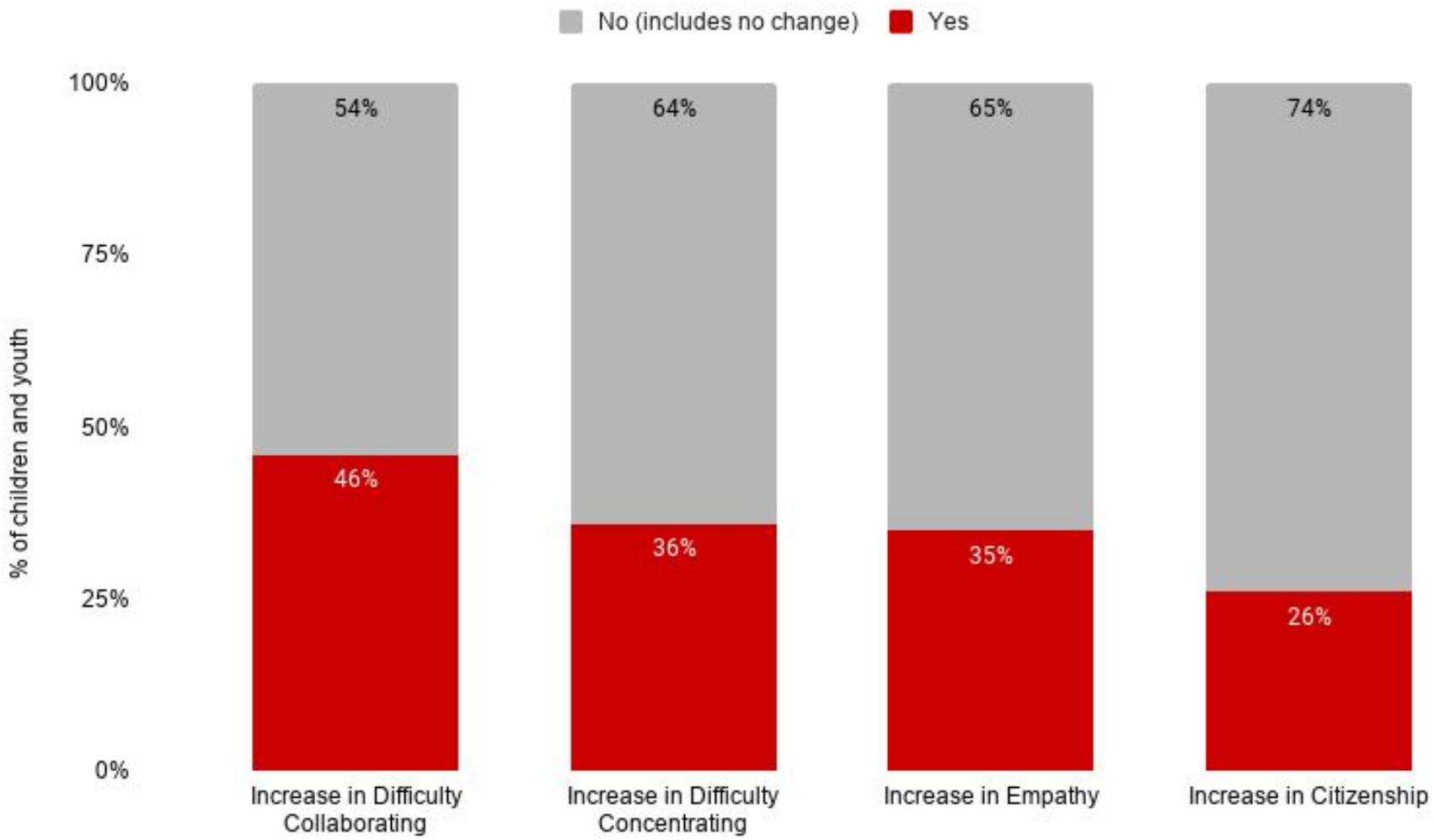


Figure 20: Changes in self-reported learning by school type

Fall 2020

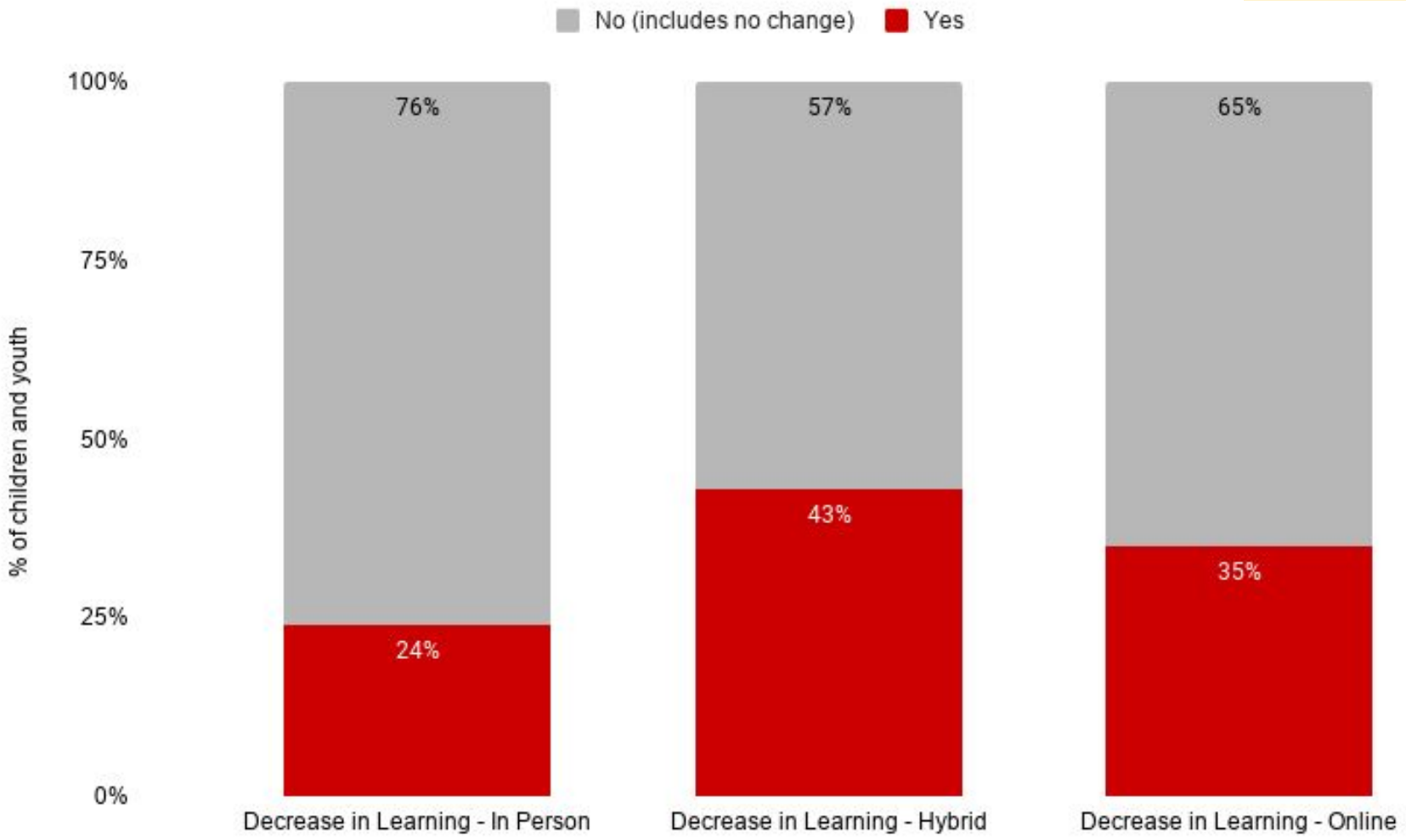


Figure 21: Challenges of Virtual School (GTA only)

Fall 2020

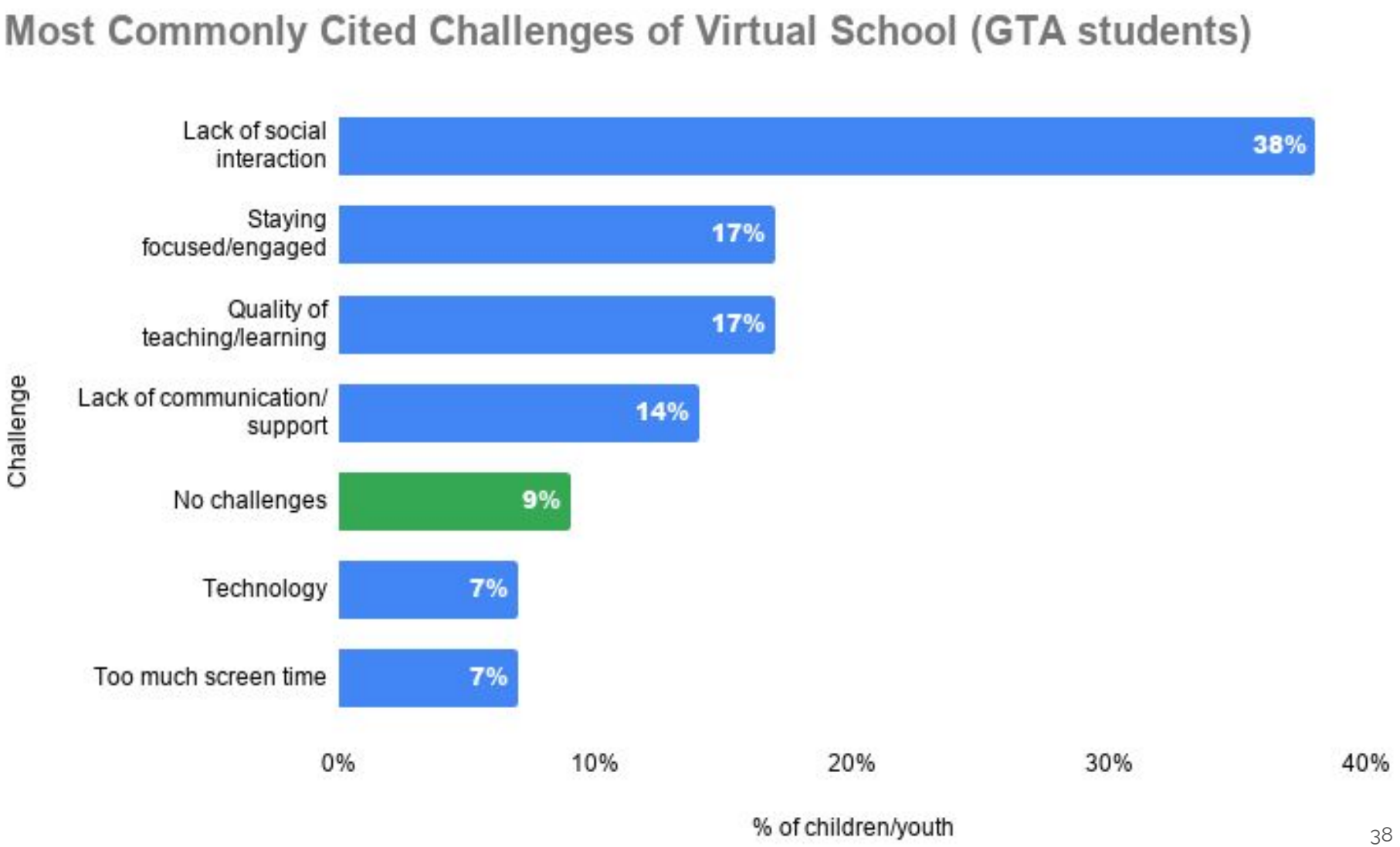
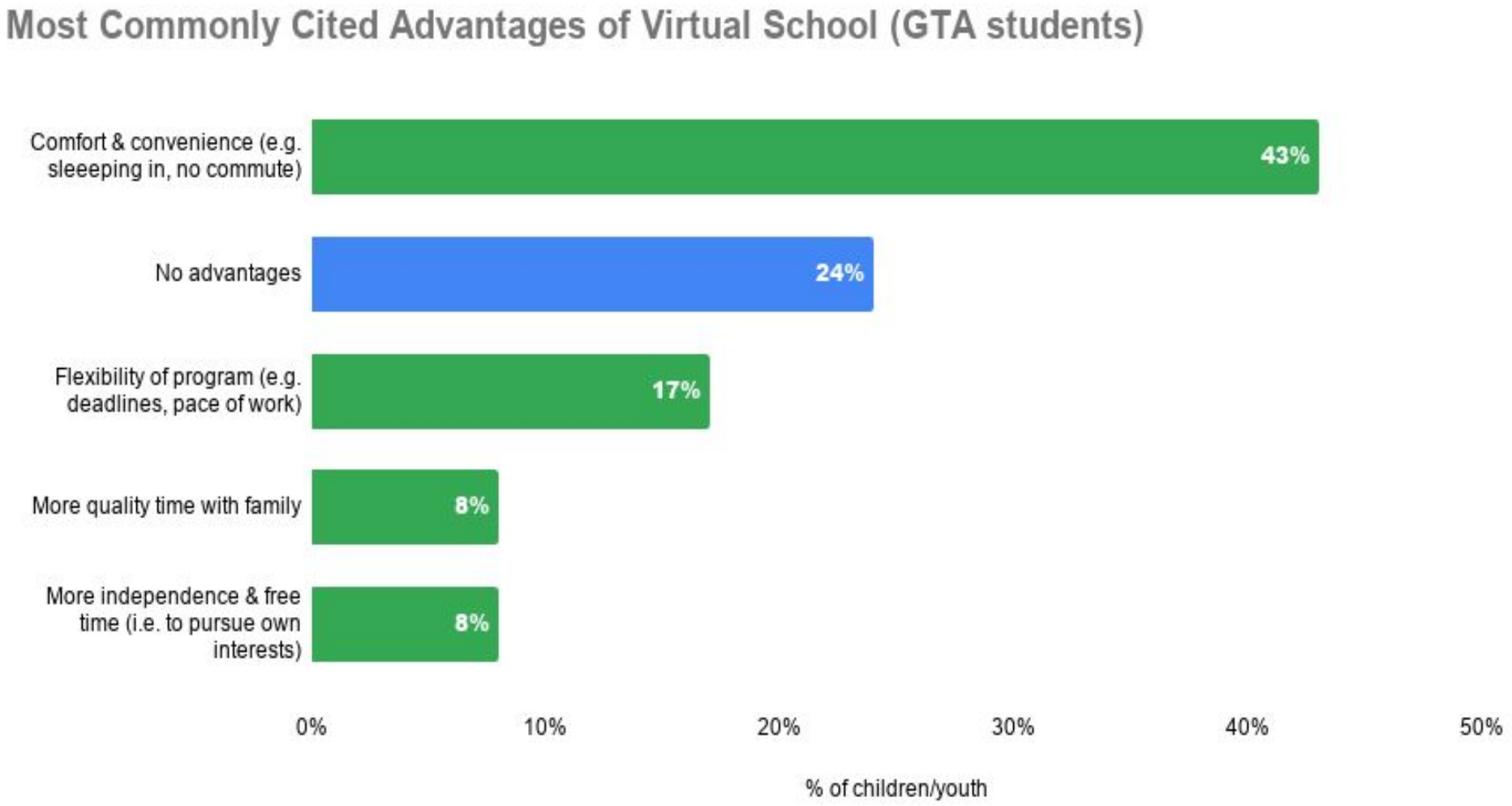


Figure 22: Advantages of Virtual School (GTA only)

Fall 2020



Next Steps: Winter/Spring 2021

COBRA: a healthy movement and well-being assessment tool

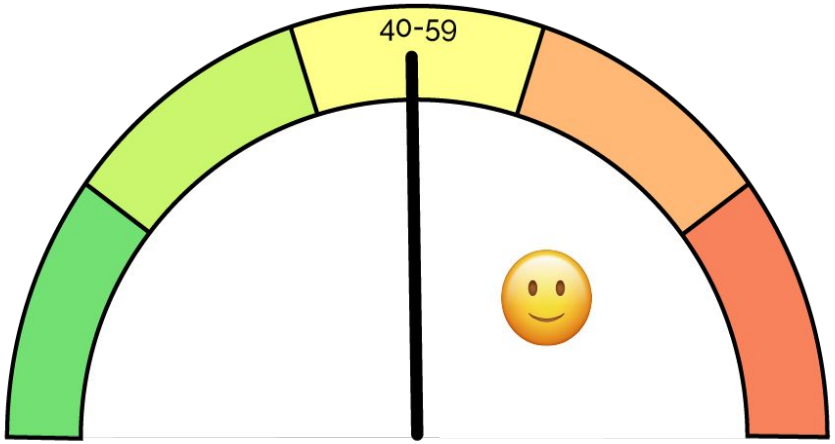
Introduction

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, highlight their needs as part of a child-friendly recovery, and engage them in creating a better future (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

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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: maximumcity.ca/wellbeing	***does not include other socio-ecological factors to be included in analysis**

Next Steps

Timeline	Actions
Q1-Q2 2021	• Promote COBRA healthy movement and well-being assessment tool • Conduct qualitative research (interviews and focus groups) in Toronto • Continue to map results and socio-ecological factors
Q2-Q3 2021	• Share classroom activity with teachers at middle and high school level for students to analyze, synthesize, and report on aggregated well-being and healthy movement data for young Canadians. • 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 sustainable child-friendly recovery. • Final national survey questionnaire
Q2-Q4 2021	• Report and present **specific and targeted recommendations** to policy- and decision-makers; collaborate on promoting and implementing solutions.

Research and Engagement Team

The Maximum City research and engagement team consists of:

- Josh Fullan, Project Lead 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

ParticipACTION 2020 Report Card (pre-pandemic)

Grade	Subject	Comments
F	Active Play	• Children and youth in grades 6 to 10 in Canada report playing outdoors for 15 minutes per day, on average.
B	Sleep	• Approximately 70% of school-aged children and youth in Canada meet the sleep recommendation.
F	24hr Movement Behaviours	• Less than a fifth of children and youth in Canada meet all three recommendations within the Canadian 24-Hour Movement Guidelines for sleep, physical activity, and sedentary behaviour.
D-	Active Transportation	• 21% typically use active modes of transportation for school (e.g. walk, bike)
B-	School	• 48% of school administrators in Canada report having a fully implemented policy to provide daily physical education to all students
B+	Community and Environment	• In cities with at least 1,000 residents, as many as one-third have policies that relate to physical activity & 22% have a formal plan regarding active transportation

Child and Youth Voice Map: Home and Community Life

Fall 2020 COVID-19 Study

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