Food Insecurity

EXAMINING THE SOCIETAL CONSEQUENCES

OF THE COVID-19 PANDEMIC

Key Findings

- The COVID-19 pandemic and associated response measures impacted various dimensions of food security, including the availability, accessibility, and affordability of food in BC. Increased unemployment and reduced income during the pandemic substantially contributed to household food insecurity.
- In the early months of the pandemic, 14.6% of people age 18 and older in BC reported worrying that food would run out before they could get money to buy more. This proportion was highest in the Northern Health region (18.5%).
- In BC, as a result of discrimination and deeply entrenched societal inequities, food insecurity during the COVID-19 pandemic disproportionately affected people age 18–29, people with an annual household income of less than \$20,000, people without a high school diploma, people with at least one disability, Indigenous Peoples (First Nations, Métis, and Inuit), and people who are racialized.

Situation

The COVID-19 pandemic and associated response measures impacted various dimensions of food security, including the availability, accessibility, and affordability of food in BC. Increased unemployment and reduced income substantially contributed to household food insecurity. People who experienced food insecurity before the COVID-19 pandemic were more likely to face increased challenges with food insecurity due to the pandemic and related response measures.

Background

Food insecurity is closely tied to structural inequities, racism, discrimination, and colonialism. ^{1,2} Even before the pandemic, some groups in society were more likely to experience food insecurity. Those who most frequently experience food insecurity in Canada include low-income households, people who identify as Black or Indigenous, families with children (especially female lone-parent families), and households that rely on social assistance or other income supports.^{3,4}

Because understandings of food security and food insecurity vary, the BC Centre for Disease Control (BCCDC), along with Indigenous and health sector partners, has created common definitions for the BC context (see text box).1,5 Through this work, they have also sought to describe—rather than define—the complex nature of Indigenous food sovereignty (IFS) and its integral role in achieving population-level food security.6 IFS has been characterized as "a re-connection to land-based food and political systems"7(p.18) and "the right and responsibility of people to have access to healthy and culturally appropriate foods, while defining their own food systems."8 IFS also forms the basis of a sustainable framework for Indigenous health, wellness, and community development; 8,9 this includes the need to restructure colonial systems to support IFS and to honour "the values and practices that guide Indigenous Peoples' relationships to the land and to each other." a,1(p.3),5

a For more information, including a discussion of key principles that guide Indigenous food sovereignty, please see the BCCDC's Conceptual Framework for Food Security Indicators in British Columbia summary report (pp. 9-10): http://www.bccdc.ca/pop-public-health/Documents/ conceptual-framework-food-security-indicators.pdf.





In 2022, the BC Centre for Disease Control, working with Indigenous and health sector partners across BC, released the following definitions of food security and food insecurity.

Food security means that everyone has equitable access to food that is affordable, culturally preferable, nutritious, and safe; everyone has the agency to participate in, and influence food systems; and that food systems are resilient, ecologically sustainable, socially just, and honour Indigenous food sovereignty.

Food insecurity exists when factors outside an individual's control negatively impact their access to enough foods that promote well-being. Economic, social, environmental, and geographical factors influence this access. Food insecurity is most acutely felt by those who experience the negative impacts of *structural inequities*, b such as discrimination and ongoing colonial practices.

For more information, see http://www.bccdc.ca/Documents/FoodSecurity
FoodInsecurity Definitions FINAL.pdf.

Food insecurity exists along a continuum, with different levels requiring different responses and supports. Severe food insecurity refers to prolonged deprivation, which can include missing meals, reducing food intake, and going without food for extended periods (even full days). Moderate food insecurity is associated with inadequate food intake: although food is accessible, it is poor in quality, quantity, and/or diversity. Food insecurity can also be described as marginal (i.e., worrying that food will run out before being able to get more, whether through food production, hunting/fishing, gathering, or purchasing food). Some sources further distinguish between the concept of food insecurity

Indigenous Peoples and Truth and Reconciliation

Section 35 of the Canadian Constitution recognizes and affirms the existing Aboriginal and Treaty rights of three distinct Indigenous Peoples: **First Nations**, **Métis**, and **Inuit**.

The lands now known as British Columbia and Canada have sustained and been stewarded by Indigenous Peoples since time immemorial. Indigenous Peoples' connectedness to the land, access to resources, and associated cultural practices have been profoundly disrupted by colonization and ongoing settler colonialism. Forced removal from ancestral lands, deliberate restriction of access to traditional resources, systemic racism and discrimination, and genocide have deeply impacted Indigenous food sovereignty and the ability of Indigenous Peoples to exercise their inherent rights and self-determination, including with respect to accessing foods (whether through food production, hunting/ fishing, gathering, or purchasing food).

During the pandemic, the Governments of British Columbia and Canada identified supporting Indigenous communities to respond to COVID-19 as a high priority. The Government of British Columbia has also committed to a process of reconciliation and relationship-building with Indigenous Peoples, including implementation of the Declaration on the Rights of Indigenous Peoples Act. For more information, visit https://www2.gov.bc.ca/gov/content/ governments/indigenous-people/newrelationship. There remains a great deal of work to be done by settler governments and systems to uphold the inherent rights of Indigenous Peoples.

b Structural inequities are the unfair and unjust systemic biases present in institutional policies and day-to-day practices that disadvantage certain social identities over others based on race, gender, class, sexual orientation, and other domains.

more broadly and **household food insecurity** (see text box).¹¹ Any of these states of food insecurity may be linked to low income, mental health challenges,¹⁰ and colonial harms such as dispossession and displacement of Indigenous Peoples from land and resources.¹²

Household food (in)security

"Food security is commonly understood to exist in a household when all [members of that household], at all times, have access to sufficient, safe and nutritious food for an active and healthy life. Conversely, food insecurity occurs when food quality and/or quantity are compromised, typically associated with limited financial resources." – Statistics Canada¹¹

Food insecurity may be transitory or chronic. In other words, food insecurity can be the short-term result of unforeseen events or conditions such as disruption of food production, increased food prices, and/or reductions in household income. Food insecurity can also be the longer-lasting result of poverty, the absence of economic resources and opportunities, and/or separation from ancestral lands and traditional food sources.¹³ By the time individuals or families are experiencing food insecurity, they are already likely to face challenges in terms of access to and affordability of other basic needs (e.g., housing).14 More than one-third (36%) of food-insecure households in Canada indicated that food was the first expense they would cut from their budget (i.e., before they would cut expenses such as transportation, medicine, utilities, or housing).15

The First Nations Health Authority's Statement on the Societal Consequences of BC's COVID-19 Response

COVID-19 and the public health measures taken to respond to it have reinforced existing inequities and discrimination present in BC's health and wellness system. First Nations people in BC have been disproportionately affected by COVID-19. Data show that First Nations people in BC have tested positive for COVID-19 at a higher rate than other residents, have had lower median ages of hospitalization and have higher rates of admission to intensive care units and death from the virus. The impact of COVID-19 on social determinants such as housing, food security, education, and geography has had ripple effects on the health and wellness of First Nations in BC. This is evident in the significant increase in toxic drug deaths during the pandemic and the elevated rates of anxiety, depression, and grief experienced by many First Nations people, which is further layered with intergenerational trauma and loss from past pandemics. Despite these challenges, First Nations people in BC have responded to the pandemic with strength and resilience that is grounded in culture and community. Families have found new ways to connect, support their communities and keep each other well. The First Nations Health Authority (FNHA) has worked quickly to expand virtual services, and proudly served as a partner to First Nations communities in BC to advance community priorities and ensure support and services have been available throughout the pandemic. The FNHA's full statement on the societal consequences of BC's COVID-19 response can be found at: www.fnha.ca/ Documents/FNHA-COVID-19-Statement.pdf.

Food security supports positive physical, mental, emotional, and spiritual health, while food insecurity is associated with a range of health and wellness impacts across the life course. In 2020, Canadians reported that food insecurity affected their relationships with loved ones and the health and wellness of their children, isolated them socially, created barriers to finding and maintaining employment, impeded their ability to find meaning and purpose in life, and affected their ability to express and share their culture.

Research has linked food insecurity to adverse maternal and birth outcomes;^{16,17} increased risk of chronic diseases such as cardiovascular disease, diabetes, and asthma;^{18,19,20,21} and higher mortality rates.²² Having access to a balanced and healthy diet is important to reduce the risk of developing chronic disease.²³ Food-insecure adolescents and adults are more likely to experience nutritional deficiencies.²⁴ Food insecurity is also associated with poorer mental health, and can contribute to mental health conditions such as depression and anxiety.^{25,26,27}

The COVID-19 pandemic and associated response measures impacted various dimensions of food security, including the availability, accessibility, and affordability of food. Following the declaration of the pandemic in 2020, "panic buying" and hoarding of food and household products (e.g., non-perishable food, baby formula, toilet paper) occurred for several weeks in Canada and the United States.^{28,29} Sales at food and beverage stores increased 22.8% from February 2020 to March 2020 in Canada.30 This spike in consumer demand in the early days of the pandemic led to temporary interruptions and shortages of food supplies in grocery stores.²⁹ These interruptions and shortages, along with subsequent disruptions in food supply chains, left individuals and families with limited options as to what remained available. Some stores eventually responded by imposing quantity purchasing limits on products.²⁹ These limits disproportionately impacted people in rural, remote, and Indigenous communities, many of whom tend to buy groceries in large

quantities.^{c,31,32} In addition, some people may have experienced limited food access due to fears of COVID-19.^{29,33} Some may have shopped less because of the fear of taking public transportation or going inside grocery stores as COVID-19 case rates increased across the province and globally, especially if they did not have someone else to shop for them, or if they could not order food or groceries online.

As the pandemic continued, COVID-19 outbreaks in food processing plants and labour shortages in the horticulture sector caused disruptions to food supply chains in BC.^{29,34,35} The pandemic has also led to new and continued pressures and disruptions in global food supply chains (e.g., production, processing, distribution), largely due to health and safety protocols and closures to curb the spread of COVID-19;^{36,37} these and other economic impacts of the pandemic and response measures affected both the accessibility and affordability of food.

In addition, the pandemic and related response measures contributed to a decline in employment and a reduction in hours of work for many, due in part to increased caregiving responsibilities especially for women-after the suspension of in-class learning at schools and the reduction of home care services.38,39 The decline in employment further increased the risk of food insecurity.40 Decreased employment and reduced income were inequitable in other ways as well, with disproportionate impacts felt by younger workers, Indigenous workers, recent immigrants, racialized workers, and those with lower incomes and/or less secure employment.41 Lower income is strongly associated with household food insecurity, and even small decreases in income can increase risk.¹⁰ Furthermore, food in Canada became substantially more expensive in 2020. For example, the prices of the following foods increased by 7 to 14% between May 2019 and May 2020: meat (7.8%), rice/rice-based mixes (9.3%), flour/flour-based mixes (9.4%), and

c This may be because many people in rural, remote, and Indigenous communities must travel long distances to get to a grocery store, sometimes by boat or plane, with significant costs in terms of travel time, fuel, and related expenses. They might also be shopping for larger/multi-generational households or multiple community members.

canned tuna (13.9%).42

While there have been many harmful outcomes related to increased food insecurity during the pandemic, positive impacts related to COVID-19 response measures have also been identified, particularly in more rural and remote areas. In some Indigenous communities, individuals and families have "returned to the land" to self-isolate and harvest wild foods and medicines as ways to stay well and connect to culture during the pandemic. 43,44,45 In communities that rely on ferry services to get groceries, some people reported that BC Ferries' decision to deliver groceries during the pandemic—which reduced the need for people to travel long distances to the grocery store—supported people to stay at home and self-isolate, increasing access to food. 46 Many people and communities-Indigenous and non-Indigenous alike—also began or increased their home-based food production activities, which are associated with increased community cohesion, resilience, self-sufficiency, and food sovereignty.47,48,49

Findings

A Statistics Canada survey conducted in May 2020 revealed that 15.3% of BC households (14.6% of Canadian households) had experienced food insecurity in the previous 30 days. d,40 This is higher than reported in Statistics Canada's 2017/18 Canadian Community Health Survey, which showed that 10.7% of BC households^{54,55} (10.5% of Canadian households) experienced food insecurity.⁵⁶ This difference suggests a dramatic increase in food insecurity in the early days of the pandemic. The May 2020 survey also found higher rates of food insecurity among Canadians living in households with children (19.2%) compared to households without children (12.2%).⁴⁰ Canadians who were absent from work due to business closure, layoff, or personal circumstances resulting from COVID-19 were almost three times more

Food Banks and the Charitable Food Sector

Food banks and affiliate organizations in the charitable food sector provide important emergency relief and short-term support to individuals and families in crisis. However, food banks were not designed to increase food security. Because food insecurity is not simply a matter of "needing more food," but is clearly linked to inadequate income, food banks and the charitable food sector can only treat the symptoms of food insecurity, and not the root causes. 10,50,51 The majority of food-insecure households in Canada do not access food banks, but rely instead on strategies such as borrowing money or not paying bills so they can afford to buy food. 10

Still, in a survey of food banks and affiliate organizations across Canada, more than half (52%) reported an increase in usage in March 2020, during the onset of the COVID-19 pandemic, compared to March 2019.52 Food banks struggled to respond to the increased need, citing a shortage of volunteers, an insufficient food supply due to disruptions in the supply chain, reduced donations and funding, and difficulties in adjusting to public health protocols.52 New federal and provincial funding and support from individuals, businesses, and local communities helped many food banks meet these challenges and provide increased support.52,53

After the initial surge in demand, however, 53% of food banks reported a decline in usage in June 2020 compared to March 2020. The majority (90%) of food bank operators believed this decline was due to government financial support for individuals in need.⁵²

d Individuals within a household might experience different levels of food insecurity. For example, individual members of a food-insecure household might vary in their access to food supports outside the household (e.g., access to school-based meal programs).

likely to report food insecurity than those who were working (28.4% compared to 10.7%).^{e,40}

The Institute for Sustainable Food Systems at Kwantlen Polytechnic University conducted a survey on food access, concerns, and perceptions during the pandemic. The survey ran from April 15 to August 15, 2020, and 2,211 BC residents responded.²⁹ Of these,

- 26% worried they might not always have access to enough food for a healthy life for all household members in the coming month. This percentage rose above 30% for those who were unemployed, those with a household income below \$40,000, and those who identified as Indigenous.
- 60% reported at least one factor limiting their access to food during the pandemic. The factors included limited income or food being too expensive (47%), being too worried/anxious to go out (47%), limited stores in the area they lived (25%), lack of transportation (15%), quarantine/self-isolation (15%), food scarcity (8%), and closed stores (4%).
- 39% of respondents said they could get the foods they needed, while 61% of respondents identified difficulties in accessing food items.
- 46% of unemployed respondents agreed with the statement: "Thinking about next month, I'm concerned that I won't have enough food for [an] active healthy life for all household members," compared with 30% of employed respondents.²⁹

This survey also found that specific groups of people indicated higher levels of difficulty in accessing food during the pandemic. These groups include families with children living at home, Indigenous people, and those at high risk of severe illness from COVID-19.²⁹ For Indigenous communities in BC, access to traditional foods was also affected by the pandemic response; for example, the need for physical distancing made

Research conducted in the fall of 2020 suggests that pandemic-related financial support slightly decreased household food insecurity in Canada, including among Indigenous Peoples. However, given the temporary nature of this support and increasing inflation, this positive impact was not expected to last.

In February and March 2021, the Public Health Association of BC surveyed community service organizations that provide food access in BC: 69% of responding organizations reported increased need/usage during the pandemic, and 65% indicated that they had established new food access programming, in some cases for the first time, because of the pandemic.⁵⁹

Figures 1 to 7 below present findings about perceived food insecurity that are representative of the BC population, based on the first BC COVID-19 Survey on Population Experiences, Action, and Knowledge (SPEAK; May 12–31, 2020). These figures include analyses by regional health authority (Figure 1), age group (Figure 2), household income (Figure 3), education level (Figure 4), number of years in Canada (Figure 5), level of ability (Figure 6), and race/ethnicity (Figure 7).

harvesting fish and other seafoods challenging, and added to the existing impacts of climate change, industrialization and resulting habitat loss, and the need for conservation of shrinking wildlife populations.⁵⁷

e This section of the report presents data from several BC- and Canada-based surveys, with an emphasis on BC COVID-19 SPEAK data from May 2020. For further details about COVID-19 SPEAK, please see Appendix A. For a summary of additional research projects focused on the impacts of COVID-19 on food security in BC and across Canada, please see Appendix B.

Due to the specific analyses and weighting conducted for this report, there may be slight differences between the COVID-19 SPEAK data presented here and the data available on the COVID-19 SPEAK Dashboard (http://www.bccdc.ca/health-professionals/data-reports/bc-covid-19-speak-dashboard).

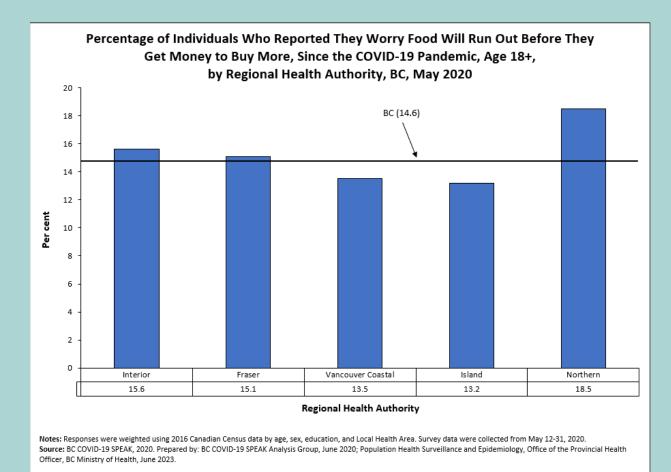


Figure 1 presents the percentage of people age 18 and older in BC, by health region, who reported worrying since the COVID-19 pandemic began that food would run out before they could get money to buy more. For example, 15.6% of people in Interior Health reported worrying about running out of food before they could get money to buy more. The average in BC was 14.6%, while the highest proportion was in Northern Health (18.5%) and the lowest proportions were in Vancouver Coastal Health (13.5%) and Island Health (13.2%). The proportions in Northern, Interior, and Fraser Health were all above the provincial average.

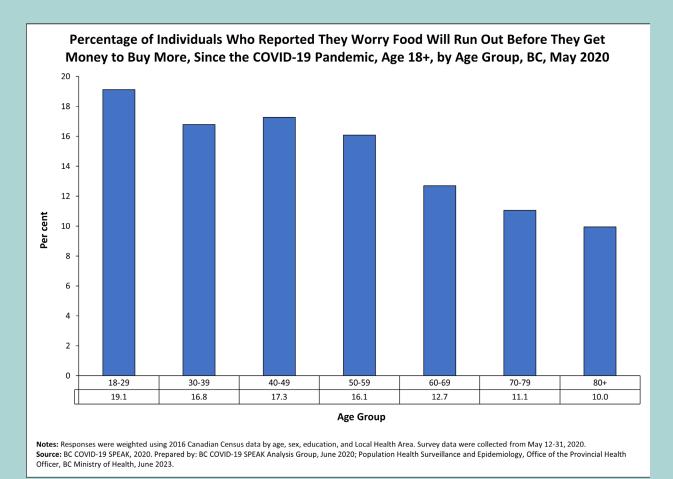
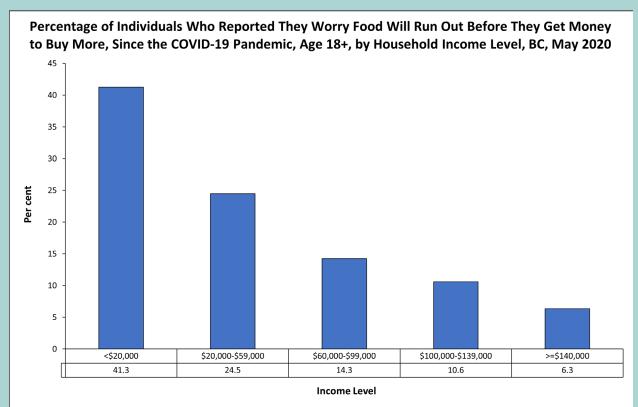


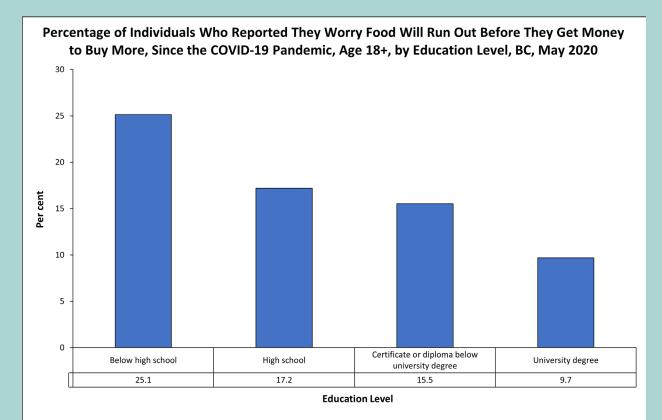
Figure 2 shows the percentage of people age 18 and older in BC, by age group, who reported worrying since the COVID-19 pandemic began that food would run out before they could get money to buy more. For example, 19.1% of people age 18–29 reported worrying about running out of food before they could get money to buy more. There is an overall decrease in the proportion of individuals reporting this as age increases. People age 18–29 were most likely to report worrying about running out of food, and people in this age group were almost twice as likely as those in the oldest age group (10.0% of those age 80 and older) to worry about running out of food.



Notes: Responses were weighted using 2016 Canadian Census data by age, sex, education, and Local Health Area. Survey data were collected from May 12-31, 2020. Household income means income before taxes and deductions, from all sources for the last calendar (tax) year, for all family members in the household combined, excluding roommates. No adjustments were made by family size or number of dependents.

Source: BC COVID-19 SPEAK, 2020. Prepared by: BC COVID-19 SPEAK Analysis Group, June 2020; Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, June 2023.

Figure 3 shows the relationship between household income and worrying since the COVID-19 pandemic began that food would run out before having money to buy more. For example, 41.3% of people with annual household incomes below \$20,000 reported worrying about running out of food before they could get money to buy more. As annual household income decreased, people were more likely to report worrying about running out of food. People with annual household incomes below \$20,000 were most likely to report worrying about running out of food before they could get money to buy more, while those with annual household incomes of \$140,000 or more were least likely.



Notes: Responses were weighted using 2016 Canadian Census data by age, sex, education, and Local Health Area. Survey data were collected from May 12-31, 2020. "Prefer not to answer" and missing responses have been excluded from this analysis.

Source: BC COVID-19 SPEAK, 2020. Prepared by: BC COVID-19 SPEAK Analysis Group, June 2020; Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, June 2023.

As was the case with income, Figure 4 shows that those with lower education levels were most likely to worry since the COVID-19 pandemic began that food would run out before they had money to buy more. For example, 25.1% of those without a high school diploma and 17.2% of those who completed high school but not further education reported worrying about running out of food before they could get money to buy more. As education levels increased, people were less likely to be worried about food running out. Fewer than 10% of those with a university degree reported worrying food would run out before they could get money to buy more. This likely reflects the tendency for Canadians with university degrees to have higher incomes than those with lower levels of education.⁶⁰

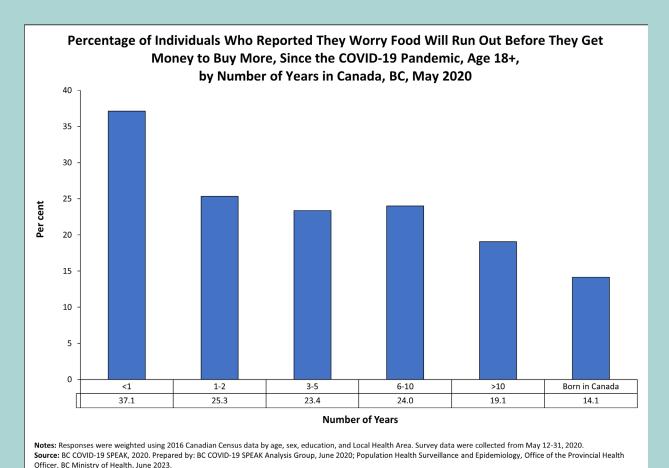


Figure 5 presents the percentage of people age 18 and older in BC, by number of years spent in Canada, who reported worrying since the COVID-19 pandemic began that food would run out before they could get money to buy more. For example, 37.1% of people who had spent less than one year in Canada reported worrying about running out of food before they could get money to buy more. People not born in Canada, regardless of the number of years spent living in Canada, were more likely than those born in Canada to report worrying about running out of food before they could get money to buy more. Those who had spent less than one year in Canada were more than two and a half times more likely to worry about running out of food than those who were born in Canada (37.1% compared to 14.1%).

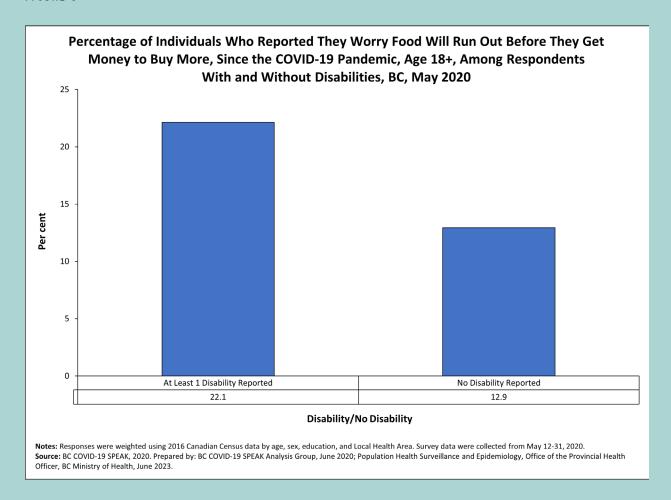
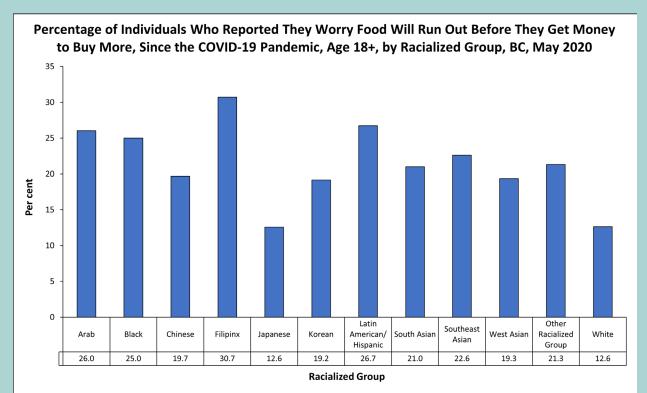


Figure 6 compares the percentages of people age 18 and older in BC, with and without disabilities, who reported worrying since the COVID-19 pandemic began that food would run out before they could get money to buy more. Of people who reported having at least one disability, 22.1% worried about running out of food before they could get money to buy more. People with at least one disability were much more likely than those without a disability to report worrying about food running out before they could get money to buy more (22.1% compared to 12.9%).



Notes: Responses were weighted using 2016 Canadian Census data by age, sex, education, and Local Health Area. Survey data were collected from May 12-31, 2020. The Project team reports on race-based disaggregated demographic data to reveal inequitable outcomes between racialized groups that result from many factors, including historic and current systemic discrimination and racism. Respondents who selected more than one group were counted in each selected group, so percentages do not add up to 100%. Due to geographical limitations of the data, the First Nations Health Authority has decided not to include First Nations people as a racialized group in this chart. Métis Nation British Columbia has chosen not to include Métis data in this chart, as they are developing a separate report on Métis food (in)security and food sovereignty.

Source: BC COVID-19 SPEAK, 2020. Prepared by: BC COVID-19 SPEAK Analysis Group; Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer, BC Ministry of Health, June 2023.

Figure 7 shows the percentage of people age 18 and older in BC, by racialized group, who reported worrying since the COVID-19 pandemic began that food would run out before they could get money to buy more. For example, 26.0% of people who identified as Arab reported worrying about running out of food before they could get money to buy more. People who identified as white or Japanese were least likely to report this worry (12.6%), while other people who identified as racialized reported this worry at levels ranging from a low of 19.2% (Korean) to a high of 30.7% (Filipinx⁹). Although Figure 7 illustrates perceptions of food affordability rather than food insecurity more directly, research shows that increased levels of food insecurity among racialized populations—along with newcomers to Canada (as seen in Figure 5), many of whom are also racialized—are the result of many intersecting factors, including structural and systemic racism, as well as systems, policies, and institutions in BC and across Canada that privilege white people while marginalizing and disadvantaging People of Colour.^{1,2,3,61}

g "Filipinx" is a gender-neutral term for people and communities originating in the Philippines, also known as "Filipino."

While not included in this chart, Indigenous Peoples and communities are known to experience very high levels of food insecurity due to the ongoing legacies of colonialism and racism. Even before the pandemic, some sources found rates of food insecurity among First Nations people that exceeded 40%.4 Métis Nation British Columbia reports that food security is also a serious issue among Métis people in BC.49,62 Again, it is important to recognize that this is the result of factors such as racism, colonialism, and oppressive systems, policies, and practices that create unearned advantages for white people and unfair disadvantages for Indigenous Peoples. 1,2,3,61 During the pandemic, First Nations Health Authority and Métis Nation British Columbia were among those working to address food insecurity in BC (see text box).

First Nations Health Authority created a toolkit with ideas, templates, tools, and information to support First Nations communities in increasing control over community-level food systems and making short-, medium-, and long-term plans for food security using a food systems approach.⁶³

Métis Nation British Columbia identified food security as a <u>key priority</u> and launched several projects to promote increased self-sufficiency in terms of access to food. These included the Métis home garden pilot project and a Métis harvester relief fund.⁶⁴

Equity Considerations

Note that the factors and considerations listed below often intersect, thus compounding their effects and deepening experiences of marginalization, poverty, stress, and food insecurity for many people. BC COVID-19 SPEAK–Round 2 data indicated an overall decrease in food insecurity concerns in BC in April–May 2021 compared to the previous spring; however, once again, certain populations (e.g., younger people, racialized people and communities, those with lower incomes and/or less education) remained disproportionately affected.⁶⁵

- Socio-economic status: Food insecurity is closely linked to social and economic disadvantage, particularly low and unstable income. Households with lower household income face the greatest risks of food insecurity;61 however, most food insecure households in BC (65%) are working households.²⁹ Lower wages and precarious employment can prevent a working individual from being food secure. 10 Among BC households who depend on social assistance as their main source of income, the majority (76%) are food insecure.²⁹ In Canada, renters are more likely to be food insecure than homeowners.3 Furthermore, households with lower education levels are more likely to be food insecure (7.2% of households with a minimum of one member with a Bachelor's degree or higher versus 18.4% of households where the highest education level of any member is a high school diploma and 21.1% of households where no member has completed high school).3
- Sex and gender: Sexism, transphobia, and heteronormativity contribute to disproportionate levels of poverty, socio-economic marginalization, and food insecurity among women⁶⁶ and people who identify as trans, queer, and non-binary.^{67,68} As noted elsewhere in this report, lone-parent households headed by women are more likely to be food insecure than lone-parent households headed by men.³
- Indigenous Peoples: The ability of Indigenous Peoples to exercise their inherent rights has been negatively impacted by factors such as historical and ongoing colonialism, systemic

- racism, removal and forced separation from traditional lands and resources, and environmental degradation. Indigenous Peoples and communities experience much higher rates of food insecurity than non-Indigenous people in Canada. 10,57,69 Access to market foods may be disrupted by geographic, financial, and transportation challenges, while access to foods obtained through traditional harvesting may be affected by climate change, industrial development, and lack of access to traditional territories and harvesting grounds. 57,69 Indigenous Peoples in northern, rural, or remote locations face additional challenges (see "Northern, rural, and remote communities" below).
- Racialized groups: Structural racism and discrimination produce unequal socioeconomic outcomes, including food insecurity, among many racialized groups. 1,2 According to weighted prevalence data from Statistics Canada's Household Food Security Survey (2005 to 2014), household food insecurity was much higher for Black respondents (28.4%) than white respondents (10.0%).3 Although owning one's home is associated with a lower likelihood of food insecurity, levels of food insecurity among Black homeowners in Canada were similar to those among white renters in Canada (14.7% vs 14.3%) from 2005 to 2014.70 More recent data from 2017 and 2018 have also demonstrated elevated levels of food insecurity among many racialized populations in Canada.3
- Children and youth: In BC, 15.6% of children under the age of 18 live in food-insecure households.71 In Canada, households with children are more likely than households without children to be food insecure (16.2% of households with at least one child compared to 11.4% of households without a child).3 The risk is even higher among children who live in a lone-parent household (33.1% for female lone-parent households and 21.6% for male lone-parent households compared to 11.8% of dual-parent households).3 Many public schools in BC offer food programs to students whose families are food insecure. While many school districts adapted their food programs during the suspension of in-person instruction in BC, new challenges and limitations for access still emerged for children and families.72

- **Disability status**: Research demonstrates that people living with disabilities—including sensory, mobility, mental, cognitive, and physical impairments-face a higher risk of food insecurity due to financial, physical, and social barriers to accessing food. For example, higher rates of poverty among people living with a disability suggest that they have reduced economic access to food.73 This is particularly the case among younger adults and individuals who have a mental health-related disability.73 Many people have relied more on online shopping for food as an easier way to shop during the COVID-19 pandemic;29 however, one in five individuals living with a disability in Canada does not use the Internet, making it more challenging to access food online.74
- Northern, rural, and remote communities: People living in northern, rural, and remote communities (including many Indigenous communities) face additional challenges in accessing healthy and affordable food. In BC, the Northern Health region had the highest overall rate of food insecurity in 2011/12 (16.4%),71 which is consistent with COVID-19 SPEAK data presented in this report (see Figure 1). Lack of public transit and other transportation options,75 greater distances to grocery stores, higher food prices in stores (particularly for fresh fruits and vegetables), and fewer healthy food options are some of the factors that disproportionately affect people living in rural and remote communities.32

Considerations for Further Action

This section provides considerations for action based on the findings of and research done for this report. These are not formal recommendations, but rather ideas to consider when shaping recommendations and actions related to this topic. The scope of the Societal Consequences of COVID-19 project (of which this report is a part) does not permit a complete cataloguing of all actions currently underway in BC on this report topic. The considerations below may lend support to actions already underway that address the issues identified and provide a starting place for discussion if action has not yet begun.

- Short- to medium-term: Use a broad, intersectional equity framework in work to address food insecurity—for example, by focusing on the upstream impacts and intersections of systemic racism, colonialism, sex and gender inequity, ableism, inequitable income distribution, and other factors that increase food insecurity (e.g., poverty, housing, geography). This will require improved data collection and monitoring to ensure appropriately disaggregated data are available for improved evidence-based decision making. 14,70,76,77,78
- 2. **Medium- to longer-term**: This report highlights the potential for decreasing food insecurity among Canadian and British Columbian households by reducing income inequality (i.e., improving the financial circumstances of low-income households).⁷⁹ Food insecurity was a significant theme that emerged from the 2018–19 provincewide consultations informing BC's first poverty reduction strategy, *TogetherBC*.⁷⁸
- 3. Medium- to longer-term: The pandemic has highlighted inequities and the need for change both in terms of food security among the broader population and within the food system itself (e.g., supply chain issues, concerns regarding the situation of agricultural workers). Longer-term investments are required to achieve longer-term improvements to food security. Systems change within the food system—including increased local food

production and food sovereignty in rural and remote areas and for Indigenous Peoples and communities³²—could help build a more sustainable, more equitable food system for all.⁸⁰ This consideration around equity highlights the importance of ongoing work toward reconciliation and self-determination for Indigenous Peoples, which will ultimately support increased Indigenous food sovereignty.

4. Planning for the future: As part of this work, it is essential to plan and strategize for improved food security overall, and for achieving and maintaining sufficient access to food for all segments of the population in the case of future public health emergencies.

Provincial Food Security Planning and Action. To address long-term needs, the BC government is developing a coordinated approach to food security, focused on the following:

- Providing a mechanism for the Province to respond during provincial emergencies,
- Guiding coordinated cross-government planning and action to support people living in BC to have greater food security,
- Upholding Indigenous food sovereignty, and
- Responding to the threat of climate change to food security and food sovereignty.

This work will prioritize actions that support population groups at higher risk for food insecurity and outline sustainable actions that comprehensively address food insecurity and reduce the need for short-term responses. Engagement with Indigenous and external partners has begun and the development of a coordinated approach to food security is expected to be complete in 2024.

Appendix A: Data Methodology Notes

1. Charts provided by Population Health Surveillance and Epidemiology, Office of the Provincial Health Officer.

For questions contact: <u>HLTH.PHSE@gov.bc.ca</u>.

2. BC COVID-19 SPEAK Data

Survey administration details: The BC COVID-19 Survey on Population Experiences, Action, and Knowledge (SPEAK) was primarily an online survey administered from May 12, 2020, to May 31, 2020, across British Columbia. A call centre was also created to support individuals who wished to take the survey with assistance. The survey was available in English and Simplified Chinese (online), with language guides in downloadable electronic format available for nine other languages (Arabic, American Sign Language, Farsi, French, Korean, Punjabi, Spanish, Traditional Chinese, and Vietnamese). All other languages were available through the call centre from Provincial Health Services Authority's Provincial Language Services. BC COVID-19 SPEAK was funded by the BCCDC Foundation for Public Health.

Sampling details: The target population for the survey was residents of British Columbia who were 18 years of age and older. To achieve a large and representative sample, a response target of 2% of the urban population and 4% for rural/remote communities was set as determined by the Community Health Service Area density designation. Targets were also established for age, gender, income, education, and ethnicity by each geographic area. Progress towards these targets was monitored daily, and purposeful promotion and stakeholder outreach was done, to better reach certain geographies and population demographics. Population targets were surpassed for each Regional Health Authority. However, not all sub-regions or demographic groups by geography did reach their target. Specifically, rural communities, populations with lower education, lower incomes, and some visible minorities were less reached and were prioritized for outreach. The final analytical dataset, which only included surveys where a Health Service Delivery Area geography, age, and gender were assigned and where the respondent must have completed at least 33% of the survey, contained 394,382 responses.

Weighting details: Statistical weighting is often used in large surveys to ensure that the sample of collected responses reflects the overall target population. This type of weighting compensates for the fact that certain demographics are less likely to respond to a survey. Establishing detailed sociodemographic targets at the outset for each geographic area of interest within the survey area allowed for more focused participant recruitment with the ultimate benefit of applying smaller weights. The BC COVID-19 SPEAK results presented in this report were weighted using 2016 Canadian Census data by age, sex, education level, and Local Health Area to account for residual differences in sample demographics and to ensure that the sample is as representative as possible of the overall geographic population being reported on. This set of survey weights is slightly different than those used to produce the public BC COVID-19 SPEAK Round 1 Dashboard, so the results in this report are not directly comparable to the public Dashboard.

Limitations: BC COVID-19 SPEAK is a non-randomized voluntary survey subject to self-selection bias among those who choose to respond. To adjust the sample to the population and enhance representativeness, quota-based sampling by geography and post collection weighting are used. Correction for unknown population characteristics is not possible. This limitation is not unique to non-randomized surveys as self-selection bias is also apparent in voluntary randomized surveys where a significant proportion of those invited to participate choose not to. Despite attempts for outreach to underrepresented communities, statistical weighting, and the creation of multiple points of access, this survey may be limited in its ability to fully reflect the experiences of members of communities unable to complete the survey due to language or access barriers.

h At the time of this reporting, a second round of COVID-19 SPEAK data (from the Round 2 survey) was available. A Round 3 survey is underway.

Note on disability status: Respondents included in the "At least 1 disability reported" population are those who selected one or more of the following responses to the question "Do you have a permanent or long-term disability? If so please indicate what type (check all that apply)": Vision; Hearing; Mobility (e.g., difficulty walking); Flexibility (e.g., difficulty bending down and picking up an object); Dexterity (e.g., difficulty in using hands or fingers); Pain-related; Learning (e.g., attention difficulties); Developmental (e.g., autism); Mental health-related (e.g., anxiety disorder); Memory (e.g., frequent episodes of confusion); or Other (please specify).

Notes on racialized groups: Figure 7 shows BC COVID-19 SPEAK responses disaggregated by non-Indigenous racialized groups. This report analyzes data by racialized groups "to reveal and address systemic inequalities in social determinants of health and access to health care," as per the report, Disaggregated demographic data collection in British Columbia: The Grandmother Perspective, by the BC Office of the Human Rights Commissioner.⁸²

Some of the categories charted were abbreviated for space. The category "Filipinx" is a gender-neutral term used in place of "Filipino" and/or "Filipina." The question asked, "Do you consider yourself to be (check all that apply)"

The options included "First Nations," "Métis," and "Inuit." Respondents who selected "First Nations," "Métis," or "Inuit" are not reported in these figures. In accordance with Indigenous Data Governance practices in BC, data from Indigenous respondents is provided to the First Nations Health Authority and Métis Nation British Columbia to determine how best to use the data in planning and engaging Indigenous communities across the province.

The options also included "White (European descent)," "Chinese," "South Asian (e.g., East Indian, Pakistani, Sri Lankan)," "Black (e.g., African or Caribbean)," "Filipino," "Latin American/Hispanic," "Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian, Laotian)," "Arab," "West Asian (e.g., Iranian, Afghan)," "Korean," "Japanese," "Other, please specify," and "Prefer not to answer."

Respondents are reported in every category they selected.

Appendix B: Research and Surveys

Subject/ Scope	Title of Research/ Survey Name	Notes on Research, Researcher, and Funding
Connection between access to transit and food security	"Getting Around to Feed Ourselves Well: Exploring the Intersection of Access to Transit and Food Security"	Tammara Soma, Simon Fraser University, Simon Fraser University Start Up Grant https://www.bcpovertyreduction.ca/posts-and- releases/gafow
Impact of COVID-19 on how people engage with food and food-related media	"International Corona Cooking Survey"	Kate White, University of British Columbia Charlotte DeBacker, University of Antwerp https://covid19.research.ubc.ca/research/covid19- food-survey-international-corona-cooking-survey https://www.frontiersin.org/articles/10.3389/ fnut.2020.621726/full
Other research & surveys that include themes related to food (in)security		
Canadians coping with the COVID-19 outbreak	"Cross-Canada survey on how Canadians are coping with the COVID-19 outbreak"	Partnership between Angus Reid and Dalhousie University https://www.dal.ca/sites/agri-food/research/ grocery-shopping-during-the-covid-19-pandemic. html
Impact of the COVID-19 outbreak on Canadians	"The Cohesion Study"	Led by a multidisciplinary team of researchers from the University of Montreal and University of Saskatchewan and supported by various public health authorities across Canada https://cohesionstudy.ca/
Mental health of Indigenous Communities	"Pandemic experiences and impacts of COVID-19 on the mental health of Indigenous communities"	Alanaise Goodwill, Simon Fraser University Jeannie Morgan, Simon Fraser University Pandemic experiences and impacts of COVID-19 on the mental health of Indigenous communities: Preliminary Knowledge Synthesis Funded by the Canadian Institutes of Health Research https://cihr-irsc.gc.ca/e/52058.html

References

- 1 BC Centre for Disease Control. Defining food security & food insecurity in British Columbia. Vancouver, BC: BC Centre for Disease Control, Population and Public Health; 2022 Oct 18 [cited 2023 Jan 05]. Available from: http://www.bccdc.ca/Documents/FoodSecurity_FoodInsecurity_Definitions_FINAL.pdf.
- 2 Odoms-Young AM. Examining the impact of structural racism on food insecurity: implications for addressing racial/ethnic disparities. Fam Community Health. 2018 Apr;41:S3.
- 3 Tarasuk V, Mitchell A. Household food insecurity in Canada, 2017-18. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); 2020 [cited 2022 May 12]. Available from: https://proof.utoronto.ca/wp-content/uploads/2020/03/Household-Food-Insecurity-in-Canada-2017-2018-Full-Reportpdf.pdf.
- 4 Chan L, Batal M, Sadik T, Tikhonov C, Schwartz H, Fediuk K, et al. First Nations Food, Nutrition & Environment Study final report for eight Assembly of First Nations regions: draft comprehensive technical report. Ottawa, ON: Assembly of First Nations, University of Ottawa, Université de Montréal; 2019 [cited 2022 Jun 06]. Available from: https://www.fnfnes.ca/docs/FNFNES_draft_technical_report_Nov_2_2019.pdf.
- 5 BC Centre for Disease Control. Conceptual framework for food security indicators in British Columbia: summary report. Vancouver, BC: BC Centre for Disease Control, Population and Public Health; 2019 [cited 2022 Jul 20]. Available from: http://www.bccdc.ca/pop-public-health/Documents/conceptual-framework-food-security-indicators.pdf.
- 6 BC Centre for Disease Control. Defining food security and food insecurity: process background. Vancouver, BC: BC Centre for Disease Control, Population and Public Health; 2021.
- 7 Martens T, Cidro J, Hart MA, McLachlan S. Understanding Indigenous food sovereignty through an Indigenous research paradigm. J Indig Soc Dev. 2016;5(1):18-37.
- 8 Blue Bird Jernigan V, Maudrie TL, Nikolaus CJ, Benally T, Johnson S, Teague T, et al. Food sovereignty indicators for Indigenous community capacity building and health. Front. Sustain. Food Syst. 2021;5:704750. Available from: https://www.frontiersin.org/articles/10.3389/fsufs.2021.704750/full.
- 9 Morrison D. Indigenous methodologies. In BC Centre for Disease Control, Conceptual framework for food security indicators in British Columbia: summary report (p. 4). Vancouver, BC: BC Centre for Disease Control, Population and Public Health; 2019 [cited 2022 Sep 20]. Available from: http://www.bccdc.ca/pop-public-health/Documents/conceptual-framework-food-security-indicators.pdf.
- 10 PROOF Food Insecurity Policy Research. Understanding household food insecurity [Internet]. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); [cited 2021 Jun 17]. Available from: https://proof.utoronto.ca/food-insecurity/.
- 11 Statistics Canada. Household food insecurity, 2011-2012 [Internet]. Ottawa, ON: Statistics Canada; [cited 2022 Sep 20]. Available from: https://www150.statcan.gc.ca/n1/pub/82-625-x/2013001/article/11889-eng.htm.

- 12 Yellowhead Institute. Land back: a Yellowhead Institute Red Paper. Toronto, ON: Yellowhead Institute; 2019 Oct [cited 2022 Aug 22]. Available from: https://redpaper.yellowheadinstitute.org/wp-content/uploads/2019/10/redpaper-report-final.pdf.
- 13 Food and Agriculture Organization. An introduction to the basic concepts of food security. Rome, Italy: European Commission Food and Agriculture Organization Food Security Programme; 2008 [cited 2021 Jun 17]. Available from: http://www.fao.org/3/al936e/al936e.pdf.
- 14 Li T. When it comes to tackling food insecurity, tackling anti-Black racism is an important part of the puzzle [Internet]. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); 2021 [cited 2021 Nov 15]. Available from: https://proof.utoronto.ca/anti-black-racism/.
- 15 Community Food Centres Canada. Beyond hunger: the hidden impacts of food insecurity in Canada. Toronto, ON: Community Food Centres Canada; [cited 2021 Jun 17]. Available from: https://act.beyondhunger.ca/.
- **16** Carmichael SL, Yang W, Herring A, Abrams B, Shaw GM. Maternal food insecurity is associated with increased risk of certain birth defects. J Nutr. 2007 Sep;137(9):2087-92.
- 17 Tarasuk V, Gundersen C, Wang X, Roth DE, Urquia ML. Maternal food insecurity is positively associated with postpartum mental disorders in Ontario, Canada. J Nutr. 2020 Nov 19;150(11):3033-40.
- **18** Seligman HK, Laraia BA, Kushel MB. Food insecurity is associated with chronic disease among low-income NHANES participants. J Nutr. 2010 Feb;140(2):304-10.
- **19** Decker D, Flynn M. Food insecurity and chronic disease: addressing food access as a healthcare issue. R I Med J (2013). 2018 May 1;101(4):28-30.
- **20** Gucciardi E, Vahabi M, Norris N, Del Monte JP, Farnum C. The intersection between food insecurity and diabetes: a review. Curr Nutr Rep. 2014;3(4):324-32.
- 21 Mangini LD, Hayward MD, Dong YQ, Forman MR. Household food insecurity is associated with childhood asthma. J Nutr. 2015 Dec;145(12):2756-64. doi: 10.3945/jn.115.215939. Epub 2015 Oct 21.
- **22** Gundersen C, Tarasuk V, Cheng J, De Oliveira C, Kurdyak P. Food insecurity status and mortality among adults in Ontario, Canada. PloS One. 2018 Aug 23;13(8):e0202642.
- 23 Lieffers JR, Ekwaru JP, Ohinmaa A, Veugelers PJ. The economic burden of not meeting food recommendations in Canada: the cost of doing nothing. PLoS One. 2018 Apr 27;13(4):1-17.
- 24 Kirkpatrick S, Tarasuk V. Food insecurity is associated with nutrient inadequacies among Canadian adults and adolescents. J Nutr. 2008;138:604-12.
- 25 Fang D, Thomsen MR, Nayga RM. The association between food insecurity and mental health during the COVID-19 pandemic. BMC Public Health. 2021 Dec;21(1):1-8.
- 26 Men F, Elgar FJ, Tarasuk V. Food insecurity is associated with mental health problems among Canadian youth. J Epidemiol Community Health. 2021 Feb 12.

- 27 Jones AD. Food insecurity and mental health status: a global analysis of 149 countries. Am J Prev Med. 2017 Aug 1;53(2):264-73.
- **28** Niles MT, Bertmann F, Belarmino EH, Wentworth T, Biehl E, Neff R. The early food insecurity impacts of COVID-19. Nutrients. 2020 Jul;12(7):2096.
- 29 Polasub W, Wijekoon M, Saugstad L, Mullinix K. Food access, concerns and perceptions during COVID-19 first wave: British Columbia. Richmond, BC: Institute for Sustainable Food Systems, Kwantlen Polytechnic University; 2020 [cited 2021 Jun 17]. Available from: https://www.kpu.ca/sites/default/files/Food%20access%20concerns%20and%20perceptions%20during%20COVID-19_BC.pdf.
- **30** Statistics Canada. Retail trade, March 2020 [Internet]. Ottawa, ON: Statistics Canada; 2020 May 22 [cited 2021 Jun 17]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/200522/dq200522a-eng.htm.
- 31 United Way British Columbia. United Way British Columbia supports food security in rural and Indigenous communities [Internet]. Vancouver, BC: United Way British Columbia; 2021 Oct 04 [cited 2022 May 19]. Available from: https://uwbc.ca/blog/united-way-british-columbia-supports-food-security-in-rural-and-indigenous-communities/.
- **32** BC Centre for Disease Control. Food security policy brief: rural, remote and Indigenous food security in BC. Vancouver, B.C.: BC Centre for Disease Control, Population Public Health; 2022.
- 33 Agri-Food Analytics Lab. Grocery shopping during the COVID-19 pandemic. Truro, NS: Faculty of Agriculture, Dalhousie University; 2020 Mar 17 [cited 2021 Oct 04]. Available from: https://cdn.dal.ca/content/dam/dalhousie/pdf/sites/agri-food/Agri-food%20Analytics%20Lab%20-%20COVID-19.pdf.
- 34 Hjalmarson E. Sentenced for the season: Jamaican migrant farmworkers on Okanagan orchards. Race & Class. 2022;63(4):81-100. Available from: https://journals.sagepub.com/doi/full/10.1177/03063968211054856.
- 35 Landry V, Semsar-Kazerooni K, Tjong J, Alj A, Darnley A, Lipp R, et al. The systemized exploitation of temporary migrant agricultural workers in Canada: exacerbation of health vulnerabilities during the COVID-19 pandemic and recommendations for the future. Journal of Migration and Health. 2021;3:100035. Available from:

www.sciencedirect.com/science/article/pii/S2666623521000027.

- 36 Organisation for Economic Co-operation and Development. Food supply chains and COVID-19: impacts and policy lessons. Paris, France: Organisation for Economic Co-operation and Development; 2020 Jun 02 [cited 2021 Oct 04]. Available from: https://read.oecd-ilibrary.org/view/?ref=134_134305-ybqvdf0kg9&title=Food-Supply-Chains-and-COVID-19-Impacts-and-policy-lessons&_ga=2.107572610.164342947.1635358707-369501920.1634590398.
- 37 Aday S, Aday MS. Impact of COVID-19 on the food supply chain. Food Quality and Safety. 2020 Dec;4(4):167-80.

- **38** Gupta A. Why some women call this recession a 'shecession.' New York Times. 2020 May 09 [cited 2022 May 18]. Available from: https://www.nytimes.com/2020/05/09/us/unemployment-coronavirus-women.html.
- 39 The Canadian Women's Foundation, Canadian Centre for Policy Alternatives, Ontario Nonprofit Network, Faraday F. Resetting normal: women, decent work and Canada's fractured care economy. Toronto, ON: Canadian Women's Foundation; 2020 Jul [cited 2022 May 18]. Available from: https://canadianwomen.org/wp-content/uploads/2020/07/ResettingNormal-Women-Decent-Work-and-Care-EN.pdf.
- **40** Statistics Canada. Food insecurity during the COVID-19 pandemic, May 2020. Ottawa, ON: Statistics Canada; 2020 Jun 24 [cited 2020 Oct 06]. Available from: https://www150.statcan.gc.ca/n1/en/pub/45-28-0001/2020001/article/00039-eng.pdf?st=a6XzTYOm.
- 41 Environics Institute for Survey Research, Diversity Institute, Future Skills Centre. Widening inequality: effects of the pandemic on jobs and income [Internet]. Ottawa, ON: Government of Canada; 2021 [cited 2022 Sep 20]. Available from: https://fsc-ccf.ca/research/widening-inequality-effects-of-the-pandemic-on-jobs-and-income/.
- **42** Statistics Canada. Consumer Price Index, May 2020. Ottawa, ON: Statistics Canada; 2020 Jun 17 [cited 2021 July 12]. Available from: https://www150.statcan.gc.ca/n1/en/daily-quotidien/200617/dq200617a-eng.pdf?st=RYUrJsBa.
- **43** Bellrichard C. COVID-19 concerns, closures have families and communities heading out on the land. CBC News; 2020 Mar 18 [cited 2020 Dec 31]. Available from: https://www.cbc.ca/news/indigenous/covid-19-tradition-land-medicine-1.5500973.
- 44 Banning J. How Indigenous people are coping with COVID-19. CMAJ 2020 July 06;192:E787-8. doi: 10.1503/cmai.1095879.
- 45 National Collaborating Centre for Methods and Tools & National Collaborating Centre for Indigenous Health. Rapid review: what factors may help protect Indigenous peoples and communities in Canada and internationally from the COVID-19 pandemic and its impacts? Hamilton, ON: National Collaborating Centre for Methods and Tools; 2020 Oct 16 [cited 2021 Jul 12]. Available from: https://www.nccmt.ca/uploads/media/0001/02/99c03498ac3fcd1a492be93846 836aa4087e3aa7.pdf.

https://www.nccmt.ca/knowledge-repositories/covid-19-rapid-evidence-service.

- **46** Paul B. First Nation praises BC Ferries' 'phenomenal' grocery delivery service to community. North Island Gazette. 2020 Jun 22 [cited 2022 Sep 21]. Available from: https://www.northislandgazette.com/news/first-nation-praises-bc-ferries-phenomenal-grocery-delivery-service-to-community/.
- 47 Mullins L, Charlebois S, Finch E, Music J. Home food gardening in Canada in response to the COVID-19 pandemic. Sustainability. 2021;13:3056. Available from: https://doi.org/10.3390/su13063056.
- **48** D'Elia Decembrini A. Indigenous food sovereignty and COVID-19 [Internet]. Vancouver, BC: First Peoples Law; 2020 Aug 26 [cited 2022 Sep 22]. Available from: https://www.firstpeopleslaw.com/public-education/blog/indigenous-food-sovereignty-and-covid-19.

- **49** Johnston S, Shaw L. Report on Home Garden Pilot Project 2021. Surrey, BC: Métis Nation British Columbia Ministry of Environmental Protection and Métis Rights; 2021 Oct 19 [cited 2023 Jan 05]. Available from: https://www.mnbc.ca/media/563.
- **50** Bazerghi C, McKay FH, Dunn M. The role of food banks in addressing food insecurity: a systematic review. Journal of Community Health. 2016 Aug;41(4):732-40.
- 51 Tarasuk V, Fafard St-Germain AA, Loopstra R. New research—the relationship between food banks and food insecurity: insights from Canada. International Journal of Voluntary and Nonprofit Organizations. 2019 Jan:31(9).
- **52** Food Banks Canada. A snapshot of food banks in Canada and the COVID-19 crisis. Mississauga, ON: Food Banks Canada; [cited 2021 Jun 17] Available from: https://foodbankscanada.ca/a-snapshot-of-food-banks-in-canada-and-the-covid-19-crisis_en-3/.
- 53 BC Ministry of Municipal Affairs and Housing. Province supporting BC's food banks during COVID-19 [news release]. Victoria, BC: Government of British Columbia; 2020 Mar 29 [cited 2022 May 17]. Available from: https://news.gov.bc.ca/releases/2020MAH0049-000583.
- 54 Statistics Canada. Canadian Community Health Survey: household food insecurity in Canada, 2017/2018 [sub- analysis of the 2017/18 CCHS data set]. Ottawa, ON: Statistics Canada; 2020 Feb 18 [cited 2020 Oct 06].
- 55 Wren A. Personal communication. BC Ministry of Health; 2021 Nov 18.
- 56 Statistics Canada. Canadian Community Health Survey: household food insecurity in Canada, 2017/2018. Ottawa, ON: Statistics Canada; 2020 Feb 18 [cited 2020 Oct 06]. Available from: https://www150.statcan.gc.ca/n1/en/daily-quotidien/200218/dq200218e-eng.pdf?st=ZgVbhsoL.
- 57 Wood SK. Adapting to coronavirus: how BC First Nations balance food security and conservation. The Narwhal. 2020 Apr 14 [cited 2022 Jul 20]. Available from: https://thenarwhal.ca/adapting-to-coronavirus-how-b-c-first-nations-balance-food-security-and-conservation/.
- 58 Polsky JY, Garriguet D. Household food insecurity in Canada early in the COVID-19 pandemic [Internet]. Ottawa, ON: Statistics Canada; 2022 Feb 16 [corrected 2022 Feb 18; cited 2022 Jul 20]. Available from: https://www.doi.org/10.25318/82-003-x202200200002-eng.
- 59 Public Health Association of BC. Food access across British Columbia. Victoria, BC: Public Health Association of BC; 2021 May 04 [cited 2022 Jun 06]. Available from: https://phabc.org/wp-content/uploads/2021/05/Food-Access-Across-BC-Report_-PHABC_May-4th-2021.pdf.
- 60 Statistics Canada. Census in brief: does education pay? A comparison of earnings by level of education in Canada and its provinces and territories [Internet]. Ottawa, ON: Statistics Canada; 2017 Nov 29 [cited 2022 May 18]. Available from: https://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016024/98-200-x2016024-eng.cfm#.

- 61 PROOF Food Insecurity Policy Research. Food insecurity: a problem of inadequate income, not solved by food [fact sheet]. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); 2022 Oct 13 [cited 2023 Nov 21]. Available from: https://proof.utoronto.ca/resource/food-insecurity-a-problem-of-inadequate-income-not-solved-by-food/.
- **62** Métis Nation British Columbia. MNBC launches food security pilot project [Internet]. Surrey, BC: Métis Nation British Columbia; 2021 Mar 26 [cited 2023 Nov 21]. Available from: https://www.mnbc.ca/news/mnbc-launches-food-security-pilot-project.
- 63 First Nations Health Authority. Planning for food security: a toolkit for the COVID-19 pandemic. North Vancouver, BC: First Nations Health Authority; [cited 2022 May 19]. Available from: https://www.fnha.ca/WellnessSite/WellnessDocuments/ENHA-Planning-for-Food-Security-A-Toolkit-for-the-COVID-19-Pandemic.pdf.
- 64 Métis Nation British Columbia, BC Centre for Disease Control, BC Office of the Provincial Health Officer. Métis food (in)security and food as medicine. Victoria, BC: Métis Nation British Columbia, BC Centre for Disease Control, BC Office of the Provincial Health Officer: 2023.
- 65 BC Centre for Disease Control. BC COVID-19 SPEAK dashboard [Internet]. Vancouver, BC: BC Centre for Disease Control; [cited 2022 Aug 08]. Available from: http://www.bccdc.ca/health-professionals/data-reports/bc-covid-19-speak-dashboard.
- 66 Chasey S, Pederson A, Duff P, BC Centre of Excellence for Women's Health. Taking a second look: analyzing health inequities in British Columbia with a sex, gender and diversity lens. Vancouver, BC: Provincial Health Services Authority; 2009 Nov [cited 2022 Jun 06]. Available from: http://www.bccdc.ca/pop-public-health/Documents/TakingaSecondLook.pdf.
- 67 Just Food Project. Gender, equity and food security [Internet]. Vancouver, BC: University of British Columbia; [updated 2021 Aug 02; cited 2022 Jun 06]. Available from: https://wiki.ubc.ca/Just Food Project: Gender, Equity and Food Security.
- **68** Russomanno J, Patterson JG, Jabson JM. Food insecurity among transgender and gender nonconforming individuals in the southeast United States: a qualitative study. Transgend Health. 2019;4(1):89-99.
- 69 Levkoe CZ, McLaughlin J, Strutt C. Mobilizing networks and relationships through Indigenous food sovereignty: the Indigenous Food Circle's response to the COVID-19 pandemic in Northwestern Ontario. Front Commun. 2021 Jun 04 [cited 2022 May 18]. Available from: https://doi.org/10.3389/fcomm.2021.672458.
- **70** Dhunna S, Tarasuk V. Black–white racial disparities in household food insecurity from 2005 to 2014, Canada. Can J Public Health. 2021 Jun 15:1-5.
- 71 Li N, Dachner N, Tarasuk V, Zhang R, Kurrein M, Harris T, et al. Priority health equity indicators for British Columbia: household food insecurity report. Vancouver, BC: Provincial Health Services Authority; 2016 Aug [cited 2020 Oct 07]. Available from: http://www.bccdc.ca/pop-public-health/Documents/Household%20food%20insecurity%20in%20 BC full%20report.pdf.

- 72 Dove N, Wong J, Gustafson R, Corneil T. Impact of school closures on learning, child and family well-being during the COVID-19 pandemic. Vancouver, BC: BC Centre for Disease Control, BC Children's Hospital; 2020 Sept [cited 2021 Jun 17]. Available from: http://www.bccdc.ca/Health-Info-Site/Documents/Public_health_COVID-19_reports/Impact_School_Closures_COVID-19.pdf.
- 73 Schwartz N, Buliung R, Wilson K. Disability and food access and insecurity: a scoping review of the literature. Health Place. 2019 May 01;57:107-21.
- 74 Statistics Canada. The vulnerability of Canadians with disabilities during the COVID-19 pandemic [Internet]. Ottawa, ON: Statistics Canada; 2020 Jul 06 [cited 2021 Jul 14]. Available from: https://www150.statcan.gc.ca/n1/daily-quotidien/200706/dq200706a-eng.htm.
- 75 Hollander Analytical Services Ltd. Evidence review: food security. Victoria, BC: BC Ministry of Health; 2014 Mar [cited 2021 Jun 17]. Available from: https://www.health.gov.bc.ca/library/publications/year/2013/food-security-evidence-review.pdf.
- 76 Green DA, Kesselman JR, Tedds LM. Covering all the basics: reforms for a more just society. Final report of the British Columbia Expert Panel on Basic Income. Vancouver, BC: British Columbia Expert Panel on Basic Income; 2020 Dec 28 [cited 2021 Nov 15]. Available from: https://bcbasicincomepanel.ca/wp-content/uploads/2021/01/Final-Report BC Basic Income Panel.pdf.
- 77 PROOF Food Insecurity Policy Research. PROOF Podcast: Why eliminating food insecurity requires dismantling anti-Black racism [podcast]. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); 2021 Oct 26 [cited 2021 Nov 16]. Available from: https://proof.utoronto.ca/racial-disparities-podcast/.
- 78 BC Ministry of Social Development and Poverty Reduction. TogetherBC: British Columbia's poverty reduction strategy. Victoria, BC: BC Ministry of Social Development and Poverty Reduction; 2018 [cited 2021 Nov 15]. Available from: https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/initiatives-plans-strategies/poverty-reduction-strategy/togetherbc.pdf.
- 79 PROOF Food Insecurity Policy Research. Household Food insecurity in Canada [Internet]. Toronto, ON: Research to identify policy options to reduce food insecurity (PROOF); [cited 2021 Nov 16]. Available from: https://proof.utoronto.ca/food-insecurity/#policy.
- **80** Monbiot G. The banks collapsed in 2008—and our food system is about to do the same. The Guardian. 2022 May 19. Available from: https://www.theguardian.com/commentisfree/2022/may/19/banks-collapsed-in-2008-food-system-same-producers-regulators?CMP=Share_iOSApp_Other.

- 81 Sandhu J, Demlow E, Claydon-Platt K, Gully M, Chong M, Oakey M, et al. British Columbia's COVID-19 surveys on population experiences, action, and knowledge (SPEAK): methods and key findings from two large cross-sectional online surveys. Can J Public Health. 2023;114:44–61. Available from: https://doi.org/10.17269/s41997-022-00708-7.
- 82 BC Office of the Human Rights Commissioner. Disaggregated demographic data collection in British Columbia: the grandmother perspective. Vancouver, BC: BC Office of the Human Rights Commissioner; 2020 Sep [cited 2022 Aug 23]. Available from: https://bchumanrights.ca/wpcontent/uploads/BCOHRC_Sept2020_Disaggregated-Data-Report_FINAL.pdf.

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