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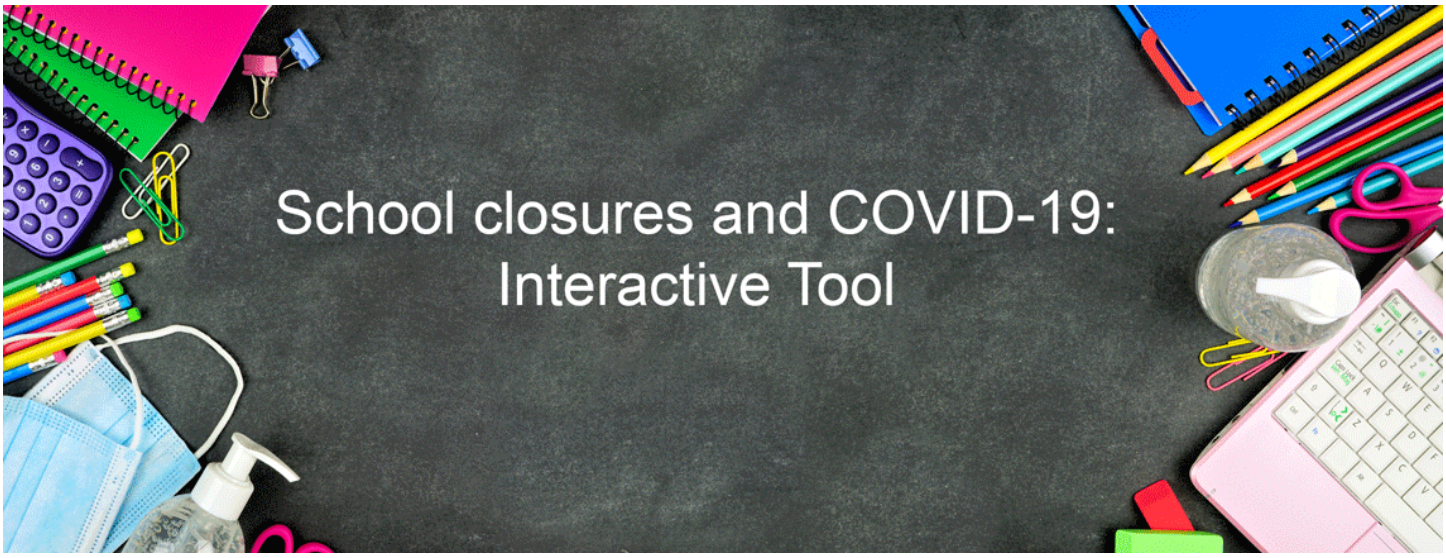

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Table of contents

School closures and COVID-19: Interactive Tool

This interactive tool was made possible through the result of a collaboration between Statistics Canada and Children First Canada.

School is considered an integral aspect of the lives of children and youth, shaping their intellectual and social development. Schools can also affect both their physical and mental health. As the COVID-19 pandemic continues to affect communities and families across the country, policy-makers have employed remote learning approaches and temporarily closed schools in order to curb the spread of the virus.

While these measures are intended to reduce the number of COVID-19 cases and deaths, there may be unintended consequences that impact the 5.7 million children and youth attending primary or secondary school in Canada. Some of these consequences are inter-connected and some children and youth will be more vulnerable than others to these impacts. For a visual overview of the inter-connected impacts of school closures on children and youth, see **School closures and COVID-19: Impacts on children**.

It may take years to fully measure and comprehend the effects of the pandemic on children and youth as some of these effects, such as potential learning loss, could have long-lasting consequences. When impacts of the pandemic have been measured, those already vulnerable were also shown to be disproportionately affected by the COVID-19 pandemic. As not all communities face the same vulnerabilities, this tool can help shed light on the degree to which some subpopulations may be more impacted than others.

This tool brings together existing baseline information about populations who were already vulnerable heading into the pandemic, as well as available data on some of the impacts of these temporary school closures.

Learning and academic success

The extent of temporary school and classroom closures in an effort to contain the spread of COVID-19 have differed markedly across Canada and within provinces. In Atlantic Canada, there was very little disruption to in-person learning in the fall and early winter of the 2020/21 school year. However, other areas of the country, school closures have been more frequent and more prolonged. These school closures and the change to remote learning may lead to notable impacts on the learning and academic success of students. Not all children and youth may find it easy to learn in a remote setting and, for some, there can be particular challenges to overcome.

Access to the Internet and an appropriate device

With school closures and a reliance on remote learning, it is more important than ever for students to have access to the internet and an internet-enabled device, such as a computer or tablet.

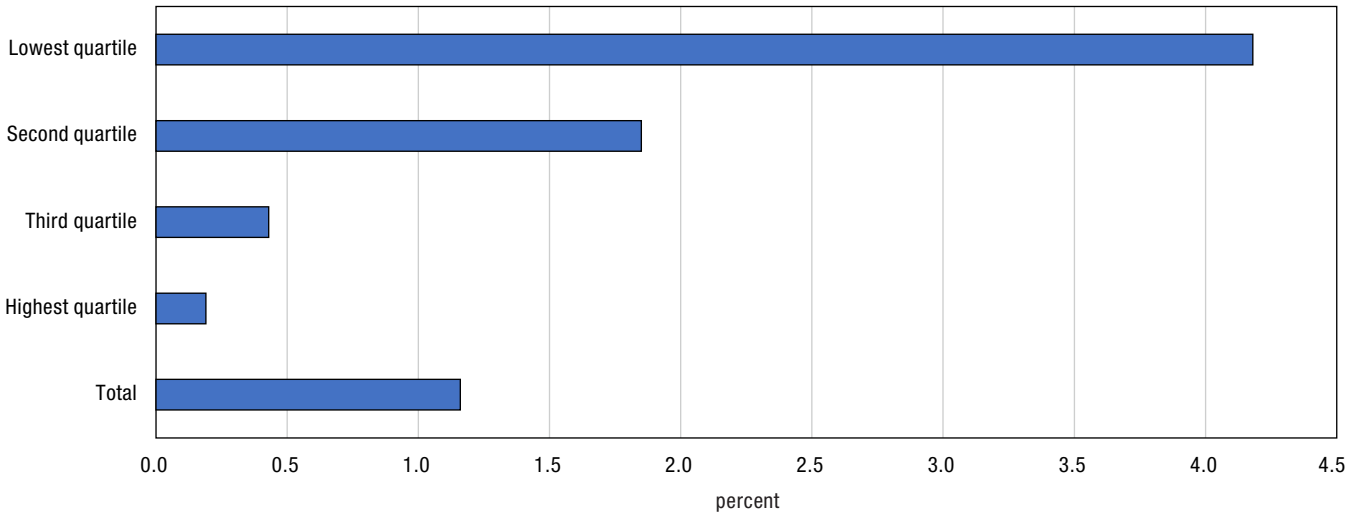
Prior to the pandemic, Statistics Canada found that children in higher income families were in a better position to support on-line learning. While only 1.2% of households with children do not have access to the internet at home, the figure is somewhat higher for households in the bottom 25% of the income distribution—4.2%—than for households in the top 25% of the distribution—0.2%.

In addition, students learning online also need access to an appropriate device. Overall, 58% of households that had internet access had less than one device per household member – not enough devices to support all household members learning and working from home at the same time. Among households in the lowest income quartile, 63% had less than one device for each household member compared to 56% of households in the highest income quartile.

Finally, the type of device available (for example a mobile device such as a cellphone) might not be appropriate for online learning. Nearly one-quarter (24%) of households in the lowest income quartile reported using only mobile devices for accessing the internet, three times higher than the share among households in the highest income quartile (8%). Households in the lowest quartile were also significantly more likely to use only mobile devices to access the internet than those in the second- and third-income quartiles (15% and 14%, respectively).

Some groups, such as groups designated as visible minorities, recent immigrants and Indigenous peoples are overrepresented among those in low income and may be more vulnerable to the economic impacts of COVID-19. This implies that some groups would face disproportionate challenges in terms of accessing remote learning with adequate devices.

Chart 1
Percentage of households with children under age 18 with no internet, by income quartile, 2018



Source: Frenette, Marc; Frank, Kristyn and Deng, Zechuan. (2020). COVID-19 Pandemic: School Closures and the Online Preparedness of Children. *StatCan COVID-19: Data to Insights for a Better Canada.* https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00001-eng.htm

Preparedness of teachers and schools

Prior to the pandemic, in 2018, about 60% of 15-year old students had principals that believed their schools had sufficient resources in place to support remote learning. Specifically, in the opinion of those principals, there were a sufficient number of qualified technical assistance staff, teachers with the necessary technical and pedagogical skills to integrate digital devices in instruction, an effective online learning support platform, and effective professional resources for teachers to learn how to use digital devices.

Preparedness among schools and their students was uneven across the country and differences were noted between socioeconomically advantaged and disadvantaged Canadian schools. For example, about 88% of students from socioeconomically disadvantaged schools reported having access to a computer at home, compared to 98% of students from socioeconomically advantaged schools.

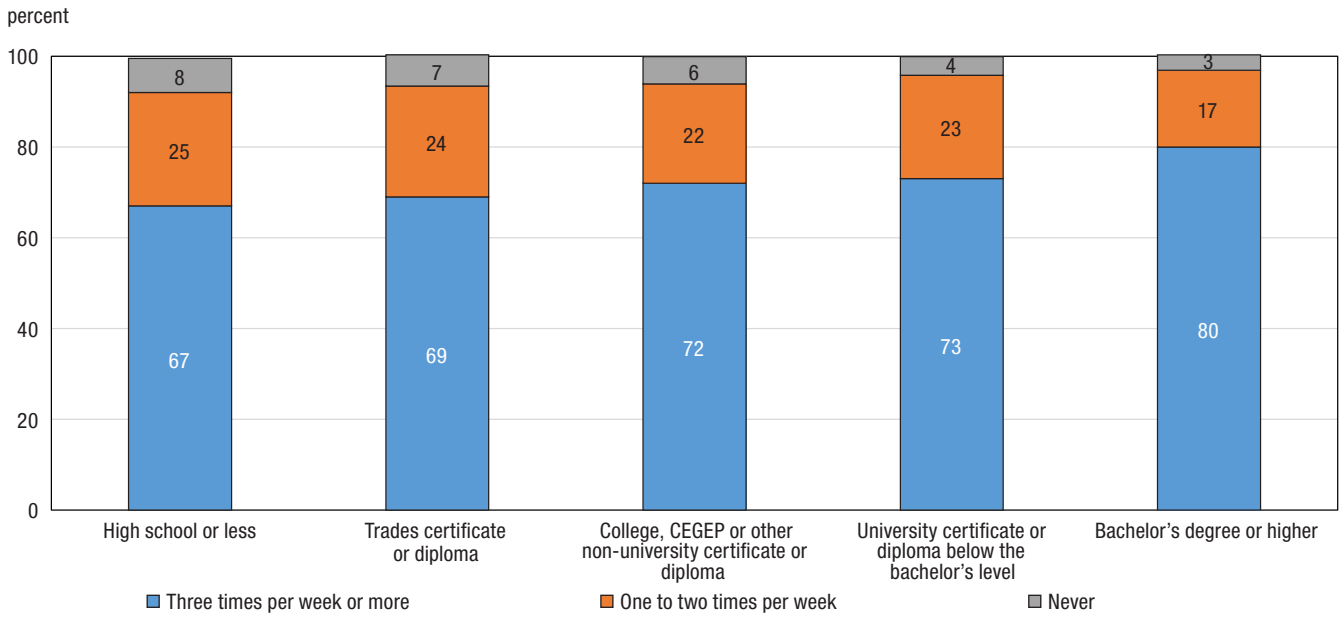
Parental education and concerns about learning from home

In the early months of the pandemic, a large proportion of parents expressed concern related to their child's school year and academic success. According to a crowdsourcing initiative conducted by Statistics Canada in June 2020, parents' concern about their children's school year varied by educational attainment: 42% of parent participants with a bachelor's degree or higher reported being concerned about their child's school year and academic success compared with 56% of parent participants with a high school diploma or less.

The frequency of children's participation in academic activities at home during the pandemic also varied by level of parental education. Eighty percent of participants with a bachelor's degree or higher reported that their children engaged in structured

academic activities at home three times per week or more, compared with 72% of participants with a college certificate or diploma, 69% of those with a trades certificate or diploma and 67% of participants with a high school diploma or less.

Chart 2
Frequency of children's participation in structured academic activities, by parental educational attainment

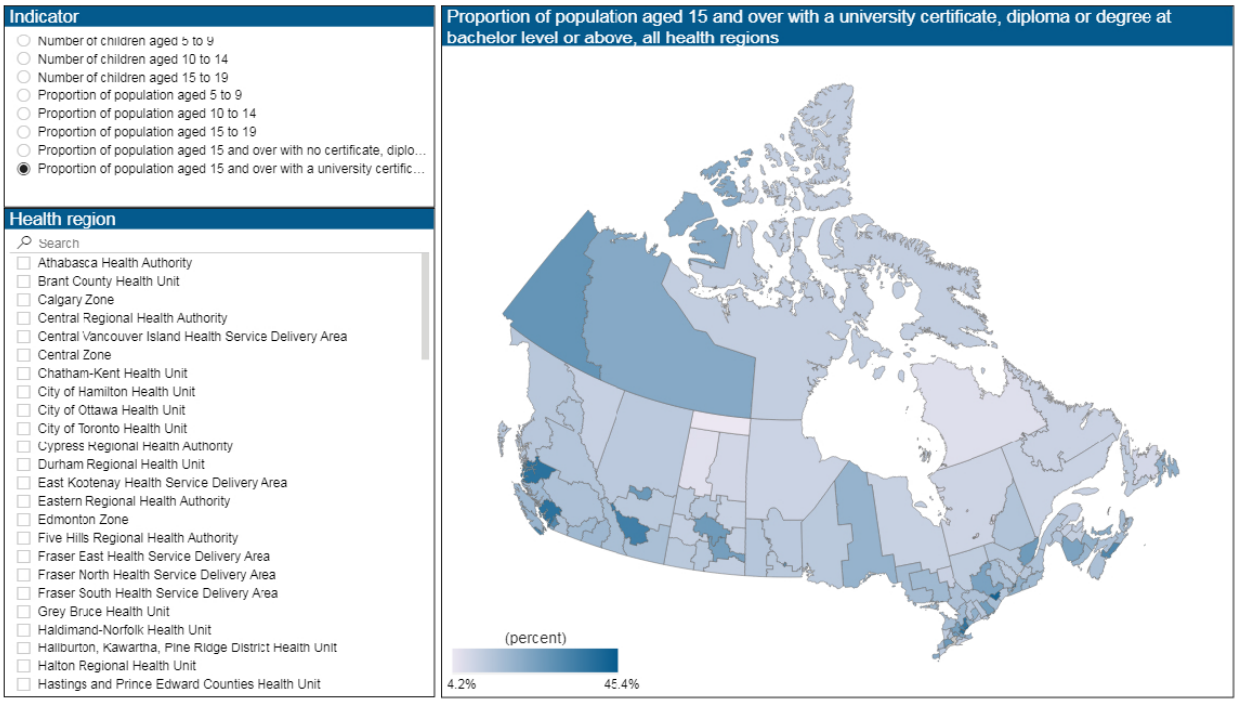


Source: Greenlee, Edith and Alana Reid. 2020. Parents supporting learning at home during the COVID-19 pandemic. *StatCan COVID-19: Data to Insights for a Better Canada.* https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00040-eng.htm

This reflects the well-established finding that parental educational attainment is highly correlated with children's academic success, as highly educated parents tend to be in a better position to support their children's learning in multitude of ways: they are better able to navigate school systems, tend to be economically advantaged and, during the pandemic, were more likely to be working from home.

As a result, communities with higher proportions of parents with post-secondary education may be less vulnerable to the impacts of school closures and remote learning in the context of the COVID-19 pandemic. See how your community fits within the national story in the map below.

Map 1
Find information about your community: education levels



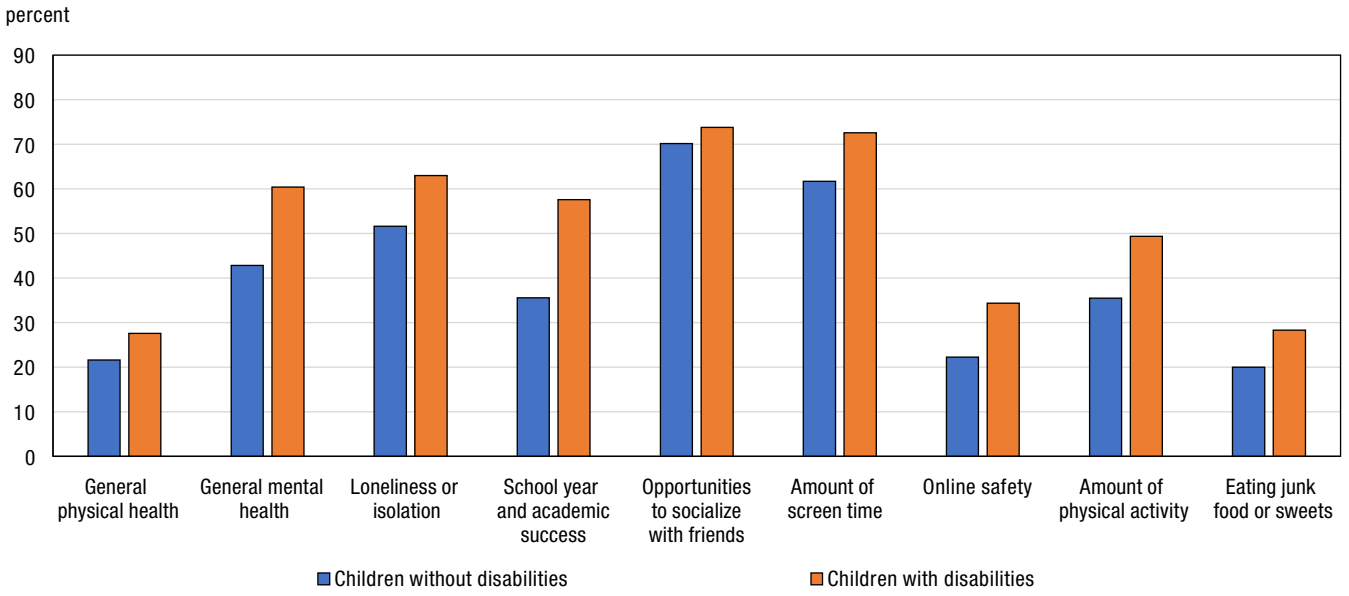
Notes: Indicators are presented at the health region level as it is often the level at which decisions are often made on measures to limit the spread of COVID-19. For more indicators at this level of geography, please refer to table 13-10-0815-01. Provincial level data for these indicators are available here: Census Profile, 2016 Census.

This interactive map can be accessed in the HTML version.

Children with disabilities

Children with disabilities may be more vulnerable to challenges with remote learning. According to a crowdsource initiative by Statistics Canada, in the first few months of the pandemic, 58% of parent participants whose children had a disability reported being very or extremely concerned about the school year and their children's academic success, compared with 36% of parent participants whose children had no disabilities.

Chart 3
Crowdsourcing participants' concerns for their children aged 0 to 14 years due to the COVID-19 pandemic, by presence of children with disabilities at home



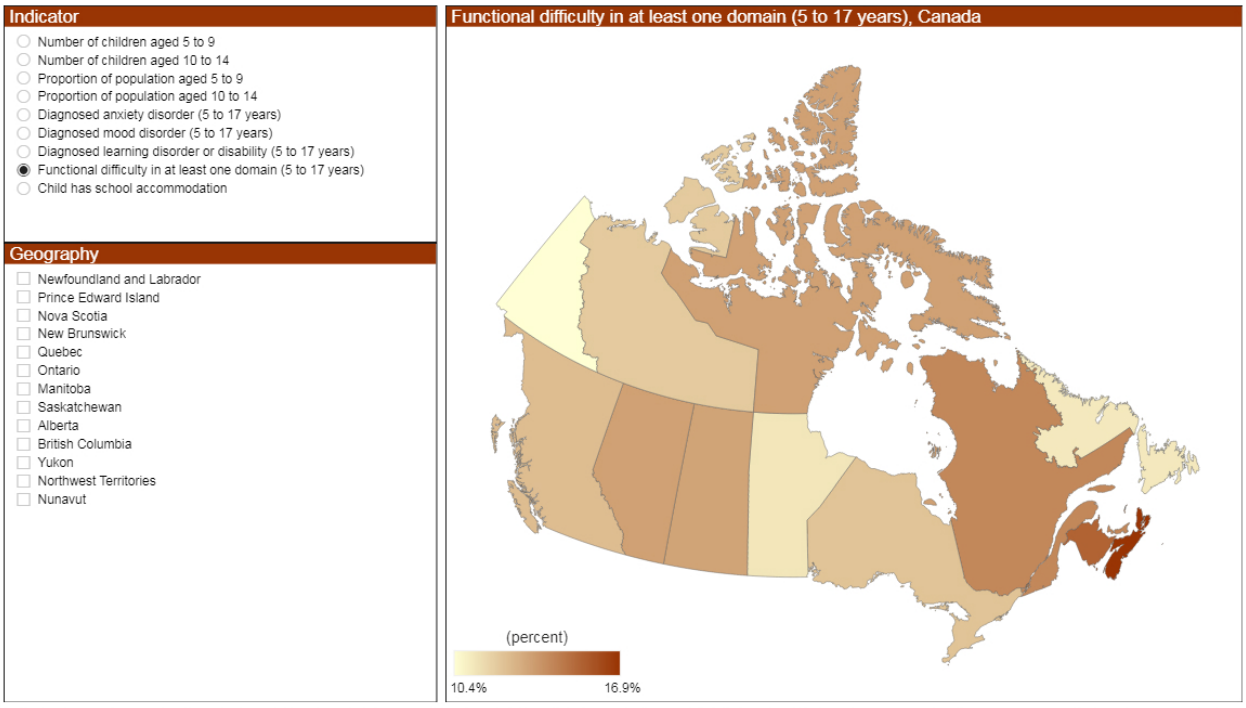
Notes: Percent calculations exclude both "not applicable" and "not stated" responses. The pattern of results was similar when "not applicable" responses were included.
Source: Arim, Rubab, Leanne Findlay and Dafna Kohen. 2020. The impact of the COVID-19 pandemic on Canadian families of children with disabilities. *StatCan COVID-19: Data to Insights for a Better Canada*. https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00066-eng.htm

Children with disabilities may require a greater amount of their parents' time for help with not only their school activities, but also with other daily activities. A higher proportion of these participants (32%) also reported spending at least ten hours or more per week supporting their children's learning compared to participants whose families did not include a child with a disability (23%).

Specifically, children with disabilities, including a learning disability, may be disproportionately affected by the move to remote learning. School supports for those children may be less available and they may require more of their parents' support than usual.

Prior to the pandemic, 8% of children aged 5-17 in Canada had been diagnosed with a learning disability.

Map 2
Find information about your province or territory: children with disabilities, disorders and accommodation



Note: Indicators are presented at the provincial level as it is the lowest level of geography for which data are available. For more indicators at this level of geography please refer to table 13-10-0816-01.

This interactive map can be accessed in the HTML version.

Physical activity and fitness

Beyond the academic benefits, schools can also serve as a place to get exercise and stay healthy through physical education and extracurricular activities like sports. The pandemic may also have an impact on reduced physical activity for children as organized and community sports were suspended. Thus, with the pandemic in general, and school closures specifically, there could be an impact on children's daily physical activity and an increase in the time children and youth spend in front of a screen.

In the summer of 2020, 64% of parents were already concerned about the amount of screen time that their children were engaging in during the pandemic. Almost nine in ten participants said that their children were engaging in screen time daily or almost every day.

Even before the pandemic, 61% of children and youth did not meet the physical activity guidelines in Canada. While this has been relatively stable since 2007, the pandemic may have an important impact.

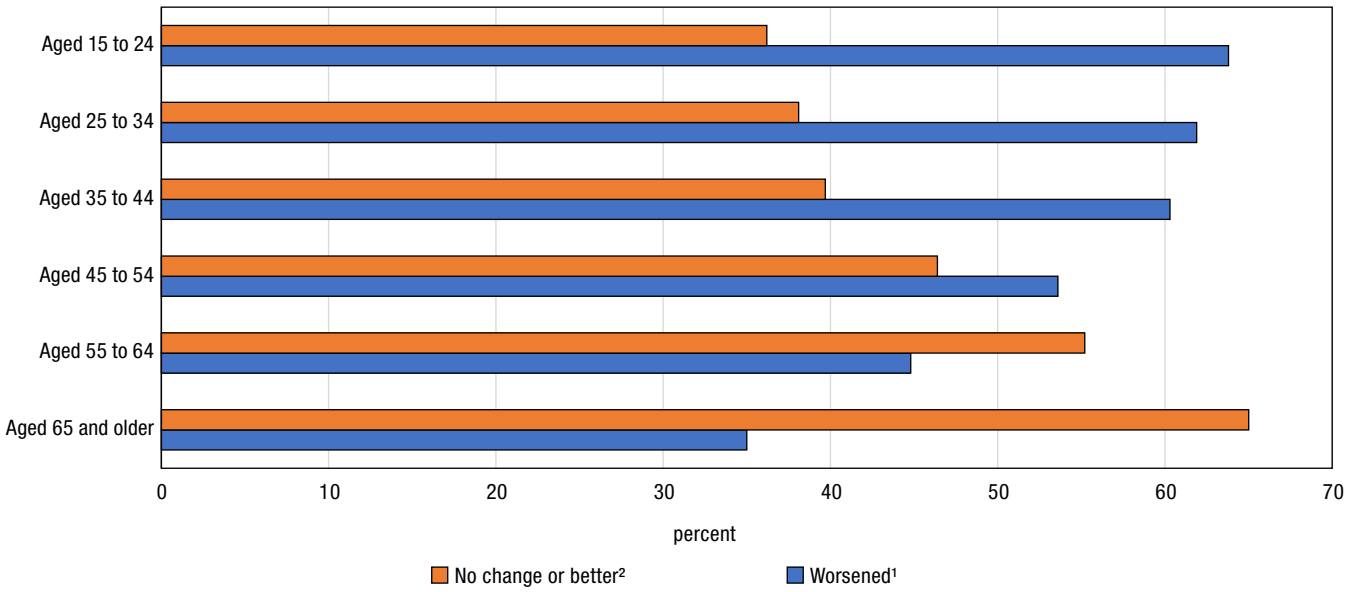
Mental health and wellbeing

With remote learning and school closures, children may feel isolated from their peers and friends. In addition, and as noted elsewhere, there could be new stresses associated with challenges with learning in this environment.

In addition, with fewer interpersonal interactions, in-school support for mental health may be less likely to be available to children and youth.

While the pandemic has had an impact on the mental health of Canadians in general, youth participants in a Statistics Canada crowdsourcing initiative were the most likely to report a negative impact on their mental health since the COVID-19 pandemic began. Almost two-thirds (64%) of those aged 15 to 24 reported a negative impact of the pandemic on their mental health, while just over one-third (35%) of those aged 65 and older reported a negative impact on their mental health since physical distancing began. Similarly, those participants aged 15 to 24 were most likely (41%) to report symptoms consistent with moderate or severe anxiety in the early months of the pandemic. This age group was already more likely to report lower mental health before the pandemic began.

Chart 4
Change in self-perceived mental health since the onlet of physical distancing, by age group, April 24 to May 11, 2020



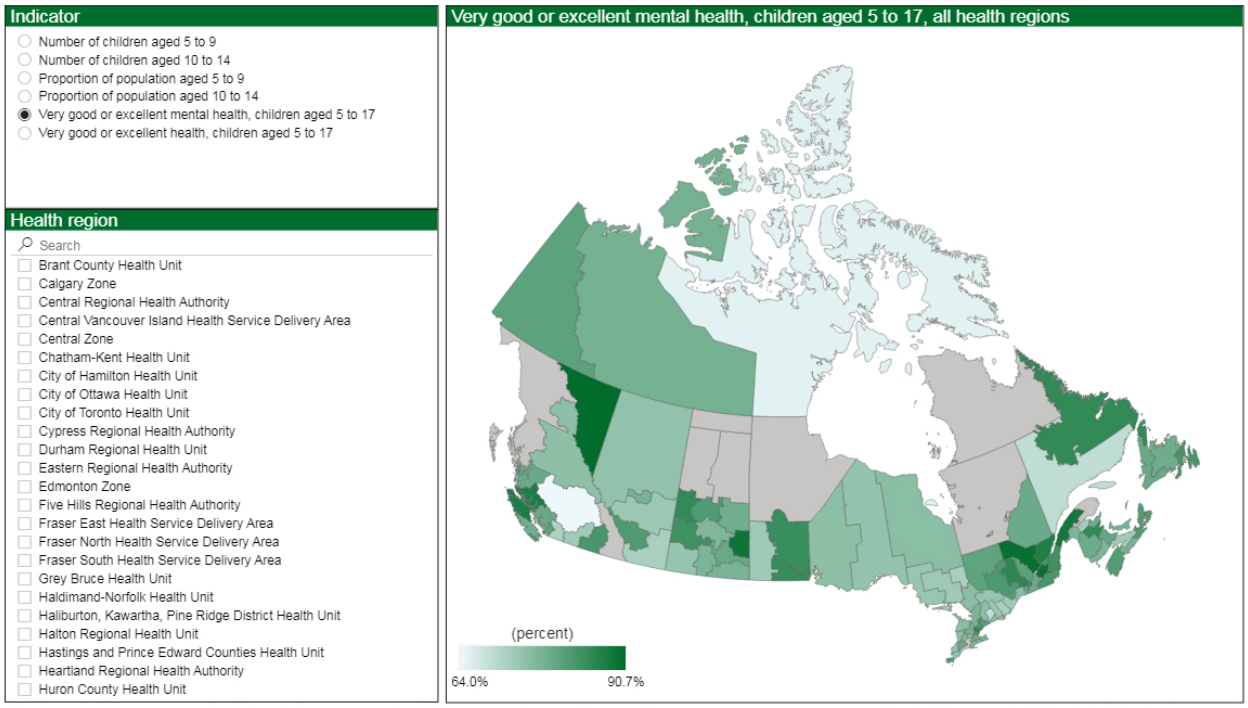
1. Responded 'somewhat worse now' or 'much worse now'.
2. Responded 'about the same', 'somewhat better' or 'much better'.
Source: Canadians' mental health during the COVID-19 pandemic. 2020. *The Daily.* https://www150.statcan.gc.ca/n1/daily-quotidien/200527/dq200527b-eng.htm

Children who were already reporting challenges associated with their mental health before the pandemic may be particularly vulnerable. In 2019, 17% of children and youth aged 5 to 17 reported poor or fair mental health and 5% of children and youth aged 5-17 reported having a diagnosed anxiety disorder.

It's important to consider that not all children report mental health in the same way. Before the pandemic, nearly one in five youth aged 15 to 17 reported that their mental health was "fair" or "poor", more than double the rate for those aged 12 to 14 (7%). More female youth reported fair or poor mental health compared with male youth. Girls aged 12 to 14 (10%) were more than twice as likely as boys (4%) to report fair or poor mental health. The difference was even larger among youth aged 15 to 17, with 24% of girls and 10% of boys reporting fair or poor mental health in 2019.

It should be noted that children and youth do not share the same perspective as their parents on their own mental health. For more than half of the youth aged 12-17 (52%), there was a discrepancy between the parent's and the youth's perception of the youth's mental health. When a difference occurred, almost two-thirds (65%) of youth rated their mental health less positively than their parents did. These results suggest that parents may not always be aware of the mental health struggles experienced by their children.

Map 3
Find information about your community: children's mental and physical health



Notes: Indicators are presented at the health region level as it is often the level at which decisions are often made on measures to limit the spread of COVID-19. To view these indicators at the provincial level, see here: table 13-10-0763-01. For more indicators at this level of geography, please refer to table 13-10-0815-01. The proportion of children in very good/excellent health and mental health are presented showing that some regions have higher proportions than others. These data are more robust at the health region level than the proportion of children in poor or fair health and mental health and still provide an indication of where some regions have better perceived health and mental health compared with others.

This interactive map can be accessed in the HTML version.

Socio-economic outcomes and food insecurity

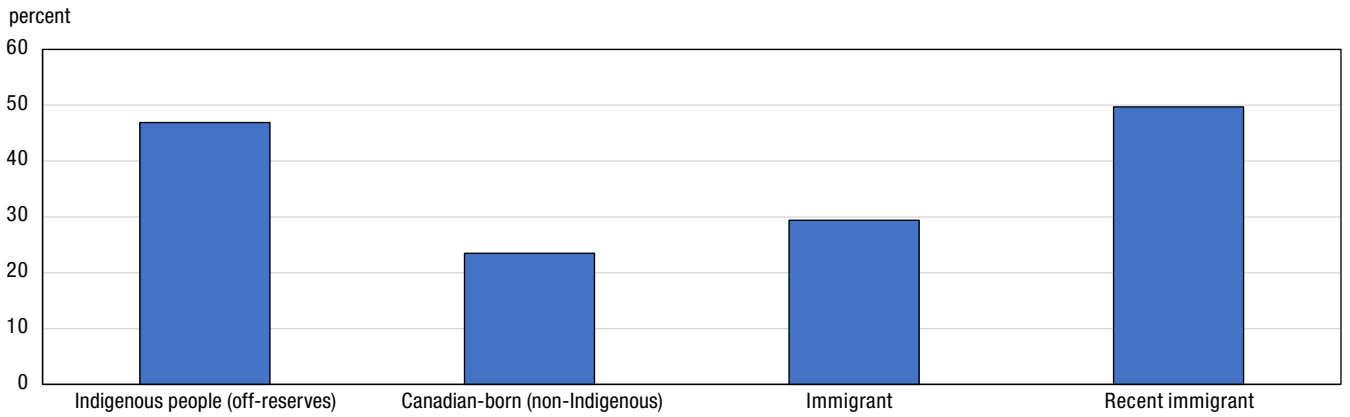
Access to appropriate tools for remote learning (such as an Internet-enabled device) was more of a challenge for families in low income heading into the pandemic. With large disruptions in Canada's economy and additional pressures on parents to balance their jobs with supporting their children, these families could be particularly vulnerable to the impacts of school closures and remote learning.

In 2018, just over one in ten (11%) of children and youth aged 0 to 17 lived in low income. In addition, some groups, such as groups designated as visible minorities, recent immigrants and Indigenous peoples are overrepresented among those in low income and may be more vulnerable to the economic impacts of COVID-19.

In May 2020, it was reported that approximately one in four Canadians (26%) could be financially vulnerable to the economic lockdown. By comparison, in March 2020, nearly three in ten (29%) Canadians reported that the COVID-19 situation was already having a moderate or major impact on their ability to meet financial obligations or essential needs.

In 2016, single mothers and their children are among the most financially vulnerable during a short period of joblessness: more than half of single mothers (56%) were at-risk of not being able to make ends meet even after selling their liquid assets and using other private sources of income. Other groups that were vulnerable included Indigenous people and recent immigrants.

Chart 5
Financial vulnerablility for select groups, 2016



Note: Indigenous people include First Nationsl people living off-reserve, Métis and Inuit.
Source: Messacar, Derek and René Morissette. 2020. Work interruptions and financial vulnerability. *StatCan COVID-19: Data to Insights for a Better Canada.* https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00010-eng.htm

By April 2020, 5.5 million workers had been directly affected by the initial widespread COVID-19 economic shutdown, which resulted in a drop in employment of 3.0 million and an increase in COVID-related absences from work of 2.5 million. Among parents aged 25 to 54 with at least one child under 18, employment essentially returned to pre-pandemic levels by September. However, it is taking longer for work absences to recover, particularly among mothers. There was a 44% increase in the number of employed mothers who were working less than half their usual hours in January 2021 compared with January 2020 (with a child under 13). This compares to 30% for fathers in the same situation. This includes lost hours due to personal circumstances, such as caring for children, as well as those related to job situation, such as reduced shifts.

For most parents, homeschooling was an additional responsibility directly related to the closure of schools during the pandemic, and this extra parental task was predominantly undertaken by women. The majority of women (64%) reported that they mostly performed homeschooling or helping children with homework, while 19% of men reported being mostly responsible for this task. When men were asked, almost half (46%) reported that homeschooling was mostly their partner's responsibility.

Sharing responsibilities for homeschooling may be more burdensome or complex for lone parents or for parents who share custody of their children.

The pressure to reduce work hours in support of homeschooling can be particularly challenging for those who cannot afford to see their income drop. Those families already in low income may be particularly vulnerable to these stresses.

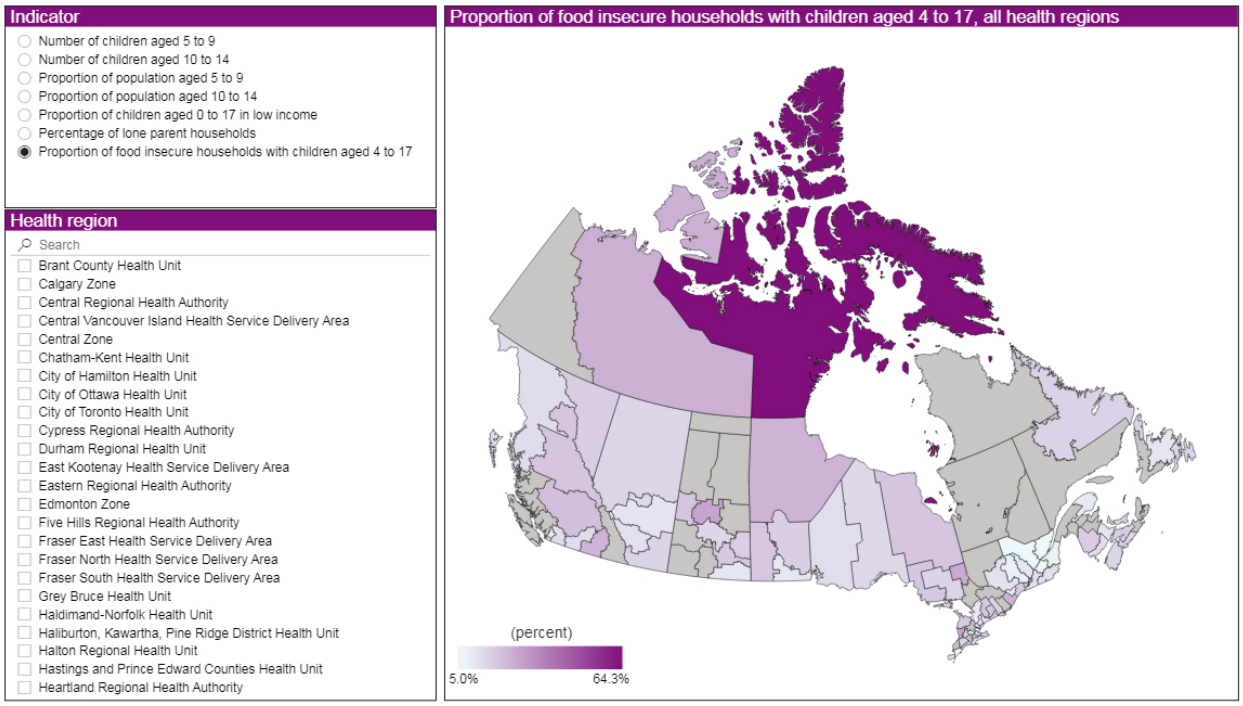
Food insecurity

Based on the most recent available national-level data, about 9% of households with children aged 4-17 experienced food insecurity in 2017/2018. Certain population groups are more likely to be food insecure, such as lone-parent households, individuals who rely on government assistance as their main source of income and individuals who rent their home.

With the onset of the pandemic, those who experienced household food insecurity were significantly more likely to report poorer mental health outcomes. Children and youth who lived in households that were food insecure before the pandemic may have relied, at least partially, on food programs available through schools. With schools closed, and such programs interrupted, these children may be particularly vulnerable to food insecurity at this time.

Some communities may have disproportionally more families who are vulnerable in terms of food insecurity, low income or other socioeconomic outcomes. Use the map below to see how your community compares with the rest of the country.

Map 4
Find information about your community: socioeconomic characteristics and outcomes



Notes: In order to maximize the amount of data available, the proportion of food insecure households with children aged 4 to 17 is presented by health region peer group, as opposed to the individual health region. These peer groups aggregate together data for health regions with similar social and economic determinants of health such as basic demographics, living conditions and working conditions. For more information on health region peer groups, please refer to: Health Regions: Boundaries and Correspondence with Census Geography, December 2018.
Indicators are presented at the health region level as it is often the level at which decisions are made on measures to limit the spread of COVID-19. To view indicators on children in low income and lone parent households at the provincial level, please see here: Census Profile, 2016 Census. To view the indicator on food insecurity at the provincial level, please see table 13-10-0472-01. For more indicators at this level of geography, please refer to table 13-10-0815-01.

This interactive map can be accessed in the HTML version.

Family violence and safety

With the closure of schools and other activities, children are more-or-less restricted to the confines of their home. For children who were already at risk of being victims of family violence, school would no longer be available as a safe space.

In 2019, there were 69,691 child and youth victims (aged 17 and younger) of police-reported violence in Canada. Of these victims, 22,299 children and youth were victimized by a family member. A parent (60%) was the most common perpetrator, followed by another type of family member—such as a grandparent, uncle or aunt—or a sibling. This was the case for both female and male victims.

In 2014, one-third of Canadians aged 15 and older (33%) reported experiencing some form of child maltreatment before age 15. Childhood

physical abuse was reported by 26% of Canadians, while 8% reported sexual abuse. About 93% of victims of childhood physical and/or sexual abuse did not report the abuse to the police or child protection services before they turned 15. About two thirds of victims (67%) did not speak to anyone about the abuse, including friends or family.

The pandemic can place additional stress on the household which could increase the risk of family violence. In addition, with fewer outlets, children may also be less likely to report abuse or reach out for help.

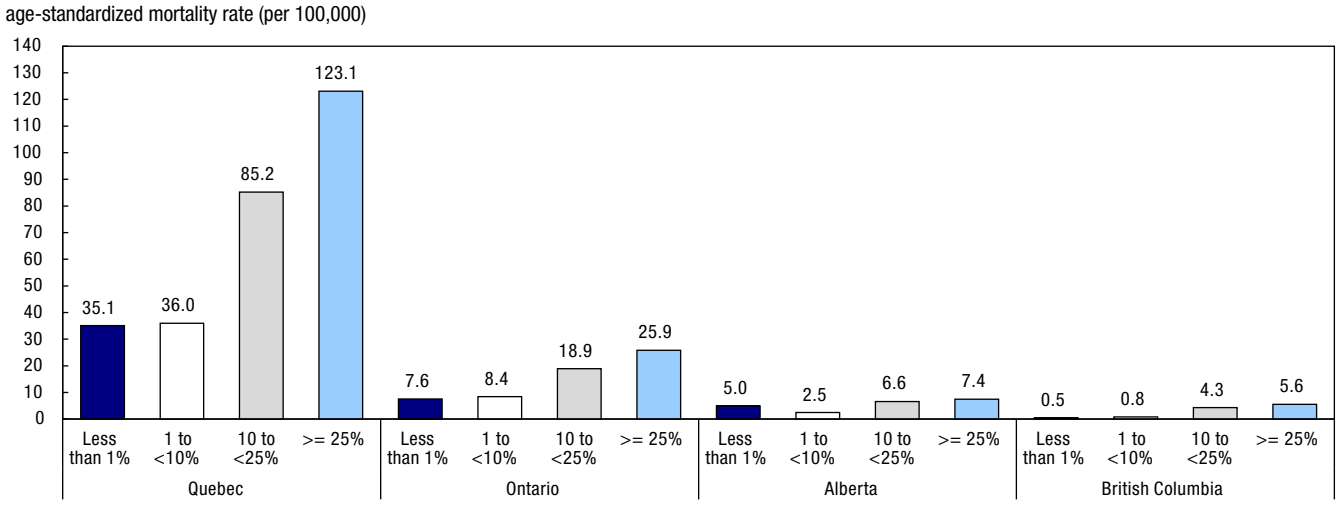
In terms of bullying at school, while not attending school may result in a decrease in in-person bullying, an increased reliance on the Internet could increase the risk of cyberbullying. Before the pandemic, in 2014, about 17% of youth, aged 15 to 29 who used the Internet, reported they had experienced cyberbullying or cyberstalking.

Diversity and disproportional impacts

Not all communities have felt the impacts of COVID-19 in the same way. Canadians, including children and youth, of diverse backgrounds have reported experiencing discrimination since the start of the pandemic. Various studies have shown that some groups, including recent immigrants, Indigenous people and groups designated as visible minorities have been disproportionately affected by the pandemic.

One study, for example, found that immigrants and groups designated as visible minorities (such as Black Canadians and Filipinos) formed a larger proportion of front-line workers, including nurse aides, orderlies and patient service associates. Many of these workers have children at home and this suggests that some groups of Canadians, including children and youth, may have been at greater risk of exposure to the virus than others. In addition, neighbourhoods with higher proportions of the population identifying as population groups designated as visible minorities have experienced higher rates of mortality due to COVID-19 as well.

Chart 6
Age-standardized COVID-19 mortality rates, by proportion of the neighbourhood population belonging to population groups designated as visible minorities, selected provinces



Note: The data used to estimate age-standardized mortality rates are provisional. Provincial vital statistics offices are not all able to provide their data to Statistics Canada at the same time. This could affect some observed differences in mortality rates between these provinces.
Source: Subedi, Rajendra, Lawson Greenberg and Martin Turcotte. 2020. COVID-19 mortality rates in Canada's ethno-cultural neighbourhoods. *StatCan COVID-19: Data to Insights for a Better Canada*. https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00079-eng.htm

The challenges faced by diverse groups are not without consequences. For example, results from Statistics Canada crowdsourcing initiatives have shown that among participants, including youth, recent immigrants, certain groups designated as visible minorities, gender diverse people, and Indigenous people, were also more likely to report symptoms consistent with moderate or severe generalized anxiety.

In addition, some groups, such as groups designated as visible minorities, recent immigrants and Indigenous peoples are overrepresented among those in low income and may be more vulnerable to the economic impacts of COVID-19.

These factors can place additional burdens on the household. The stresses of dealing with increased risk to COVID-19 as well as the economic impacts of the pandemic can lead to increased stress on the household affecting the mental health of the entire family from parents to children.

On the other hand, some groups may be aware of the increased risk they and their children face. For example, in the early months of the pandemic, immigrants were significantly more likely than Canadian-born people to be concerned about their own health and the health of others in their household. Subsequently, they also indicated being more likely to take precautions, such as wearing masks in public.

The Census of Population provides extensive details on the socioeconomic characteristics of the population and at detailed levels of geography. The Census Program Data Viewer is a web-based data visualization tool that will make statistical information more interpretable by presenting key indicators in a statistical dashboard.

Appendix

For a visual overview of the inter-connected impacts of school closures on children and youth, see School closures and COVID-19: Impacts on children.