BC Centre for Disease Control
Provincial Health Services Authority

Impacts of the COVID-19 Pandemic on the Health and Well-Being of Young Adults in British Columbia

A Report by the British Columbia Centre for Disease Control COVID-19 Young Adult Task Force

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Commissioned by Dr. Réka Gustafson, Vice-President, Public Health and Wellness and Deputy Provincial Health Office, Provincial Health Services Authority

With contributions from the Office of the Provincial Health Officer

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In 2020, an estimated 892,543 young adults aged 18-30 years lived in British Columbia (BC), comprising 17% of the BC population.

Developmental skills and competencies associated with this phase of life include building the capacity for financial and residential independence and autonomy (such as through post-secondary education and job training); developing a sense of identity; establishing supportive relationships with parents, romantic partners, and peers; and family formation. Success in these areas promotes the social and economic determinants that support life-long health and well-being — both for individuals and the BC community-at-large.

Coronavirus disease 2019 (COVID-19), and the measures stemming from efforts to control it, have had significant and deleterious impacts on many areas of young adults' lives. In BC, an estimated 4.2% of young adults aged 18-30 have been diagnosed with COVID-19, nearly twice the rate of those over 30 (2.2%). Young adults represent 31% of BC individuals infected during the pandemic (34,723 of 110,224 cases as of April 2021). Although they are less likely to be hospitalized or die compared to older adults, the long-term health consequences of COVID-19 for young adults are not yet known. The emergence of COVID-19 variants of concern may also change this picture, both through the changing impact of the pathogen and the unintended consequences of prolonged control measures.

The immediate adverse effects of COVID-19-related response measures on young adult health and well-being, and on the social determinants of health, are increasingly evident in survey findings from BC and Canada. These data forecast serious challenges that need to be addressed to prevent unintended long-term consequences of COVID-19 for young adults and our broader society.

Young adults in BC are experiencing a severe economic crisis. According to Statistics Canada, 13% of young adults aged 18-30 years in BC were not employed or training in February 2021, 60% higher than the same time the previous year, prior to the pandemic. Young adults were more likely than other age groups to lose their job during the pandemic and many reported that their household experienced increased difficulty meeting financial needs. Education and job training have been disrupted or delayed for many and may become financially out of reach for some young adults in the future. Young families with children are missing from statistics examining the pandemic's unintended costs.

Education and job training have been disrupted or delayed for many, and opportunities may become out of reach for some young adults due to costs, incurred debt levels, or pressure on available post-secondary or training resources. Employers and post-secondary institutions will need to be responsive to the additional young adults seeking training as this cohort over the next two years. Those who were able to continue achieving their post-secondary goals may not have been able to work part-time to defer debt as was the norm prior to the pandemic.

Housing and living arrangements of young adults have also contributed to a higher risk of COVID-19 and made it challenging to adhere to public health recommendations. Lack of affordable housing can contribute to overcrowded living conditions and increased risk of COVID-19 exposure. Many young adults in BC live with roommates, in dormitories, or in multi-unit apartment buildings, where the ability to self-isolate and access adequate indoor and outdoor space is challenging. Risk of exposure is also increased due to frontline work in health care, grocery stores, restaurants, recreation, and retail stores.

Young adults are experiencing a substantial increase in mental health concerns, including reported poor mental health and increased stress. Many young adults with mental illness report disruptions in mental health services that they had accessed prior to the pandemic. Although access to crisis-oriented and virtual counselling has increased during the pandemic, in-person access to continuing mental health services remains limited, stigmatized, expensive, and difficult for young adults to find. Moreover, some young adults reported concerns about their ability to develop a

therapeutic relationship with a mental health care provider in a virtual setting. Access to population mental health promotion will be important to support mental well-being and mitigate trends in poor mental health and increased stress for young adults, as observed during the pandemic.

Trends in health behaviours include declining physical activity, sleep disruptions, inadequate nutrition, and increasing substance use (alcohol and cannabis). All have repercussions on emotional and physical well-being. The lack of routines and structure previously created by work and education may contribute to these problems and be exacerbated by decreased access to settings, expendable income, resources, and opportunities that promote healthy behaviours.

Many young adults report increases in their connections to friends and family online, but they feel less like they belong to their communities. The social networks, daily routines, and mobility of young adults have been significantly disrupted by the COVID-19 pandemic. Young adults are generally more socially active and dependent on parks and other public spaces for socializing and recreation. While more young adults are shifting towards active modes of transport during the pandemic, many continue to rely on public transit for commuting, groceries, and other necessities, indicating the importance of access to safe, reliable, and affordable mobility options for this population.

This report includes young adults' voices through the inclusion of direct quotes obtained through focus groups and qualitative research. However, we acknowledge that young adults have been largely absent from conversations about pandemic measures and impacts. We heard from young adults that this has left them feeling disempowered and largely unheard.

We note that societal impacts have not been distributed equitably during the pandemic and may be compounded for those already experiencing the most stress and with the fewest resources. Those who may be subject to additional pressures include racialized groups, LGBTQ2S+ individuals, and young adults with disabilities. This, in turn, may contribute to further health inequities by concentrating a range of adverse outcomes in these populations.

The information reviewed in this report is a summary of currently available evidence and information; however, the scientific literature will continue to expand and evolve as the pandemic recovery moves forward. Available data are primarily limited to cross-sectional surveys, making it impossible to infer cause and effect. Many are conducted with post-secondary students, although community and population studies are growing in number. These data also inadequately describe the impact of the COVID-19 pandemic and control measures on young adults already at risk due to chronic health concerns, disabilities, mental illness, and learning problems. There are also serious gaps in our understanding of the impacts on racialized young adults, those who experience systemic racism, or those who are stigmatized due to their gender identity. Data reviewed here also do not reflect the experiences and perspectives of Indigenous young adults. Understanding the experiences and priorities of Indigenous populations is essential to the province's commitment to truth and reconciliation. In the future, it is important that Indigenous young adults are engaged to speak to their experiences and to direct priorities in this area.

Areas for Action

The future of all British Columbians relies on a healthy and successful young adult population. Serious concerns resulting from the pandemic and response measures reach across sectors and pertain to labour, education, job training, social welfare, transport, health, mental health, and substance use.

Indeed, accumulating evidence of serious impacts suggests that a coordinated, cross-sectoral approach is urgently needed to monitor and alleviate the impacts of COVID-19 on young adult health and well-being. We cannot trivialize the pandemic as solely affecting the social freedoms of young adults. The risks and impacts of COVID-19 response measures on current health and the social determinants of lifelong health are clearly much more widespread and damaging for the future well-being of this population and our broader society. Young adults at risk for long-term impacts of restrictions need to be included in messaging and COVID-19 recovery planning.

There is clearly a need to monitor health trends, characterize health trajectories, and identify key social determinants of health through ongoing, timely, and targeted longitudinal monitoring. Even modest improvements in individual and structural factors driving health and well-being trajectories of young adults may attenuate COVID-19-related negative impacts, as well as lead to broader positive, societal effects. Time is of the essence — to delay will undermine the ongoing health and well-being of young adults, as well as their capacity to contribute to the future of BC.

It is uncertain whether the observed impacts of COVID-19 on young adults are short-lived or will have longer-lasting consequences for their health and well-being. Equally it is unclear what those impacts will mean for the health of the province as a whole. A more comprehensive monitoring approach, such as systematically identifying young adults as a demographic within surveillance data, as well as a longitudinal cohort study, would enable researchers to study a broad range of indicators across a diverse population of young adults, using metrics optimized to measure change over time. The resulting data will be critical in both guiding and evaluating the successes (or not) of policy, education, labour, and health service interventions for this age group.

We provide the following guidance to enhance initiatives and policies already supporting this population as part of the BC government's planning for the post-COVID-19 recovery. Key stakeholders to engage for action include, but are not limited to:

- Provincial government (e.g., Ministry of Health, Ministry of Advanced Education, Ministry of Labour, Ministry of Mental Health and Addictions)
- Local government (e.g., planning, recreational services)
- Post-secondary institutions (e.g., student health services, administration)
- Regional health authorities (e.g., primary care, public health)

Other stakeholders will also need to be engaged to ensure meaningful and sustainable change, including the private and non-governmental sectors, as well as the broader public.

It is crucial that young adults at risk for long-term impacts of pandemic restrictions be included in COVID-19 messaging and recovery planning. Across all areas, we must engage young adults — particularly those historically underserved (e.g., Indigenous and racialized groups; those living in rural, remote, and northern communities; and gender-diverse people) — to speak to their experiences, and to direct actions and future priorities.

ADDRESS CHALLENGES TO ECONOMIC WELL-BEING AND OPPORTUNITIES

1 Provide incentives for work, training, and re-training opportunities to facilitate return to the workforce, and to assist those redeployed in other functions or who need to change jobs using a cross-ministerial approach.

2 Improve opportunities for young adults to enter stable, meaningful, and full-time employment and career development opportunities.

3 Leverage government poverty reduction initiatives to address economic challenges and disparities faced by young adults, including increasing debt accrued during the pandemic.

4 Provide short-term financial relief and longer-term strategies for young adults who are affected by underemployment, lack of employment opportunities, and food and housing insecurity.

ADDRESS CHALLENGES FOR POST-SECONDARY STUDENTS

5 Enable safer return to in-class post-secondary instruction and identify gaps in education resulting from a year of virtual learning.

6 Support measures (e.g., tuition freezes) to address students' financial challenges that have been exacerbated by the pandemic.

7 Develop innovative and equitable approaches to relieve student competition for courses and direct training or co-op opportunities.

IMPROVE MENTAL HEALTH AND WELL-BEING

8 Develop a provincial strategy for population mental health for young adults that reflects individual, social, and structural determinants of health, using a life-course approach.

9 Expand availability and access to mental health services (e.g., counselling) beyond crisis care.

10 Disseminate information informed by diverse young adults on where and how to access available mental health and well-being supports through age-appropriate mechanisms.

11 Facilitate development of active coping skills and increase resiliency through access to evidence-based self-management programs and supports.

12 Evaluate acceptability and effectiveness of virtual mental health services, and continue to co-design flexible service options for young adults in BC.

INCREASE HEALTH SERVICE ACCESS AND UTILIZATION

13 Address and remove restrictions and barriers to timely access to health services that can be provided through telemedicine or other platforms, including sexual and reproductive health services (e.g., birth control, routine sexually transmitted infections screening).

14 Reduce barriers (e.g., financial and administrative) to accessing non-Medical Service Plan covered health services, such as dental care, psychology services, and prescription medications.

15 Strengthen transitional programs for young adults aging out of pediatric services and child welfare programs.

16 Ensure, as primary care access and continuity of care is improved across BC, that barriers to access are removed.

ENCOURAGE HEALTH-PROMOTING BEHAVIOURS

17 Increase awareness and uptake of evidence-based information on effective health-promoting behaviours (i.e., activity, nutrition, sleep hygiene, and reducing sedentary time) and daily habits to support mental, emotional, and physical well-being.

18 Foster equitable access to resources, opportunities, and services to enable physical activity and access to healthy, affordable, and culturally appropriate food.

19 Encourage health providers to actively screen and provide support for the prevention of problematic substance use and chronic disease in accordance with professional guidelines.

20 Engage young adults to identify priorities and address barriers regarding overdose prevention to better orient harm reduction and treatment initiatives to their needs.

21 Distribute age appropriate COVID-19 information for young adults through appropriate communication channels (e.g., Instagram, TikTok, Discord) to promote preventive measures and "meet young adults where they're at."

IMPROVE SOCIAL CONNECTEDNESS

22 Create opportunities to increase community belonging and inclusion during the pandemic recovery period.

23 Provide appropriate risk mitigation strategies for those weighing the risks of socializing, living in overcrowded homes, and working. Support family and peer connections whenever possible.

INCREASE ACCESS TO HEALTHY BUILT ENVIRONMENTS

24 Create safe, vibrant, and health-promoting public spaces where young adults live, play, and connect within their communities.

25 Enhance access to neighborhood parks and green spaces.

26 Improve access to affordable mobility options by maintaining a safe, accessible, and reliable transit system, while continuing to invest in and promote active transportation.

PROMOTE YOUNG ADULTS' VOICES AND ENGAGEMENT

27 Ensure a diverse representation of young people are engaged as part of research, public health planning, messaging, policy development, and decision-making.

INITIATE ONGOING MONITORING

28 Include a diverse and representative sample of young adult voices at all stages of the development of indicators and an ongoing monitoring plan.

29 Advocate for young adults (i.e., 18-30 years) to be assessed as a distinct demographic within existing health surveillance data to better understand and monitor health trends, characterize health trajectories, and identify key health determinants for young adults.

30 Leverage existing, routinely collected data sources for linkage to longitudinal survey data, including administrative health (hospitalizations, physician visits, vital statistics, prescription data) and education (high school completion or completion of a graduate equivalency degree) data.

31 Support ongoing monitoring specific to young adults' health and well-being, including methods that allow for robust and intentional analyses of under-served subpopulations (e.g., young people of colour, LGBTQ2S+ individuals, etc.). Include qualitative measures to capture the contextualized experience of young adults.

32 Convene a solution-oriented, cross-sectoral collaborative that will develop key indicators to monitor the health and well-being of young adults (e.g., work, debt, mental health, protective and resilience factors, and health-care access) over time.

Introduction

THE IMPACT OF COVID-19

In 2020, an estimated 892,543 young adults aged 18-30 years lived in BC, comprising 17% of the BC population.[1] Developmental skills and competencies associated with this phase of life include building the capacity for financial and residential independence and autonomy (such as through post-secondary education and job training); developing a sense of identity; and establishing supportive relationships with parents, romantic partners, and peers. Success in these areas promotes the social and economic determinants that support life-long health and well-being — both for individuals and the BC community at large.

Unfortunately, statistics specific to this age group are often not collected as they are often grouped with broad categories of adults (aged 19-65 years), despite potentially very different needs and concerns. Young adults are often discounted in health policy and planning because they often constitute a smaller proportion of voter turnout. There is also a pervasive perception that young adults are generally healthy; however, this view ignores the fact that positive behaviours and life skills established in this developmental stage can greatly impact future well-being, including prevention of chronic diseases.

While young adults have largely been spared from experiencing serious direct effects of the COVID-19 pandemic, they have been adversely affected by indirect effects of pandemic response measures. As such, prevention of short- and long-term negative consequences for their social and economic development are needed. While the studies we review here are largely cross-sectional and focused primarily on 2020, there is considerable consistency across Canadian data showing negative impacts of COVID-19 on many aspects of young adults' lives.

BEFORE THE PANDEMIC, HEALTH RISKS IN YOUNG ADULTS WERE APPARENT

Even before the pandemic, the increasing vulnerabilities of this age group were evident. Concerning health trends for young adults related to obesity, mental illness, problematic substance use, injury, and sexual risk behaviours have been highlighted in key reports from Canada's Chief Public Health Officer [2] and the United States (U.S.) Institute of Medicine.[3] Broadly, prior to the pandemic, only about two thirds of young adults aged 18-34 years perceived their physical health (68%) and mental health (62%) as "good" or "excellent".[4] Additional challenges to health and the social determinants of health are noted in the box below.

At a Glance: Young Adult Health Before the Pandemic

PHYSICAL AND SEXUAL HEALTH

- Obesity has escalated, with 30% of Canadians aged 18-34 years categorized as overweight and 20% as obese in 2018 and 2019.[5]
- Over two thirds of new gonorrhea and chlamydia infections occur among young adults.[6]
- While 25% of young adults report multiple sexual partners in the past month, only 30% report regular condom use.[7]
- In 2016 and 2017, over half (55%) of sexual assault victims were females under 25 years of age.[8]
- Women and men in their late 20s and early 30s had the highest rates of intimate partner violent victimization, followed by those aged 15-24 years.[9]

MENTAL HEALTH AND SUBSTANCE USE

- Young adults have the highest annual prevalence of mood (8%) and substance use disorders (12%) of any age group.[10]
- Following unintentional injury, suicide is the second leading cause of death for young adults overall; three quarters of those who died were male.[11]
- In 2018 and 2019, Canadians aged 18-34 years had among the highest rates of heavy drinking (29% and 27%) and smoking (19% and 17%) compared to other age groups.[12]
- Between 2009 and 2013, over 150 young adults aged 19-23 years in BC died by overdose — two thirds of whom had experienced a prior overdose-related hospitalization or mental health diagnosis.[13] A trend of increasing overdose mortality rates for those aged 19-29 years in BC continued between 2015 and 2018, particularly impacting young men.[14,15]
- Approximately 10% of young adults who use cannabis will experience deteriorating trajectories with increasing mental health impacts, highlighting the importance of early identification and targeted prevention strategies.[16]
- Approximately 12% of Canadian post-secondary students surveyed reported unprotected sex while intoxicated, demonstrating the impacts of substance use on multiple health domains.[17]

Before the pandemic, young adults also faced evolving and often challenging social, economic, and employment landscapes in Canada. Young adults live with their parents longer, and the age of marriage and first childbirth have risen steadily.[18] Despite being more highly educated, young adults start their career later than previous generations, only reaching peak full-time employment at age 31.[19] The unemployment rate of young adults was twice the national average, with 15% engaged in neither education nor employment.[19] Disposable household income for individuals in their early twenties is 20% below the national average, while intergenerational income inequality continues to rise.[20] Voter turnout, a Statistics Canada indicator of societal equality, is lowest for young adults,[21] while disproportionately low levels of government spending for the under-40 population highlight a resulting policy disconnect.[22]

BC data directly confirm many of these national trends. The Victoria Healthy Youth Survey (V-HYS) is a longitudinal cohort study that followed 662 BC young adults from 2003-2013. It provides a partial pre-pandemic profile of a random community sample of young adults from a variety of social and economic backgrounds (but limited in representation of ethnically diverse, chronically ill, or gender-diverse young adults). Findings in 2013 show most young adults pursued higher education: 45% completing a university degree, 23% obtaining a college diploma, and 19% becoming certified in a trade.[23] Leadbeater et al. also noted most were working, either full time or part time, and earning an income.[23] Most reported that they were physically healthy and their mental health and well-being increased as they transitioned into young adulthood. Most young people stayed highly connected to their parents and were also supported by friends and romantic partners. Connections to their communities were also strong, and most contributed as volunteers. Risky behaviours, more typical in adolescent years, declined over the study period. Far from the stereotypical carefree, party-oriented, young adult culture and irresponsible lifestyles reflected in media and advertisements, young adults in this study were juggling education, commitments to work, and lack of sleep and activity with mental health, family health, and relationship problems.[23]

Challenges reported by young adults in the V-HYS included balancing educational requirements with the need to support themselves through full- or part-time work.[23] The leading problem reported by 50% of young adults was work-related and financial stress, followed by housing, family health-related, and relationship stress (each endorsed by 29%).[23] Many young adults were shouldering debt that was greatly disproportionate to their incomes (with an average combined debt from student loans and lines of credit of $40,950).[23] Leadbeater et al. found that problematic cannabis use was reported by 30% of the participants, whereas 20% binged on alcohol at least once a week.[23] Furthermore, approximately 50% reported nine or more sexual partners in their lives, while 8% received treatment for a sexually transmitted infection in the last year. Many struggled with depression and anxiety throughout their young adult years. In each year of the survey by Leadbeater and colleagues, one third suffered an injury that was serious enough to limit their daily activity and was typically treated by a physician. Hypertension and obesity already threatened the long-term health of more than a third of these young people.[23] Sleep and physical activity declined rapidly both during and after high school.[24] In addition to this profile of stress and struggle to pay for the skills needed to join our communities as full contributing citizens, COVID-19 has created a new context in which young adults describe "living day to day" and waiting for their lives to restart.

THE INCIDENCE OF COVID-19 IN BC YOUNG ADULTS AND UNINTENDED CONSEQUENCES OF PUBLIC HEALTH MEASURES

British Columbians aged 18-30 years have been clinically diagnosed with COVID-19 at a greater rate than any other age group. Among young adults aged 18-30 years in BC, population infection incidence was 4.2% from Jan 1, 2020 to April 25, 2021 compared to 2.2% among those over 30 years of age (95.8% higher).[25] While many have been spared from experiencing serious disease and death, the long-term consequences of SARS-CoV-2 infection and the impacts on other social determinants of health are not known. Notably, we describe considerable harms related to the unintended consequences of response measures, as well as collateral impacts of exposure to a positive COVID-19 case (e.g., having to self-isolate when in a precarious employment situation without sick leave or benefits).

We reviewed published and grey literature about the impacts of the COVID-19 pandemic and response measures on several areas of young adults' lives, with an emphasis on ages 18-30 years. While there is no consistent definition on what constitutes a young adult, we chose this age range to acknowledge critical developmental processes that continue into the late 20s.[26]

We examined international, Canadian, and BC data concerning the consequences for economic well-being (financial strain, housing, food security), post-secondary education, mental health, physical health and access to health services, health behaviours, social connections, built environments, and the voice of young adults in public health prevention and recovery efforts. Throughout the report, we include quantitative and qualitative findings, including quotes from young adults in BC describing in their own voice the impacts of the COVID-19 pandemic. We draw heavily from BC COVID-19 Survey on Population Experience, Actions, and Knowledge (SPEAK) data,[27] (hereafter referred to as the BC SPEAK Survey), conducted among almost 400,000 BC residents in May, 2020, to understand the perceptions of risk, acceptability of public health measures, and broader impacts of the COVID-19 response.

> *"Financial stability is no longer as strong; [I] wasn't able to finish the semester in class which I believe will negatively impact my education in the long run; family member has significantly increased their alcohol consumption; elderly family has become very lonely and sad (FaceTime is not the same for her); having to study at home (not ideal learning environment); increased poor food choices; missing social interaction; increased levels of anxiety; increased feelings of sadness/depression; increased worry for family and friends that I cannot physically see or help; increased feelings of frustration; increased feelings of worry for our future and the negative impacts that this has had on the economy (and the closing of local businesses) — all around this has had a very negative impact on my life and the lives of many other Canadians!"*
>
> *– (BC SPEAK participant, 2020)*

a) Economic Well-Being

Prior to the pandemic, a rapidly shifting economic, social, and employment landscape in Canada contributed to increased generational pressure and inequities for young adults, with trends in rising student debt, a lack of housing affordability, decreased return on educational investment, increasing unemployment, and reduced job security for this age group.

These concerns are magnified for young adults during COVID-19 with increased unemployment and financial strain, housing and food insecurity, as well as drastic changes to post-secondary education and other training opportunities, that may have reverberating effects long into the future.

> *"The events industry I worked in won't be the same for what might be a couple of years and I feel I have to re-educate myself to work in a different industry. Otherwise, I won't be able to find good work and can't support myself and my family."*
>
> – (BC SPEAK participant, 2020)

INTERNATIONAL AND CANADIAN DATA

Unemployment and financial strain

Many Canadian young adults report significant financial repercussions related to the COVID-19 pandemic. A large online survey from Quebec showed that nearly 1 in 4 young adults aged 18-29 (23%) reported their home has suffered major financial losses due to the pandemic, similar to other age groups (i.e., 30-49 years: 25%; 50-64 years: 26%).[28] These financial losses may be particularly difficult for young adults, given that they were more likely than any other age group to report household income less than $20,000 in 2019.[28]

> *"[I] lost my new job that would have provided medical and travel benefits. My partner did not get to become certified for his new job truck driving. This will take us longer to build a credit and buy a house. Not able to save tips up from bartending gig. This has been hard on my mental health, no breaks from children."*
>
> *– (BC SPEAK participant, 2020)*

Unemployment rates for Canadian young adults 15-24 years tripled from February to May 2020 (from 10% to 29%), reaching the highest peak levels ever recorded for this age group, including during historic recessions.[29] Unemployment rates for young adult males, in particular, were higher (20.5%) than any other age group in September 2020.30 A higher proportion of young adults 20-29 years (31%) reported job losses during the pandemic compared to older adults (30-49 years: 22%; 50-64 years: 22%).[28] In turn, they were also more likely than adults aged 50-64 to report that the pandemic has impacted their ability to pay rent (14% vs. 7%), to purchase or access groceries (30% vs. 21%) and pay for utilities such as electricity (14% vs. 9%).[28] In addition, young adults under age 30 were almost twice as likely to report concerns about job loss in the pandemic compared to those over age 30.[31] However, the federal emergency response benefits provided relief for some. Younger adults aged 18-22 were four times more likely to report that receiving federal benefits helped them cope with their stress compared to those aged 27-30.[31]

Housing and food insecurity

Financial and employment status can impact one's ability to meet housing needs and access nutritious and affordable food. Global data suggest young adults aged 18-30 years were at increased risk of food insecurity during the COVID-19 pandemic. In a college-based, U.S. sample (*n* = 651) undertaken in May 2020, 35% of students reported being food insecure in the past 30 days.[32] Change in living situations, being furloughed, laid off, and losing part-time work were the strongest predictors of food insecurity in this sample. Similar results were found among a Quebec-wide web survey conducted in May, 2020, with nearly a quarter of young adults aged 18-24 (24%) reporting food insecurity.[28]

BC DATA

Unemployment and financial strain

In BC, younger working-age groups are disproportionately impacted by unemployment and income reduction during the pandemic. The BC SPEAK Survey shows that 26% of young adults aged 18-30 years were not working due to the pandemic compared to 16% overall in BC, while 42% reported that they or their household had increased difficulty meeting financial needs (compared to 32% overall; see Figure 1).[27] Young adults were adversely affected by not working due to the pandemic, which caused increased stress associated with losing their income, losing employment benefits, not qualifying for government financial support, and the unpredictable future of their employment.[27] However, for some people, not working provided welcome family time and less job-related stress.[27]

Early indications suggest repercussions of the economic downturn may persist for young adults well into the future. Wage losses are projected to be significant for young adults over the next five years, with inequities associated with level of education and sex.[29] Those with high school diplomas are expected to lose up to a quarter of their potential earnings (20% for males, 25% for females, respectively); those with college certificates may have earning reductions of 15% for males ($25,197) and 22% for females ($29,491); while those with a bachelor's degree may lose up to 12% of their earnings for males ($27,887) and 21% for females ($43,674).[29] Entering the labour force during periods of high unemployment can result in interrupted early career trajectories, fewer opportunities to gain experience, and underemployment (including low-wage, part-time work).[33] These can ultimately lead to a 10-year loss of personal (and national) earnings, delayed wage and career progression, and decreased use of specialized skills.[34–36]

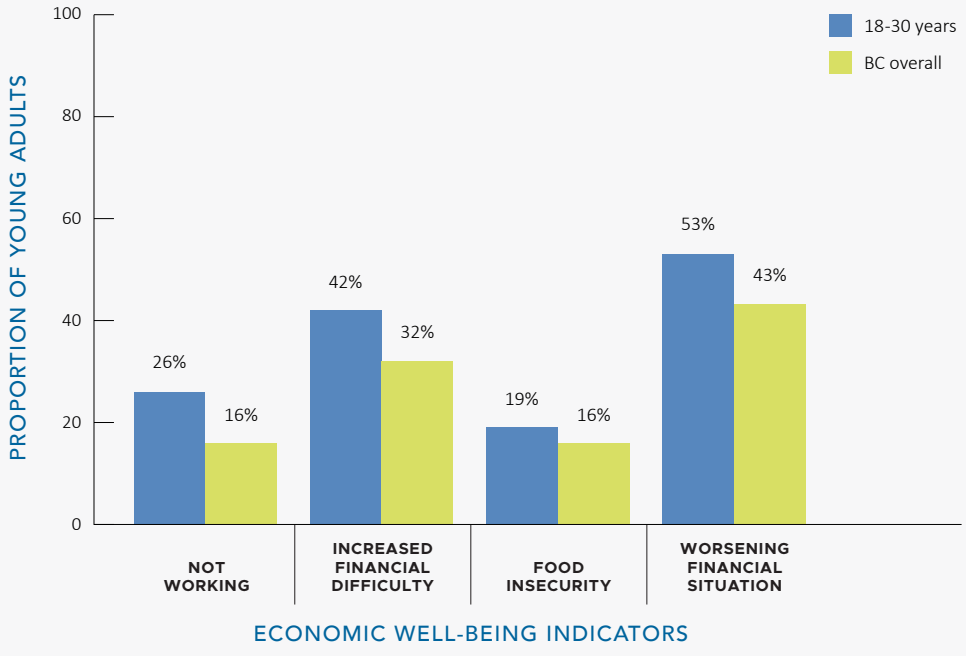
Housing and food insecurity

The BC SPEAK Survey demonstrated significant impacts of housing insecurity on young adults, with the highest proportion occurring among those aged 18-29 years (8%)

FIGURE 1

Economic Well-Being

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



and declining progressively with age (e.g., to 7% among 30-39-year-olds and 6% among 40-49-year-olds).[27] When asked whether Greater Victoria has been successful in increasing the availability of diverse/alternative housing options, those aged 30 and under (26%) were less likely to select "somewhat agree" or "strongly agree" than those aged 45-64 (31%).[37] The pandemic may increase housing instability and push some young adults into homelessness due to financial strain or if alternate means of shelter such as couch surfing, temporary shelters, or university residences are no longer an option.[38]

Adequate nutrition was also of concern, with 63% of those aged 30 and under less likely to rate their access to nutritious, culturally appropriate food for their families as "good" or "excellent".[37] Populations already subject to marginalization and social exclusion — including racialized and gender diverse individuals — as well as those in supported or communal housing situations, reported the greatest impacts on housing insecurity. For example, food security was a significant concern for people who identified as gender diverse (32%).[27] In addition, food insecurity was prevalent among those living in supported housing (45%) or in dormitory (38%) accommodation.[27]

> *"CERB has provided me with enough money to live off ... I have been able to focus on the foundational aspects of my life (sleep habits, eating habits, exercise routine, social connections, mental health) which has been unbelievably beneficial."*
>
> – (BC SPEAK participant, 2020)

SPECIAL POPULATIONS

It is important to note that some populations may experience unequal financial consequences related to the pandemic. The economic burden particularly affected young adults aged 18-22 years. Compared to the overall BC population, young adults aged 18-22 were more likely to report not working due to the pandemic (32% vs.16%), increased financial difficulty (44% vs. 32%), concern for food security (20% vs. 16%), and worsening financial situation (58% vs. 43%).27 COVID-19 also presents unique challenges for young adults without parents or guardians, and those who are homeless. A U.S.-based survey of 90 young adults aged 18-25 participating in the Youth Experiencing Homelessness Survey (YEH) between April and July 2020 reported greater difficulty accessing services and meeting their basic needs, including food, shelter, and hygiene.[39]

Former foster children who age out of the child welfare system at age 18 are also faced with numerous challenges (e.g., greater likelihood of poor mental health, homelessness, and difficulty obtaining employment) as they attempt to tackle adult life. The global pandemic has amplified the difficulty in this transition for those leaving foster care, with some choosing to stay in group homes and not exit care due to the financial risk of leaving.[40]

Of 820 trans and non-binary Canadians surveyed by Trans PULSE Canada in September to October of 2020, over half (53%) of respondents said that COVID-19 had a negative impact on their ability to meet financial obligations or pay for essential needs.[41] Racialized and Indigenous young adults experiencing existing barriers to education, employment, and training, as well as workforce exclusion, may suffer disproportionate and accumulating effects.[42,43] The rising cost of unemployment and lost opportunities and skills may compound inequalities — this is a significant concern that will be critical to monitor and address well into the future.

KEY POINTS

- Canadian young adults were among the most affected with respect to unemployment rates, financial strain, and housing and food insecurity during the COVID-19 pandemic.
- Costs of unemployment and lost wages are likely to compound over time, and young adults are worried about their ability to recover.
- Housing and food instability were reported to be greatest among underserved and marginalized young adults.
- Some young adults found financial relief when they were able to access federal funding to mitigate pandemic impacts.

> *"Mental disorders (anxiety and depression) are worse, and my coping mechanisms aren't available. I lost my job and the entire film industry. I can barely afford rent and the very basics!"*
>
> *– (BC SPEAK participant, 2020)*

b) Post-Secondary Education and Training

Post-secondary education is a key determinant of future employment, health, and socioeconomic status.[44,45] Following the public health emergency declaration in March 2020, post-secondary institutions in BC transitioned from in-class instruction to remote online learning for the spring term. With the continued progression of the pandemic, online learning platforms were maintained during the summer and 2020/21 school year, with limited in-class instruction for essential teaching.[46,47]

Post-secondary students and instructors continue to have major disruptions in their academic experience (including gaps in access to instructors, research, curriculum, student employment, and co-op opportunities). In-person attendance at post-secondary institutions is important for young adults to assert independence and identity; gain valuable educational opportunities; build professional networks; and facilitate access to resources and opportunities essential for personal, social, and economic well-being, including the development of personal health behaviours.[48,49] Although for some students online learning may reduce anxiety related to attending and participating in class and can increase student motivation or performance, missed opportunities for peer collaboration, interaction with professors, socialization, and networking reduce engagement, learning, and valuing of coursework.[50,51] Accessing study space for online learning in overcrowded housing also poses problems for post-secondary students.[52] Synchronous online learning using virtual platforms can actually contribute to student stress, anxiety, and "screen fatigue" in some cases due to efforts in attempting to synchronize with each other, read body language, and make judgement calls of when to speak; anxiety associated with being watched closely; and sometimes even the activation of the sympathetic nervous system due to biochemical changes in the brain.[53]

Some students may experience certain advantages of remote learning, such as opportunities to attend virtual international webinars or conferences that are accessible and free. They may also save time and money from not having to commute and gain a degree of flexibility.[54] However, from an overall cost perspective, distance education degrees typically cost less than in-person programs. The current status quo (and in some cases increase) of tuition fees will continue to pose challenges for students; in 2020/2021 students will pay higher tuition fees on average compared to previous years, even with continued online instruction in response to the pandemic.[55]

> *"The transition to online is honestly a very lonely one, and I am sure that many students are feeling very isolated and restless with the limited amount of people they can see and things they can do. I think that moving forward society as a whole should be more mindful of everyone's invisible struggles, and work together to build safe, understanding, and caring professional, social, and academic environments."*
>
> – (SFU student, 2020)[56]

INTERNATIONAL AND CANADIAN DATA

Delayed and disrupted academic and learning opportunities during COVID-19 have had widespread effects on Canadian students. In a Statistics Canada survey of 100,000 post-secondary students in April 2020, 75% of respondents reported all classes had transitioned to online instruction, while 17% reported only some courses had transitioned.[57] Overall, 7% of respondents reported being unable to complete some or all of their programs, with variation seen across type of program (e.g., CEGEP diploma (9%), master's (6%)) and field of study (e.g., engineering (5%), trades (13%)).[57] Additionally, many respondents reported cancelled or postponed classes (26%) and work placements (35%), and an inability to complete credentials as planned (11%).[58]

> *"I really disliked the online platform that I did just for the last few weeks, so much that I decided not to attend school this year, which has taken a huge shift in my life direction, and I do want to go back*

and I feel the lack and just missing school just now but at the same time just watching my friends do online school and it looks really challenging and not very engaging. So yeah, loss of freedom and independence and I was also supposed to go on exchange this year so that's not happening obviously. A huge 180 spin in my life I think."

– (Leadbeater et al., 2020)[52]

For young adults, academic disruptions during the COVID-19 pandemic have led to heightened anxiety and concerns regarding the future. College students have more ready access to health services, such as mental health counselling on campus, compared to young adults not enrolled in higher education training, but many of these services were disrupted when colleges were closed or moved online.[59] A recent study by the Canadian Mental Health Association found that those under 30 were four times more likely to report concerns about interrupted education or career training (31%) than those over age 30 (9%).[60] A majority of respondents in the Statistics Canada survey were "very" or "extremely" concerned about using up savings (68%), having no job prospects for the near future (67%), having to take on more student debt (73%), and effects on grades (63%).[58] Notably, 48% of post-secondary students reported losing a job or being laid off, 26% reported reduced hours, and 49% reported lost job prospects.[58] Loss of employment may also affect students' capacity to afford post-secondary education or add to accruing debt.

Graduate students, who are typically financially independent, may be experiencing particular challenges during this time. In a recent national survey, graduate students in Canada reported concerns about sources of income and ongoing expenses such as tuition fees.[61] In addition to ongoing financial impacts, graduate students surveyed also reported a negative impact on their ability to secure or complete work experiences (50%) and having to cancel study or work terms abroad or in other institutions (78%).[61] Over a quarter (27%) reported not having access to a safe and quiet workplace, and half (50%) reported delays in study completion.[61] Notably, teaching assistants and course instructors received no financial compensation for the significant work involved in transitioning to remote teaching at the start of the pandemic.[61]

BC DATA

Of BC respondents, a third (35%) of all respondents reported having work placements negatively impacted by COVID-19.[57] Nearly half (49%) of all health care and law student respondents experienced delays or cancellations, while other students reported similar impacts (36% of science and engineering students, 32% of business students).[57] Half of students (50%) across all fields of study report being "very" or "extremely concerned" about the ability to return to school, highest among health care/law (55%) and business students (49%).[57] Fields in which in-person learning is a core aspect of education may be particularly affected by barriers to developing practical skills and, potentially, the ability to graduate.

Academic disruptions may result in a number of snowball effects. Some students may experience unequal barriers to accessing online education, including regular access to a computer and adequate study space. Significant travel restrictions and barriers to virtual participation (such as differing time zones) have limited the ability of international students to attend post-secondary programs.[62] As post-secondary learning disruptions progress, some predict the presence of a "COVID slide", with concerns about the ability of young adults to recoup missed education.[63,64] Finally, due to extended in-person learning disruptions over the 2020/21 school year in BC, secondary school graduates may be less prepared upon entry to university and college than those graduating prior to the pandemic.[65]

SPECIAL POPULATIONS

Existing educational disparities may be amplified during the pandemic. Students already facing barriers in accessing post-secondary education — such as racialized and Indigenous students — may face additional structural challenges in remote learning with the potential to widen existing educational disparities.[66,67] Prior American studies have revealed an alarming gap in college completion among young people with lived experience in foster care — more than two thirds of foster young adults who start college do not graduate within six years.[68] Although the pandemic has disrupted educational pathways for all students, youth and young adults aging out of foster care may experience the biggest setback.[69]

"...we can see a massive decline in motivation to complete coursework, in studying skills and patterns, pressure for graduation, increase in loneliness and isolation because of the lack of social interaction with peers and family members. In order to battle these issues, I have created a strict schedule for myself that helps me stay motivated and focused and helps me complete all my tasks for the day. Phone calls, video calls, and occasional socially distanced visits with my friends and family also help in reducing feelings of loneliness and isolation."

– (SFU student, 2020)[56]

KEY POINTS

- Detrimental effects for young adults are likely to accumulate well into the future as post-secondary academic disruptions persist.
- At the institutional level, decreased enrollment and revenue may impact future staffing, training, and funding opportunities.[70,71]
- Program and graduation timelines may be impacted in some programs.[72]
- There may be an escalating demand for classes and training opportunities as programs and courses resume fully, resulting in long wait lists and greater competition.[73]
- The cumulation of delayed education, reduced necessary training experiences, and mounting debt and barriers to higher education may result in social and economic repercussions for young adults.

c) Mental Health-Related Outcomes

The onset and peak burden of mood and substance use disorders typically occurs in young adulthood.[74] Young adults experience the highest annual prevalence of any age group (8% and 12%, respectively).[10] Seventy-five percent of all mental health disorders first occur between the ages of 12 and 24 years.[74] Suicide is the second leading cause of death for this age group, with 75% of those being men.[75]

Young adults may be particularly vulnerable to the mental health consequences of COVID-19 due to severe financial strain, loss of jobs or educational access, insecure overcrowded housing, unstructured time, and lack of access to medical and mental health services. Young adults make up 10% of the proportion of the population living alone, which can also exacerbate mental health challenges.[76]

> *"Seeing other people makes me extremely anxious, I am fearful of leaving my house and am filled with rage constantly when I see people not distancing. My sleep schedule is messed up and my dreams have been significantly more vivid and disturbing. I feel helpless all the time. My house is a mess."*
>
> – (BC SPEAK participant, 2020)

INTERNATIONAL AND CANADIAN DATA

Globally, trends show that, compared to other age groups, young adults have experienced heightened mental health and substance use concerns due to the COVID-19 pandemic.[77] For example, an online survey of college students in the U.S. (*n* = 2,031) showed 48% of students endorsed moderate-to-severe levels of depression, 39% endorsed moderate-to-severe levels of anxiety, and 18% endorsed suicidal ideation.[78] The majority of the sample (71%) reported increases in stress and anxiety since pre-pandemic, with less than half indicating confidence in their ability to cope.[78] Similarly, among another U.S.-based sample of college students (*n* = 898), 43% endorsed high levels of depression, 45% had high anxiety scores, and 32% had high levels of post-traumatic stress disorder (PTSD) symptoms.[79] Heightened rates of mental health concerns have also been noted globally, including in studies from China,[80] France,[81] and Austria.[82] Despite increased rates of mental health concerns, help-seeking behaviours (e.g., accessing counselling) seem to remain low (12%).[81]

Studies highlight a wide range of risk factors that put a young person at increased risk of mental health concerns during the pandemic. A large study of students (*n* = 69,054) living in France during the COVID-19 quarantine reported associations between poor mental health (i.e., self-reported suicidal thoughts, severe distress, stress, anxiety, and depression) and identifying as female or gender diverse, low-quality income or housing, a history of psychiatric follow-up, social isolation, and low quality of COVID-19 and quarantine information received.[81] Loneliness and living alone are key risk factors for poor mental health among young adults.[83] Social determinants of health including lower education, unemployment, economic stress, and

financial strain are also highlighted as risk factors in the literature.[84–86] Protective factors and strengths, including family support,[79] engagement in physical activity,[82,87,88] and trust and optimism[84] are associated with lower mental health concerns during the pandemic.

Young adult Canadians have been disproportionately impacted by a number of pandemic stressors (i.e., burden of lost household income, loss of employment and educational opportunities, disproportionate impact of child/elder care, barriers to accessing mental health services) that may contribute to the onset or exacerbation of mental illness or problematic substance use.

Self-reported mental health of Canadian young adults has been worsening over the past five years and was accelerated further by the pandemic. In 2015-2016, 67% of women and 74% of men self-reported "excellent" or "very good" mental health within a population aged 15-30.[89] In July of 2020, those numbers were only 33% for women and 44% for men.[89]

Canadians aged 18-34 were more likely to be diagnosed with anxiety (41%) or depression (41%) compared to older adults aged 55 and older.[90] They are also less likely to be positive about their ability to "bounce back" post-COVID-19 compared to older adults.[90] A 2020 study conducted by the Canadian Mental Health Association showed young adults (under age 30) were 2.5 times more likely to report that they were worried about the impact of the pandemic on existing mental health problems than those over 30.[60] Among young adults, those aged 18-22 were 2.6 times more likely than those aged 23-30 to report they had felt lonely or isolated because of the COVID-19 pandemic in the past two weeks.[60]

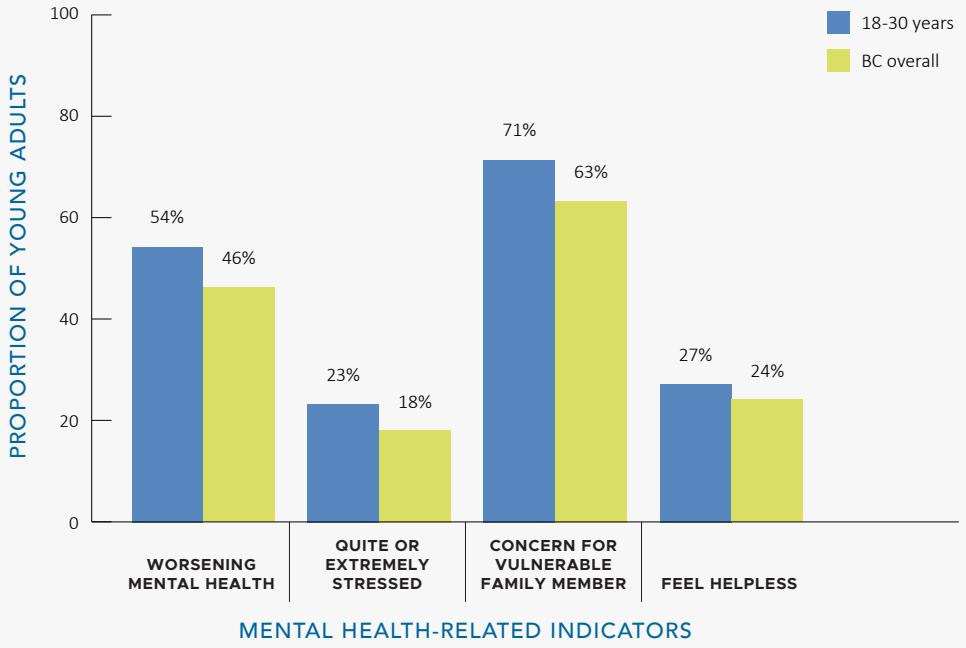
Results from two Canadian population-based datasets show the mental health impact of the pandemic is greatest among younger generations (i.e., Millennials aged 15-34).[91] A large Canadian study integrated data from two community-based and two clinical samples of young people (ages 14-28; only 9% were under age 18) in April 2020.[92] Across samples, young adults expressed concern for their mental health or reported a significant deterioration in their mental health compared to the pre-pandemic period, and many met screening criteria for a mental health disorder (anxiety, depression) (68% clinical, 40% community).[92] Many young adults (45% of the clinical samples, 17% of the community samples) also reported mental health and substance use service needs that were not being met.[92] Young adults with pre-existing physical or mental health and substance use concerns may be at increased risk of further exacerbation of problems.[92,93]

According to more recent surveys, the mental health status of young adults remains poor for many. A sample (n = 1,438) of young Canadians under 34 years of age were asked about their mental health during the pandemic in September 2020. Results indicated that 64% of young Canadians who are experiencing suicidal thoughts and 42% who engaged in self-harm before the pandemic have experienced an increase in these thoughts and behaviours since the pandemic began.[94] Furthermore, of those with prevalence of depression, anxiety, or panic disorder diagnoses, 62% of those under age 21, 59% of those ages 21-24, and 54% of those ages 25-34 reported a worsening diagnosis.[94] Similarly, the results of a survey conducted in September 2020 revealed a bleak picture of the psychological health of young adults, especially those in the Montreal area. In fact, 46% of young Montrealers aged 18-24 (compared to 24% of those aged 25 and over) reported symptoms consistent with generalized anxiety or major depression, while the share of affected young adults in other regions of Quebec was 31%.[28]

FIGURE 2

Mental Health-Related Outcomes

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



BC DATA

Young British Columbians (those under 30 years of age) endorsed that COVID-19 had worsened their mental health (61%), was a threat to their mental health (23%), and impacted their level of stress (24%) more so than those aged 65 and older (34%, 9%, and 10%, respectively).[37] Further, these young adults felt less able to cope with their daily stress compared to older adults.[37] Results from the BC SPEAK Survey showed the mental health of young adults aged 18-30 years was adversely affected by the COVID-19 pandemic compared to the BC population overall (see Figure 2).[27] More than half (54%) of young adults surveyed reported worsening mental health compared to the BC population overall (46%), with many people feeling either quite or extremely stressed most days (23% of young adults vs. 18% BC overall) or helpless (27% of young adults vs. 24% BC overall). A large proportion were also concerned about the impact of COVID-19 on vulnerable family members' health (71% of young adults vs. 63% BC overall). The mental health impact of COVID-19 seemed to vary depending on living situation. For example, more than half of the people living in dormitory accommodation (59%) reported a worsening of their mental health. People who were living in supported housing (41%) were also quite or extremely stressed most days. People with no permanent home (45%), living in dormitory accommodation (39%), or living in supported housing (38%) reported increased feelings of helplessness.[27]

Results from Foundry's COVID-19 report highlight that 89% of young people accessing virtual services were either in high or very high distress at the first visit.[95] Among 270 visits from April to December 2020, 70% were by young people 18-24 years of age.[95]

With ongoing dual public health emergencies, BC has experienced a surge in illegal drug toxicity deaths since March 2020, with the highest historical monthly death counts occurring in May to July 2020.[96] A total of 278 young adults between the ages of 19 and 29 died by overdose

between January and November 2020, comprising 24% of all overdose deaths.[96]

SPECIAL POPULATIONS

As noted above, the pandemic has had a substantial impact on education and training. Canadian students pursuing graduate studies (*n* = 1,431) reported increased anxiety, depression, feelings of helplessness, loneliness, or being overwhelmed compared to before the pandemic, with most (72%) attributing these feelings to COVID-19.[61] Many graduate students (26%) are now considering a long-term leave of absence compared to 10% pre-pandemic.[61]

> *"Increased stress, depression from spending a lot of time alone, friend has had new panic attacks, people don't realize the amount of stress [they're] under and need to learn new coping mechanisms now."*
>
> – (Leadbeater et al., 2020)[52]

Some research shows that, compared to cisgender individuals, young adults who are gender diverse were more likely to report higher levels of mental health symptoms within the larger college-focused samples.[79,81] Gonzalez et al. surveyed LGBTQ2S+-identifying American college students (*n* = 477; ages 18-25) and reported a large portion of their sample (60%) experienced psychological distress (i.e., depression, anxiety).[97] Almost half of the participants (46%) endorsed family members being unsupportive of their sexual identities, possibly contributing to psychological distress among this population.[97] Data from the BC SPEAK Survey showed a large proportion of young adults who identified as either gender diverse (67%) or female (60%) more frequently reported worsening of their mental health compared to males (47%), individuals aged 18-30 years (54%), and the BC population overall (46%).[27] These young adults experiencing marginalization also reported feeling either quite or extremely stressed most days, an increased feeling of helplessness, and concern about the impact of COVID-19 on vulnerable family members' health.[27]

Young adults experiencing homelessness experience high rates of psychiatric and substance use problems,[98] which may be further exacerbated due to COVID-19. A survey involving 90 young adults who were recently or currently homeless demonstrated high rates of past-seven-day mental health symptoms including hopelessness (48%), anxiety (44%), loneliness (38%), sleep problems (34%), and depression (36%).[39] Among young adults who had already engaged in substance use pre-pandemic, some reported increased alcohol (16%), tobacco (20%), and cannabis (28%) use following the onset of the pandemic.[39]

With closures to schools and child care settings, parents may experience heightened stress due to COVID-19, while trying to balance working full-time, providing child care, and supporting online learning efforts. Although not specific to young adulthood, data from Canadian mothers (*n* = 642) who were either pregnant or had a child aged 0-8 years showed rates of clinically relevant depression (33%-44%) and anxiety (30%-36%) that were higher than non-pandemic populations, although only 20% of those exhibited help-seeking behaviours (e.g., access counselling).[99]

KEY POINTS

- Young adults demonstrated increased mental health and substance abuse concerns, including increases in rates of depression, anxiety, suicidal ideation, and self-harm and suicidal behaviours following the onset of the COVID-19 pandemic.
- Gender, educational, and financial inequities in these associations exist.
- Some research shows lower levels of education and economic strain are associated with mental health problems; however, little is known regarding other inequities (e.g., race, ethnicity, LGBTQ2S+) that may put a young person at disproportionately higher risk of problems during the pandemic.

> *"My mental health is declining daily...anxiety at an all-time high...increased cannabis use which normally I would NEVER do to cope with anxiety & avoid a trip to the doctor…I have to choose between being an involved parent or working in order to get my work done from home with no child care! It feels like I am failing at everything and the burden is huge on mothers. My international travel plans (honeymoon) were cancelled. We have decided to delay having our second child due to the pandemic."*
>
> – (BC SPEAK participant, 2020)

d) Health Services Access and Utilization

The COVID-19 pandemic has interrupted health care systems globally. In early phases of the pandemic, lockdowns and shelter-in-place recommendations to encourage social distancing disrupted health care service delivery through structural factors, such as delay of elective surgeries and capacity challenges due to the influx of COVID-19 patients, and individual-level factors, such as patients' reluctance to visit health care settings due to fear of SARS CoV-2 infection.

At the same time, use of telemedicine and virtual care has expanded in many regions and for many populations, with variable uptake.

> *"I think I have reached a point that I feel open to seeing a counsellor, like working through myself emotionally that way, but I don't feel there it's a possibility right now since I don't want to do it online. So I think the opportunity for people who don't have that opportunity set up [sic]. It doesn't seem like there is the opportunity right now."*
>
> – (Leadbeater et al., 2020)[52]

INTERNATIONAL AND CANADIAN DATA

Young adults were already reporting unsatisfactory access health care services prior to the COVID-19 pandemic. For instance, in a survey of Canadian graduate students (*n* = 1,431) in April/May 2020, 32% expressed dissatisfaction with their access to mental health support before the pandemic.[61] This number rose to 38% after the pandemic was declared.[61] A similar trend was observed with students' dissatisfaction in their access to primary care, which increased from 14% prior to the pandemic to 23% during the pandemic.[61]

The impact of health services closures resulting from pandemic restrictions on young adults is unknown. There are indications that certain services have experienced increased access and availability for young adults, such as same-day start of contraception and elimination of pelvic exams for birth control prescriptions in the U.S.[100] However, other services such as sexually transmitted infection (STI) testing and treatment are likely less amenable to virtual care and may result in reduced access for young adults.[101] A study of 1.5 million women in Southern California showed a decrease in cervical cancer screening rates during the pandemic.[102] Compared with rates during the same period in 2019, among women aged 21-29 years compared to those 30-65 years of age, screening rates for cervical cancer were 8% lower (vs. 3%) before the California stay-at-home order issued March 19, 2020, 78% lower (vs. 82%) during the stay-at-home order, and 29% lower (vs. 24%) after the stay-at-home order was lifted.[102]

In Canada, participants (*n* = 622) aged 14-28 years in existing clinical and community samples based at the Centre for Addiction and Mental Health (CAMH) in Toronto surveyed during the pandemic (April 2020) reported substantial mental health service disruptions (49% and 11%) and unmet support needs (44% and 16%).[92] Similarly, a study of 18-29-year-olds in Montreal identified significant impacts on access to health and social services.[28] Almost a third of young adults in the sample reported that the pandemic had a significant impact on their home's access to social services compared to a quarter of participants in other age groups. Almost a third also reported significant impacts on access to health services, which was just slightly higher than disruptions reported by other age groups.[28]

Move to telemedicine and virtual care

In response to the pandemic, health care providers serving young adults developed strategies to mitigate impacts on health care delivery, while maintaining the greatest degree of physical distancing possible. For instance, among U.S. Maternal Child Health Bureau Leadership in Adolescent Health (LEAH) programs serving youth and young adults, telemedicine was used to triage patients in primary care settings to emergency vs. urgent care.[59] There were also special considerations for young adult patients in certain program types; for instance, eating disorder patients, cared for by multidisciplinary teams of medical, behavioural health, and nutrition staff either synchronously or asynchronously, were assessed daily

in "vital sign clinics'' for heart rate, blood pressure, and weight assessment, in combination with a telemedicine visit. Meanwhile, substance use treatment regulations were adapted to allow for virtual enrollment of new patients. Contraception services were considered essential by certain programs, particularly to meet the needs of patients scheduled for long-acting reversible contraceptives, while other programs encouraged use of oral contraceptives to maintain physical distancing and minimize in-person visits, as well as exploration of self-injection or pharmacy visits for patients receiving Depo-Provera. Most programs delayed new visits for patients with gender-related concerns but offered in-person visits for those with gender dysphoria needing hormone injections.[59] Lastly, continuity of mental and behavioural health visits was prioritized by health care providers, especially those providing acute response resources and suicide prevention services. These services, including psychological assessments and therapeutic groups, were expediently adapted to virtual settings.[59]

BC DATA

Virtual care in BC in the context of the COVID-19 pandemic

GetCheckedOnline (GCO) is an internet-based testing service for sexually transmitted and blood borne infections (STBBI) offered by the BC Centre for Disease Control in partnership with the BC Public Health Laboratory and participating regional health authorities. Users complete an online risk assessment to inform STBBI test recommendations, auto-generating a lab requisition which can be used at a participating laboratory location, with results available online or by phone. The service launched in 2014 in Vancouver and has expanded to include locations across the province. The proportion of test episodes completed by those 18-30 years who were using GCO for the first time increased from 56% pre-pandemic (March-December 2019) to 60% during the pandemic (March-December 2020).[103] Positive results for gonorrhea infections among those 18-30 years of age increased from 60 cases in 2019 to 74 cases in 2020, while cases of chlamydia infections in this group increased from 297 in 2019 to 395 cases in 2020.[103] GCO test episodes completed also increased in this age group from 5,105 in 2019 to 6,594 in 2020. These data suggest that uptake of at-home/online STI testing has increased significantly during the pandemic, and this may also reflect an increase in the prevalence of STBBIs.[103]

Access to virtual mental health care for youth and young adults was supported in BC through Foundry Virtual, launched in April 2020 as an extension of the Foundry network of centres that operate an "integrated youth services" model for young people aged 12-24 years. From April 16, 2020 to January 2021, 749 unique youth and young adults accessed Foundry Virtual services over 1,429 visits.[95] Monthly unique and total visits increased from 24 and 32 in April 2020, to 264 and 398 in November 2020. The predominant services accessed were walk-in counselling (46%) and peer support (37%). Twenty percent of Foundry Virtual visits were from young people between the ages of 18 and 24 years. Almost 90% of young people at their first virtual visit reported that they were in "high" or "very high" distress, measured using the Kessler Psychological Distress Scale. Young people rated the quality of virtual services highly, with 62% strongly agreeing that they would use the service again if they needed support.[95] However, some young adults believed that starting a therapeutic relationship online would be difficult; as one young adult noted, "establishing the therapeutic alliance over Skype seems disingenuous; might be easier if you had this bond pre-COVID."[52] Online care may also be limited to one visit and be crisis-oriented, and this may be inadequate when longer-term care with a consistent therapist is needed.

BC survey findings

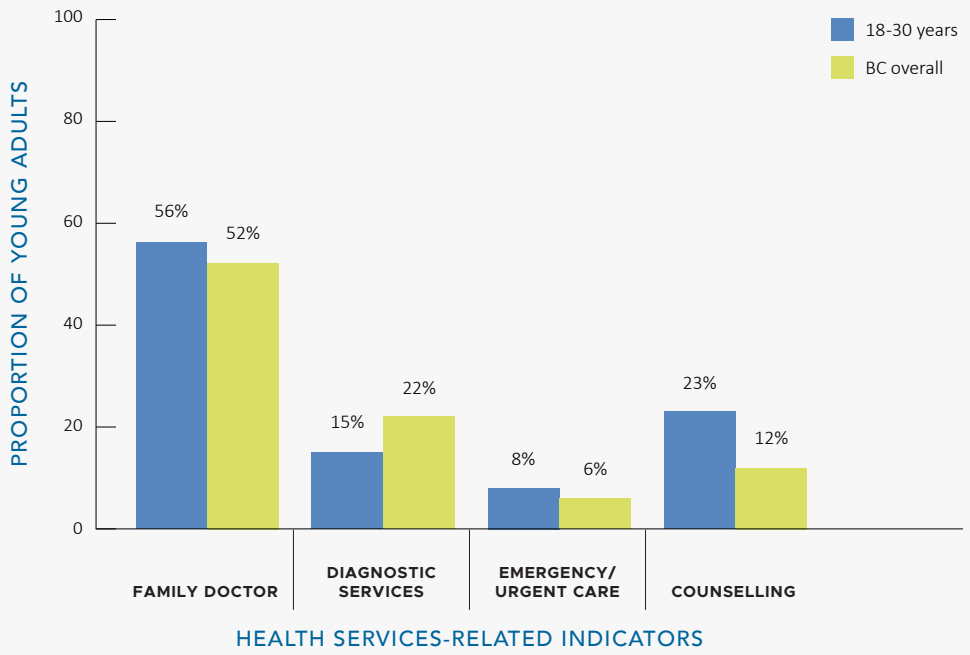
The Victoria Foundation's Vital Signs survey in June 2020 found that 44% of those aged 30 years and younger reported "good" or "excellent" access to health care for physical health concerns than those aged 55 years and older (57%).[37] Results from the BC SPEAK Survey also provide a snapshot of young adult health service utilization in the early phase of the pandemic. Survey findings illustrated that young adults aged 18-30 years had more difficulty accessing health care services or avoided health care services compared to the overall BC population (Figure 3).[27] For instance, a majority of young adult and BC population respondents reported difficulty accessing their family doctor (56% vs. 52%, respectively) and counseling (23% vs. 12%, respectively), while others had difficulty accessing emergency care (8% vs. 6%, respectively).[27] Appetite for accessing health care services virtually was similar for young adults and the overall BC population (60% vs. 62%, respectively).[27]

Many young adults also avoided accessing health care services due to fears of SARS-CoV-2 infection. More young adults compared to the BC population said they avoided accessing emergency care (6% vs. 4%), and over a fifth avoided accessing counseling services (21% vs. 11%) that they would have accessed prior to the pandemic.[27] About a third of each group avoided accessing health care generally, and two-thirds of each group avoided visiting their family doctor at the time of the survey, though young adults were less likely to avoid accessing diagnostic services compared to the BC population (11% vs. 20%).[27] Lastly, qualitative findings from the BC SPEAK Survey suggested that young adults described the difficulty they had accessing health care, including not being able to schedule an appointment, having appointments cancelled, and the care received not meeting their expectations.[27]

FIGURE 3

Health Services Access & Utilization: 2020

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



SPECIAL POPULATIONS

Current information on health care utilization for young adults is limited; however, the dearth of data is particularly notable for special populations. In the BC SPEAK Survey, young adults who reported difficulty accessing their family doctor or emergency care were more likely to be aged 18-22 years, living in a household with children, in remote or rural areas, and reporting worsening mental health.[27] For this younger subset aged 18-22 years, accessing their family doctor (60% vs. 52%) or emergency care (7% vs. 4%) was also more difficult than for the BC population overall. Additionally, young adults who avoided accessing emergency care or counseling were in the younger subgroup aged 18-22 years and reported worsening mental health. Further, a greater proportion of people aged 18-22 avoided emergency care (10% vs. 6%) and counseling (24% vs. 11%) than the BC population overall.[27]

The BC SPEAK Survey also found that young adults who identified as gender diverse reported increased difficulty accessing health care generally (40%) compared to cisgender individuals aged 18-30 years (22%) and the BC population overall (23%). They also had greater difficulty accessing their family doctor (65%) compared to cisgender individuals aged 18-30 years (56%) and the BC population overall (52%), and greater difficulty accessing counseling (50%) compared to cisgender individuals aged 18-30 years (23%) and the BC population overall (12%).[27] More young adults who identified as gender diverse avoided emergency care (14%) compared to cisgender individuals aged 18-30 years (8%) and the BC population overall (6%) and avoided counseling (39%) compared to cisgender individuals aged 18-30 years (23%) and the BC population overall (11%).[27] Further, of 820 trans and non-binary Canadians surveyed by the Trans PULSE Canada survey in September-October of 2020, approximately 1 in 10 reported avoiding COVID-19 testing or care.[41] Among this group avoiding testing and care, 40% indicated that their avoidance was due to fear of discrimination.[41] In the six to seven months between the start of the pandemic and survey completion, 35% of trans and non-binary people experienced an unmet general health care need, and 37% an unmet mental health care need.[41] More data are needed in this area to identify challenges for young adults in this population.

People who reported no permanent home also had more difficulty accessing their family doctor (74%) compared to other young adults aged 18-30 years (56%) and the BC population overall (52%) and more difficulty accessing counselling (89%) compared to others aged 18-30 years (23%) and the BC population overall (12%) (BC Speak Survey, 2020).[27] Tucker and colleagues surveyed 90 young adults between the ages of 18 and 25 years participating in their Youth Experiencing Homelessness Survey (YEH) between April and July, 2020. Approximately 32% to 44% of these young adults reported more difficulty accessing behavioural health services, such as mental health and substance use services, since the start of the pandemic.[39]

Another group that may have been disproportionately affected is immigrant and undocumented young adult migrants, who may have been excluded from government relief packages.[104] Along with young adults with fewer financial means, immigrant and migrant young adults may experience technology barriers limiting access to telemedicine services and remote schooling.[104]

Lastly, from an economic perspective, young adults with greater resources and supports — such as the ability to move back in with caregivers or rely on family financial support — appear to cope better financially than those with fewer available networks and resources. However, young adults who have moved back home for financial reasons may experience privacy and confidentiality issues when accessing telemedicine or online supports like virtual cognitive behavioural therapy.[105] Reduced income due to the pandemic for young adults can also impede access to contraceptive and other health care.

> *"Loss of daily family support with our newborn… Unable to have family and friends over to meet our little one / help around the house…Discharged from midwife care over the phone and have not taken our newborn to the family doctor for a check-up since."*
>
> – (BC SPEAK participant, 2020)

KEY POINTS

- Young adults may be amenable to using online and virtual resources for physical and mental health care, including STI testing and crisis care for mental illness and substance use. However, continuity of care may be a challenge, and more evidence of acceptability and effectiveness of virtual care services is needed.
- Young adults had more challenges accessing family doctors, emergency care, and counseling services compared to the general BC population.
- Challenges accessing health care were magnified for certain subsets of young adults (e.g., gender diverse people, immigrants) and special care to understand barriers and engage these groups in needed.

"I agree with — that as many positives there are, there are equal negatives and especially during the serious quarantining spike; I felt a huge spike in my anxiety and even now you have to remind yourself that it is a temporary situation, that we are still in a pandemic that these are unusual times, but I've also been wanting to reach out to a counsellor and I have in the past and have found it hugely beneficial and I'm just like the thought of connecting with someone over Zoom or Skype is just like I don't even, it wouldn't seem the same at all. There could be benefits, but it is just such a different experience, it is so unappealing to me to reach out in that way. Even though, I think right now myself and a lot of people could use that help of a mental health professional."

– (Leadbeater et al., 2020)[52]

e) Health-Promoting Behaviours

Young adulthood is an important time for the initiation and reinforcement of health behaviours essential to overall well-being and to set a foundation for future health. Key modifiable factors to prevent chronic disease and promote mental and physical well-being include reducing physical inactivity and sedentary behaviour, promoting healthy eating, reducing alcohol consumption and smoking, gaining sufficient sleep, and managing stress.[106–108]

Young adults have unique developmental considerations influencing the adoption and maintenance of health behaviours. Young adults may be subject to intense social pressures (e.g., regarding weight or improving one's appearance), have a predisposition towards risk taking in exploring and asserting identity,[109] and may experience competing demands or barriers, such as a lack of time or skills (e.g., meal preparation), as well as new stressors in the transition to independence (e.g., loss of social support or resources).[110–112]

INTERNATIONAL AND CANADIAN DATA

Prior to COVID-19, key national reports highlighted concerning health trends for young adults.[2,3] Over 30% of Canadian young adults 20-29 years old are characterized as "overweight" or "obese".[5] Young adults 15-24 years old have the highest annual prevalence of substance use (12%) disorders of any age group,[10,113] with peak rates of problematic drinking and smoking.[4] Baseline data suggest a high proportion of Canadian post-secondary students are already physically inactive (72%), have inadequate sleep (75%), have low fruit and vegetable intake (88%), and binge drink (60%).[17] For some, these patterns may be temporary, while for others, they may affect well-being and contribute to future health issues.

"Negative coping measures such as alcohol, smoking, cannabis, and fast food are considered essential and therefore remain open...My mental health has significantly declined. You've taken away positive measures to deal with stress and cope with these extreme measures and left us with only negative ways to cope: drinking and smoking."

– (BC SPEAK participant, 2020)

Repercussions of the COVID-19 pandemic and related measures, including ongoing educational closures, may worsen these trends for young adults. As societal disruptions related to the COVID-19 pandemic persist, young adults may experience a loss of access to resources and educational and employment opportunities, as well as supportive settings and routines, that are key determinants of health-promoting behaviours.

Physical activity

Global data suggest that physical activity has declined and sedentary behaviour has increased precipitously during the COVID-19 pandemic. A large population survey of 12,000 adults in China during the first pandemic wave found that young adults reported the lowest prevalence of vigorous physical activity (with only 17% achieving recommended levels) and the peak increase in screen time (305 minutes/day) of any age group.[88] Similarly, a study of over 1,400 Italian undergraduate students found that all types of physical activity decreased during the lockdown, with walking reduced by six hours/week, while sedentary behaviour increased by 52 minutes/day.[114] Smaller studies exhibited similar trends of reduced physical activity and increased sedentary behaviour for young adults[115,116] — in one Australian study, 30% fewer students met recommended physical activity guidelines of 150 minutes/week during the pandemic.[116] However, a Spanish study noted divergent effects in the young adult population — although sedentary behaviour increased overall, some young adults increased their recreational and leisure physical activity in lockdown, while those who were already sedentary, less active, or were smokers before the pandemic were more likely to see this trend exacerbated.[117]

Physical activity has protective effects on mental health and resilience. Two recent studies show a correlation between physical activity and improved mental health during the pandemic. Vigorous physical activity, as well as duration and regularity of exercise (>2 times per week, 60 minutes duration, or over 2,000 pedometer steps/day), was correlated with better self-reported mental and emotional well-being, as well as less depression and anxiety during COVID-19.[87,88]

A recent study of Canadian adults found that investment in physical activity as a core component of identity was the most important predictor of maintaining physical activity during the COVID-19 pandemic, along with strength of habits, planning, equipment availability, and home environment.[118] These factors should be considered, along with increased accessibility and availability of activity settings, in efforts to promote physical activity as the pandemic continues.

Sleep

Early indications suggest sleep has been impacted for some young adults during COVID-19 and is correlated with poor mental health; however, more research is required. A cross-sectional study of 11,000 youth and young adults in China found insomnia symptoms reported by 23%, highest among those in rural settings and those with less knowledge of COVID-19, more adverse impacts of COVID-19 on their life, or co-existing depression and anxiety symptoms.[119]

Nutrition

Limited literature was available to assess changes in nutritional patterns for young adults during COVID-19. A small Australian study of university students noted energy intake was 20% greater for females during COVID-19, observing greater snacking frequency and energy density of consumed snacks.[116] A U.S. longitudinal study of ~2,000 young adults found that almost half (48%) reported one or more unhealthy eating behaviours to cope with social distancing and isolation during the pandemic, more likely among women and those experiencing depressive symptoms.[120]

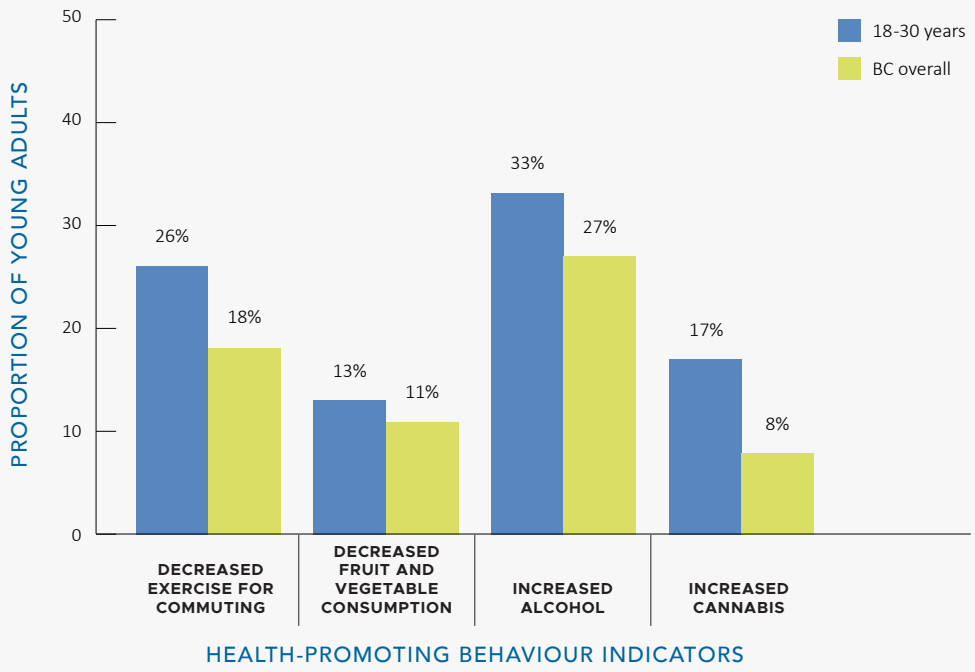
Substance use

A recent Canadian survey of over 1,400 young adults under age 34 found that one third (27%) reported increased alcohol use and almost half (45%) reported increased drug use during the pandemic.[94] A U.S. survey found that over two thirds of teens and young adults (< age 24) reduced their use of e-cigarettes in May 2020 related to lockdown restrictions, citing decreased access or moving back home; however, ~18% of individuals reported increasing nicotine use — more likely with frequent use and nicotine dependence — while 8% used cannabis more and 7% switched to other smoking products.[121]

FIGURE 4

Health-Promoting Behaviours – Negative Impact

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



BC DATA

BC data collected during the pandemic suggest that young adults experienced significant impacts on health behaviours, including decreased exercise and fruit/vegetable consumption, as well as increased alcohol and cannabis consumption.

Results from the BC SPEAK Survey showed that young adults 18-30 years old experienced negative changes in health behaviours due to the COVID-19 pandemic compared to the BC population overall (see Figure 4).[27] Compared to other age groups, a greater proportion of young adults reported decreased exercise for commuting (26% vs. 18%), less fruit and vegetable consumption (13% vs. 11%), and increased use of alcohol (33% vs. 27%) or cannabis (17% vs. 8%).[27]

Young adults reporting decreased exercise for commuting were more likely to be younger (aged 18-22 years), live in a household without children, and live in urban areas.[27]

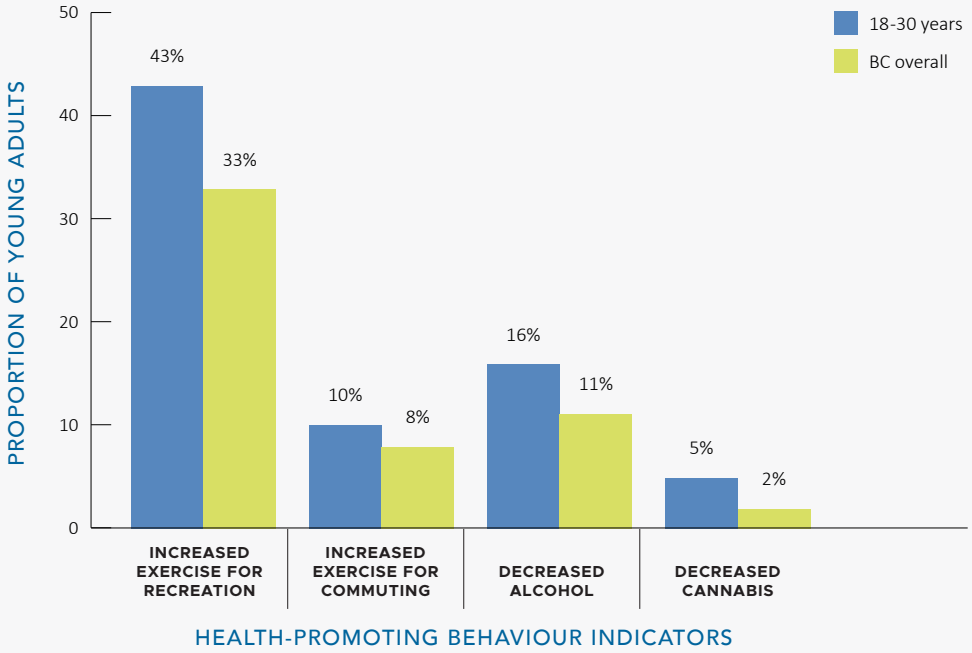
Of those who reported consuming fewer fruits and vegetables, a greater proportion were aged 18-26 years, living alone and in semi-urban or urban areas. Conversely, similar proportions of young adults compared to the BC population overall reported exercising less for recreation (25% vs. 27%) or sleeping less (24% vs. 23%).[27]

The negative impact on health behaviours varied by age group within the young adult cohort. Compared to the overall BC population, people aged 18-22 years exercised less for commuting (30% vs. 18%), and those aged 18-26 years consumed fewer fruits and vegetables (14% vs. 11%). An older subset of respondents aged 23-30 years reported an increase in their alcohol use (34%-37% vs. 27%) or cannabis use (17%-19% vs. 8%) during the pandemic. These respondents were more likely to live in a household without children, to live in remote areas, and to report a change (better or worse) in their mental health.[27]

FIGURE 5

Health-Promoting Behaviours – Positive Impact

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



Results from the BC SPEAK Survey show that some young adults aged 18-30 years also experienced positive changes in health behaviours due to the COVID-19 pandemic compared to the BC population overall, including exercising more for recreation (43% vs. 33%) or for commuting (10% vs. 8%), while others consumed less alcohol (16% vs. 11%) or cannabis (5% vs. 2%).[27]

SPECIAL POPULATIONS

Data suggest impacts were not experienced equitably, implying that particular challenges may have been experienced by certain population groups. Young adults who identified as gender diverse reported exercising less (31%) due to decreased commuting demands compared to cisgender individuals aged 18-30 years (26%) and the BC population overall (18%).[27] Young adults who identified as gender diverse also reported consuming fewer fruits and vegetables (21%) compared to individuals aged 18-30 years overall (13%) and the BC population overall (11%). Young adults who reported their ethnicity as White reported increasing their use of alcohol (39%) compared to the 18-30 population overall (33%) and the BC population overall (27%). Young adults who identified as gender diverse reported an increased use of cannabis (30%) compared to individuals aged 18-30 years overall (17%) and the BC population overall (8%). It is important to contextualize these results with an understanding of the critical role that social inequities play in influencing access to resources and opportunities associated with health behaviours.

> *"Better sleep schedule, lost weight/getting healthy, way more exercise, eating much healthier, saving sooo much money (not eating out as much or drinking alcohol), happier mental state/relaxed, feel more organized, spending 100x more time with family by moving back home."*
>
> – (BC SPEAK participant, 2020)

KEY POINTS

- With the loss of supportive structures, routines, and resources, many young adults decreased their physical activity and increased sedentary behaviour during the first pandemic wave, while others increased alcohol or cannabis consumption.
- This pandemic decline in health-promoting behaviour may further contribute to escalating trends in obesity, chronic disease, and substance use for young adults, and impact mental health and resilience.
- Effects may be particularly pronounced for those already experiencing inequities.
- However, some young adults have experienced positive changes due to the COVID-19 pandemic compared to the BC population overall, including increased exercise for recreation and commuting, and decreased alcohol and cannabis use.
- Positive health behaviours were more likely in the younger subset aged 18-22 years and those reporting better mental health. This change was considerably greater than the BC population overall for people who reported exercising more for recreation (43% vs. 33%) or for commuting (12% vs. 8%), and consuming less alcohol (19% vs. 11%) or cannabis (6% vs. 2%).[27]

"Out of extreme boredom, I began drinking more alcohol than I would like, eating a lot more, and purchasing too many things online. Impulse spending and consumption like this has put me into a lot of debt and I usually never carry any debt (I have a 750 credit score). Not being able to go out to the gym and other activities that would normally fill my time has caused me to pick up some very bad habits that I am concerned will be difficult to break out of — especially debt."

– (BC SPEAK participant, 2020)

f) Social Connectedness

As for all of us, young adults' connections to their friends, romantic partners, family, and communities are all challenged by physical-distancing measures and other public health measures mandated to contain the spread of COVID-19. Opportunities to engage in face-to-face social contact outside their "households" are restricted.

This limits connections with community, but not necessarily with family and friends. However, these household structures are diverse, and how to apply the rules is often fraught with difficult decisions. Young adults' households may consist of single persons living alone, overcrowded apartments with roommates, communal housing related to occupations, young parents with children, or young adults living with their parents.

"Right now in Vancouver, there are a lot of parties, house parties, small gatherings, big gatherings. There are people who are just saying, we are just going to meet up. It is within our acceptable risk to do it. So, if they are living at home that's more complicated. Many worry about the risks of giving COVID to loved ones."

– (Leadbeater et al., 2020)[52]

Loneliness and relationship stress are predictors of and can compound difficulties for young adults experiencing mental health concerns, disabilities, or social isolation. New dating relationships and roles as new parents are challenging at the best of times, but as one young adult describes it: "these can feel like living in a pressure cooker in the pandemic."[52] Independence can be lost as youth and young adults move back in with their families. Alternatively, the decreases in daily stressors that accompany commuting to jobs and declines in the rush of daily life can make more time for friends and family life. Familiarity with and access to social media are expected to increase capacity for resilience and connections in this age group,[122] although excessive time online can be correlated with poor mental health.[123,124] Some young adults have found increased time for introspection and self-reflection helpful.[52]

INTERNATIONAL AND CANADIAN DATA

Canada-wide data suggest considerable diversity in young adults' experiences of isolation and loneliness. While media coverage views this age group as highly social, in reality nearly half (47%) of young adults aged 18-34 years described themselves as very isolated, based on a survey of 1,845 Canadians (including 522 young adults).[125] This rate is almost double that of the 27% of young adults who reported being very isolated in 2019. Loneliness also increased between 2019 and 2020 with 29% of 18-34-year-olds reporting being "very lonely" in 2019 compared to 34% in 2020.[125] An increase in the rate of being "very lonely" was observed among all age groups. In the 2020 survey, 72% of those aged 18-24 reported using social media or text to stay in touch "often/always", 39% reported using the phone, and 40% of young adults saw their friends weekly or more (compared to 29% of respondents ages 35-54 and 28% of those over 55).[125]

Research from the U.S. and China also echoes the finding that young adults are able to maintain connections to family and friends through social media and online activities. These connections eased loneliness for Italian and Belgian young adults.[126,127] However, the quality of these contacts may be limited and may underline paradoxical feelings of dissociation. As one young adult said, "I'm more independent in the way that I feel less connected to the world around me. People online don't make eye contact."[52]

BC DATA

In the BC SPEAK Survey (2020), young adults reported increases in connections with family (37% vs. 27% of the BC general population) and friends (20% vs. 16%) compared to before the pandemic.[27] Consistent with COVID-19 restrictions and job losses, fewer young adults reported a strong sense of belonging to their local community (50% vs. 64% of the BC general population).[27]

The Victoria Vital Signs survey (2020) also asked about the impact of COVID-19 on the lives of residents of Greater Victoria. Findings concurred with the BC SPEAK Survey: young people aged 30 years and under were more likely to report that COVID-19 improved spending time with family and loved ones (38%) compared to those aged 55 and older (18%).[37] However, fewer individuals under 30 compared to those over 30 years of age "strongly agreed" that they had opportunities to make a difference in their community (13% compared to 27%) and had a lower sense of belonging to their community (41% compared to 58% of those over 45). In addition, fewer young people aged 30 and under (36%) selected "never" than those 65 and older (57%) when asked how often they felt uncomfortable or out of place because of their religion, ethnicity, skin colour, culture, race, language, accent, disability, gender identity, and/or sexual orientation.[37]

SPECIAL POPULATIONS

While little data exist, social isolation and loneliness may be compounded by discrimination, poverty, and unwanted moves. Living arrangements changed for many of the 820 trans and non-binary Canadians surveyed by Trans PULSE Canada (September-October of 2020), including 7% who had to live with someone unsupportive of their gender.41 Also, 59% reported that their access to gender-diverse social spaces had decreased, and 57% were "extremely" or "very" concerned about the pandemic's impact on their ability to maintain social ties.[41] Qualitative research and a few empirical studies suggest greater concerns about social support for newcomers, young adults who have mental health problems or chronic disabilities, those who are new parents, or those who are LGBTQ2S+. U.S. studies examining the effects of COVID-19 isolation for LGBTQ2S+ young adults suggest the impact of returning to live with unsupportive families or in small or more conservative communities may be problematic for those who have found university campuses more accepting.[128] Young adults with mental health concerns also may suffer greater social isolation and loneliness.[79]

> *"Being together a lot can strengthen long-term relationships as you are dependent on that person, but it can become a pressure cooker. Even being together is almost like a pressure cooker. It is a lot on a new relationship being together. It is a way exaggerated amount of time together."*
>
> – (Leadbeater et al., 2020)[52]

KEY POINTS

- The majority of young adults report increased contact with families and friends. Familiarity with online contact and cooperative gaming helped some.
- Staying connected with or belonging to their communities has been difficult in the context of COVID-19 response measures.
- Lack of connections with professors and other students are impairing engagement and learning in education.
- Young adults who are stigmatized due to ethnicity, race, sexual orientation, and/or disabilities are experiencing greater loneliness and have less access to accepting spaces.

"Dating now, a big consideration for myself would just be if you don't live with family or don't see them regularly, I'm hesitant to meet new people and then go see members of my family who might be more at risk. So I think you have to be more intentional and more considerate about who you are seeing. It did change a lot, definitely more online based and different considerations."

– (Leadbeater et al., 2020)[52]

g) Access to Healthy Built Environments

At every age, opportunities for health and well-being are shaped by the physical spaces where we live, work, play, and learn. Accessibility to healthy built environments — whether pertaining to transportation, neighbourhood design, natural environments, housing, or food — has been rapidly disrupted by the COVID-19 pandemic, particularly for young adults.

Many young adults are concentrated in central, high-density areas of cities, driven in part by a desire for urban and car-free lifestyles.[129,130] Before the pandemic, employed young adults (18-29 years) in BC were twice as likely to rely on public transit to get to work than other commuters (22% vs. 11%, respectively).[131] Considered in conjunction with low rates of vehicle access and ownership,[132,133] the reliance of young people on transit means they are more vulnerable to mobility impacts stemming from COVID-19-related reductions in service and safety concerns.[134–136] Importantly, young adults in BC are historically more likely to walk or bike to work (12% vs. 9% of commuters in other age groups)[131] and are frequent users of public bike-share programs.[137] These active transport behaviours may serve as a source of resiliency during (and beyond) pandemic restrictions.

> *"I'm certain I will have the finances for food and shelter, but less certain about the availability of food at the stores, or the safety of going to those stores. I've started a garden to try and help, which I feel is a positive thing to do regardless of the current situation."*
>
> – (BC SPEAK participant, 2020)

Other sources of marginalizing experiences for young adults stem from housing and living arrangements. Large proportions of young adults aged 20-34 years live with their parents (35%) or their own families (42%), while nearly one quarter (23%) live alone, with room-mates, or with other relatives.[138] Young adults aged 25-34 years represent the largest share (26%) of renters in BC.[139] Compared to homeowners, renters are less likely to report satisfaction with their housing environment, including adequacy of space.[83] Further, most (46%) young adults aged 18-29 years in BC live in multi-unit apartment buildings,[140] which pose challenges for social distancing given the number of residents, lack of outdoor space, and many common areas such as foyers, elevators, and laundry.[141] Stay-at-home regulations and the closure of schools and social amenities have resulted in many young adults being confined to live, work, and study in small spaces with limited access to private outdoor space.

Young adults are also likely to be disproportionately impacted by the closure of or restrictions on recreation facilities, fitness studios, parks, restaurants and cafes, and arts and cultural centres — spaces that are important to the facilitation of physical activity, social cohesion, and support.[142] Prior to the pandemic, young adults in Canada enjoyed relatively high levels of social and cultural engagement; 69% (aged 15-24 years) were members of a group, organization, or association, and 42% (aged 20-34 years) did volunteer work.[143] The social participation and mobility of young adults are further disrupted by the cancellation of in-person learning at post-secondary institutions, resulting in the forced relocation of students to their family homes or other locations.

INTERNATIONAL AND CANADIAN DATA

Transportation

The COVID-19 pandemic has had dramatic effects on transportation worldwide.[144] Evidence specific to the mobility of young adults remains limited. An analysis of transit demand across the U.S. found disproportionate drops in transit use among young people under 18, and 25-44 years of age.[145] Similarly, results from a smartphone-based study in Switzerland found that the distances travelled by participants aged 18-25 years have dropped as much as 60% from pre-pandemic levels, and 73% among those 25-35 years old — the largest of any age group.[146]

Substantial declines in transportation are also evident in Canada.[147] As of June 2020, the percentage of Canadians (15 years and older) commuting to work or school by transit had dropped from 16% before the pandemic to 4%, while

commuting by private vehicle had declined from 68% to 52%.[147] Declines in walking and biking for commuting were minimal, consistent with relatively stable rates of active transportation observed in cities internationally, despite decreases in overall mobility.[147,148] There is no data on age-specific declines in the commuting behaviours of Canadians during the pandemic. However, only 17% of workers aged 15-34 years had switched to telework in June 2020 compared to the national average of 22%.[149] Transit, therefore, remains an essential service for young workers, particularly those who are financially vulnerable or may not have the option to work remotely during the pandemic.[150]

As economies reopen, global experts have raised concern about the danger of large declines in transit use translating to increased car dependency, and the related risks for population health, equity, and climate change,[144,151] which will have greater impacts on younger generations. While recent analysis shows that younger Canadians (15-24 years of age) were 2.6 times more likely to change commute mode due to COVID-19 risk,[147] age-specific data on the mode of travel adopted is not reported. Among all ages of pre-COVID-19 transit users in Canada who were still commuting to work or school in June 2020, most continued to use transit (46%), while a larger proportion shifted to using personal motor vehicles than active modes (33% vs. 16%, respectively).[147]

Neighbourhood design

Pandemic measures to contain the spread of COVID-19 have significantly disrupted the daily routines of young adults, who are more socially active and dependent on public spaces for socializing and recreation.[143,152] Studies conducted globally have linked pandemic-related restrictions — including social distancing and limited access to public spaces — to declines in the psychological well-being and quality of life of young adults.[152–154] Beyond consequences for health and well-being, prolonged absences from public spaces during the pandemic have the potential to deteriorate young peoples' sense of attachment with places such as parks and public squares that are an important source of cultural and life experiences for this population.[155]

Young adults tend to be concentrated in dense and compact urban neighbourhoods that may have insufficient public space to safely accommodate outdoor recreational and social activities during the pandemic. Cities worldwide, including local governments in BC, moved swiftly with temporary street rebalancing measures to increase the amount of public space available for walking, biking, recreational and social activities, and commerce.[156–160] The extent to which young adults are figuring into the design, implementation, and benefits of street reallocation programs is unclear.

Natural environments

Data on park use among young adults are not available, but the importance of access to parks and green spaces during the pandemic is evident. Access to natural environments can facilitate multiple positive impacts on population health, including decreased chronic disease and stress, and improved mental health, physical activity, and social well-being.[161] Park closures introduced by cities in the early stages of the pandemic (including green spaces and amenities such as playgrounds, sports fields, and picnic areas) were likely felt more acutely among those in urban areas without access to private green space, including younger people.[162] When restrictions on parks eased, visits surged as people sought space to safely exercise and socialize outdoors.[163] In a national survey conducted in June 2020, close to two thirds of Canadians reported visiting parks at least several times a week, and 82% said that parks had become important to their mental health during the pandemic.[164]

While age-specific evidence remains limited, emerging international research is demonstrating the benefits of exposure to parks and green space on well-being during the COVID-19 pandemic.[165–167] A large survey involving 6,895 respondents (all ages) across 77 countries found that contact with nature helped to buffer against the negative impacts of pandemic restrictions on mental health.[168] In one European study involving university students (n = 323), greenery experienced both indoors and outdoors supported mental health during pandemic restrictions.[166]

Housing

The design and quality of our housing environments are important in the context of the COVID-19 pandemic, given the increased time spent at home. In a survey of UK adults aged 18-65 years,[169] younger people were less likely to report having access to adequate space at home during pandemic lockdown.[169] In addition, 21% of respondents aged 25-34 years and 16% aged 18-24 years reported lack of access

to a garden, balcony, or terrace, compared to an average of 10% across older age groups. This study also found that 10% of young people were living in households where they felt unable to continue regular day-to-day activities due to limited space and privacy, including concentrating on studying or work, socializing, or accessing remote support such as medical appointments.[169]

Food environments

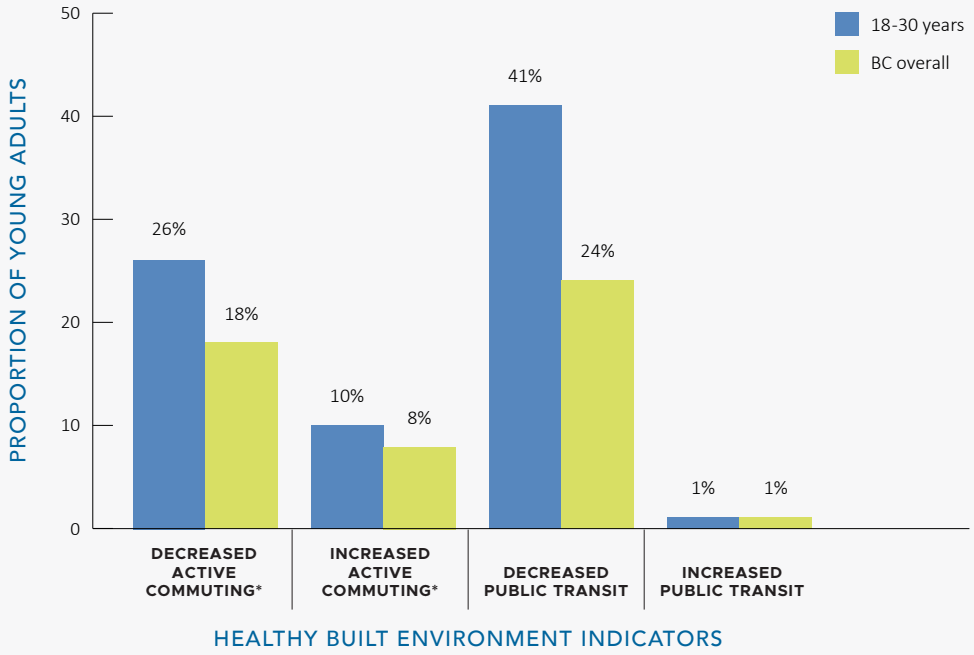
The COVID-19 pandemic has impacted food environments and food security in Canada due to job losses, supply chain disruptions, restrictions on dine-in service at restaurants and food retailers, and increasing food prices.[170] In Canada, levels of household food insecurity reported during the pandemic are higher among young adults aged 15-34 years compared to other age groups.[171] Insight into barriers to food access specific to young adults is limited. An inter-provincial survey on food access of Canadians (18 years and older, ***n*** = 4,928), conducted between April and August 2020, revealed that while most consumers have not found it difficult to access food during the pandemic, many are worried about being infected with COVID-19 while shopping in grocery stores.[170] In Alberta and Ontario, for example, anxiety about going out to purchase food was the biggest limiting factor (28%), followed by lack of income or food being too expensive (21% of Alberta respondents; 18% of Ontario respondents).[170] Physical barriers such as lack of transport, scarcity, or self-isolation were also reported.

To build a more equitable and resilient food system during the COVID-19 pandemic and beyond, research points to the importance of income-based solutions to address food insecurity, clear risk-communication strategies to address pandemic fears, and the strengthening of local and regional food systems.[161,170] For example, infrastructure support for local producers and space and training for residents to grow their own food would improve capacity of the local food system while mitigating other barriers to food access, such as lack of transportation.

FIGURE 6

Indicators of Access to Healthy Built Environments

Source: BC COVID-19 SPEAK Survey. Prepared by BC Centre for Disease Control. 2020



*By walking, running, or cycling

BC DATA

Consistent with global and Canadian data, BC is seeing unprecedented shifts in transportation behaviours due to COVID-19. In the BC SPEAK Survey, 41% of young adults (18-30 years of age) reported decreased use of public transit (see Figure 6).[27] An assessment of travel impacts of COVID-19 in the Kelowna region between March and May 2020 found that younger adults (under 35 years) accounted for the highest share (42%) of individuals who reported stopping travel for recreation and social activities.[172]

There is some indication that young adults in BC are shifting towards active modes of transport during the pandemic. Results from the BC SPEAK Survey found that 10% of young adults aged 18-30 years reported increases in active transportation (walking, biking, or running to work).[27] Further, in a May 2020 survey of 2,327 frequent transit users living in Vancouver, young adults who used to commute by transit were most likely to switch to active modes (23%), whereas respondents in their 50s and early 60s were most likely to switch to driving (28%).[173] In comparison, 19% of young adults surveyed switched to commuting by car. While media reports have suggested a trend towards Millennials purchasing cars as a means of personal protection from the virus,[174,175] in this survey just 2% of Vancouverites (across all age groups) reported buying a vehicle during the crisis.[173] Among those who are still taking transit in Vancouver, the most important destinations and activities reported among young adults were getting groceries (40%), followed by health care, pharmacy, and work[173] — again pointing to transit as an essential support for young adults during the pandemic, particularly those who do not own or have access to a car. Data are lacking on whether the shifting transportation behaviours of young adults in BC during the pandemic are influenced by socioeconomic factors, service changes, fear over contracting the virus, or other factors. As one twenty-something stated, without transit "I would need to go to the grocery store more often (because I can carry less on my bike)."[173]

Concerning access to natural environments, in Victoria those aged 30 years and under were less likely to rate their access to green spaces and parks as "good" or "excellent" (70%) compared to those aged 45 years and older (83%).[37]

With respect to housing environments of young adults during the pandemic, BC-specific data on risks and impacts are limited. Many young adults in BC are co-housed and living in multi-unit apartment buildings, where the ability to self-isolate and access adequate indoor and outdoor space is challenging. Safety at home may also be a concern. In a survey of Victoria residents conducted during the pandemic, young adults (30 years and under) were less likely than older adults (65 years and older) to rate the degree to which they feel safe in their home as "good" or "excellent" (78% vs. 91%, respectively).[37] To decrease the risk of disease transmission in multi-unit dwellings, it is recommended that building managers use a combination of risk mitigation and communication, health promotion, and heightened sanitary measures.[141]

A recent survey on food access in BC revealed that most young adults (19-29 years) felt it was relatively easy to access food.[170] Among those who reported challenges accessing food (*n* = 112), 55% reported physical barriers (e.g., self-isolation, lack of transportation, store closures), 32% reported food scarcity, and 30% reported financial barriers (e.g., limited income, high food price). Pandemic anxiety was less of a concern for young adults than older adults.[170]

> *"My physical activity is non-existent because my apartment is too small and I live right beside a popular park that is always packed with people not following social distancing rules."*
>
> – (BC SPEAK participant, 2020)

> *"Living alone has meant that walks and outside visits are the only social contact I have had for 4 months. I would have been a mess without access to parks, ravines, trails, the waterfront, etc."*[164]

SPECIAL POPULATIONS

Across all age groups, limited research is available on the role of the built environment for Indigenous populations, people living in poverty, the homeless, people with a disability, and people who identify as gender diverse (LGBTQ2S+).[176] The pandemic has the potential to exacerbate pre-existing inequities in accessibility to healthy built environments for marginalized populations, who may be more reliant on transit or live in communities that lack access to active transportation infrastructure, high-quality and safe green spaces, adequate housing, and affordable, culturally appropriate food options. For those living in under-invested areas, coping under pandemic restrictions is all the more challenging.

Personal safety in public spaces such as transit and green spaces are also a primary concern for young adults during the COVID-19 pandemic, particularly for women, Indigenous people, racialized groups, and people who identify as LGBTQ2S+. Even before the pandemic, people encountered barriers to safety in public spaces based on their race, gender, income, or ability. With fewer people riding transit and spending time in public spaces due to the pandemic, safety concerns may be heightened. Engaging marginalized residents in mobility and public life initiatives, including temporary measures during the pandemic, is essential to creating built environments that are equitable and inclusive.

> *"The increased encounters of racism against Asian people have scared me from taking transit. I don't think I will take transit again until there are more people on the SkyTrain/buses."*[173]

KEY POINTS

- While fewer young adults in BC are using transit during the pandemic, available evidence suggests they are shifting towards active modes of transport. Young adults are less likely to be working from home, less likely to own a car, and more likely to continue to rely on transit for groceries and other necessities.
- Pandemic measures to contain the spread of COVID-19 have significantly disrupted the daily routines of young adults, who are more socially active and dependent on public spaces for socializing and recreation.
- Park closures and restrictions are likely felt more acutely among those in urban areas without access to private green space, including younger people. Access to natural environments is playing an important role in helping people of all ages cope during pandemic restrictions.
- Many young adults in BC are co-housed and living in multi-unit apartment buildings, where the ability to self-isolate and access adequate indoor and outdoor space is challenging.
- Most young adults in BC report no difficulties with accessing food. Those experiencing difficulties in food access are less deterred by pandemic risk and more limited by physical barriers such as self-isolation, lack of transportation, and store closures.

h) The Impact of the COVID-19 Pandemic on the Voices of Young People in Responses to the Pandemic

In 2020, lack of youth and young adult voices has also been a challenge in areas informing policy, public health messaging, and research. The United Nations Convention on the Rights of the Child mandates that every young person should have a say about what affects them, in or out of school, as well as freedom of expression and association, and the right to information.[177]

Emerging research highlights that Canadian young adults aged 18-30 years have felt left out of conversation about the development of policies that directly impact them, often perceiving their age demographic as "villainized" or contributing to the underlying problem of community spread of COVID-19.[52,178] As noted in previous sections, the COVID-19 pandemic is having notable consequences for young peoples' mental health and well-being, as well as economic, education, and social opportunities.[52,92] In the BC SPEAK Survey, people were asked what had changed for the worse since the COVID-19 pandemic. Young people aged 18-30 years described their experience and the impact the COVID-19 pandemic had on many aspects of their lives:

> *"I fear the media does not understand the impact everything is having on peoples' mental health and I don't think the government has done enough to provide resources to help those in need (mental health wise). They need to pause and take a look at the faces of the country and understand that some of the things they are saying are causing great fear or depression and understand that some people are stranded alone in isolation due to this. We are going to need an army of mental health workers to get through this."*
>
> – (BC SPEAK participant, 2020)

Recent op-eds highlight that young people do not feel that there have been strong efforts to communicate in ways that resonate with them. According to Barbic (2020):

> *"The challenge with supporting young people during the pandemic lies not in a lack of services, funding, or creativity, but rather a lack of youth engagement in deciding how messages and public health initiatives are designed, delivered, and evaluated."*[179]

Targeting innovative public health messages towards communication channels that young adults use, and in ways that resonate with them, is key for buy-in and effectiveness. Twitter, Facebook, and YouTube are ways in which COVID-19 information is communicated, but in an ongoing study funded by the BC SUPPORT Unit, Dr. Ben-David and colleagues found that platforms such as TikTok and Discord are where young people are seeking information and sharing their perspectives.[180] In a blog post from this study, one young adult Research Assistant notes that "for research purposes TikTok can be a very useful tool….TikTok's base is largely made up of youth and young adults with 40% of users between the ages of 16 and 24.[181] Hodson (2020) notes:

> *"In addition to going to the platforms most frequented by young people online, public health communicators must also spend time understanding the needs of their audience. They need to listen to young peoples' frustrations, fears and concerns. Then they must speak to young people like human beings, rather than scolding them or speaking as a parent or teacher would to a child."*[182]

Recent research from Portugal titled "Hey, we also have something to say" is one of few studies that demonstrates that young people can and should contribute to the COVID-19 public health planning and responses.[183] In Canada, a Canadian Institutes of Health Research (CIHR)-funded study by Hawke and colleagues (2021) is engaging young people aged 16-24 years in a longitudinal qualitative study to understand the needs and priorities of young adults in BC, Ontario, and Ireland over one year. Across all three countries, participants report being "relieved," "thankful," and "grateful" for "finally being asked about how the pandemic is impacting me."[184] One BC young adult said:

"When people fall through the cracks, especially young people, they always come back looking for you...this time no one came back to look in the cracks, we are forgotten."[184]

"PARTICIPATING IN ANYTHING MEANINGFUL"

In the BC SPEAK Survey, young people described the wide range of ways in which their participation in meaningful activity has been impacted in three main areas: productivity (e.g., work, study, caregiving, parenting), social relationships (e.g., going to parties, being with friends, dating, family planning, weddings), and leisure (e.g., going to the gym, travelling).[27] Younger participants (<22 years) in the study emphasized the impact of this on educational/training milestones and social life, while older participants (>22 years) emphasized the way in which the pandemic was posing risk to career milestones, life balance (including parenting), and financial security.[27]

"I hate not seeing my friends […] I hate not working […] I hate the fact I can't go to a restaurant to eat or a coffee shop to sit and have coffee […] I hate the fact this virus took away dating for me […] I hate that it has affected my hobbies such as gym use and going to whitecap games and going to concerts. This virus is awful and has affected me financially and mentally I can't sleep well at night and all I think about is when things are going to be normal again. I hate the fact I can't travel and had to cancel my cruise booked for the May long weekend. This has been the worst year of my life. Thanks covid!"

– (BC SPEAK participant, 2020)

CONTRADICTIONS AND "RULE BREAKERS"

Young people in the Hawke et al. (2021) study discussed frustrations with contradictions and changing COVID-19 restrictions — in what was said and what is actually happening.

"You know, I mean they say I can go to school, I don't have to wear my mask, it is normal. But the minute I step out that door, I can't see my friends, I have to go home, and I am trapped."
– (Hawke et. al., 2021)[184]

They also talked about their frustrations with citizens (and sometimes their own friends) who were breaking the rules or were perceived to be above the law or restrictions. Scapegoated by the press as COVID-19 spreaders, figuring out how the restrictions applied to themselves and to their peers and loved ones created many questions about what was doing the right thing.

"I feel like I am working so hard to be good, but I am being scapegoated. It is so frustrating...One person says shop local, buy local...but I can't go out with my friends. It is like you are free, but you really are on full life lockdown."

– (Hawke et. al., 2021)[184]

"THERE IS ONLY A CERTAIN AMOUNT OF SOCIAL MEDIA YOU CAN TAKE"

Research in this area has been contradictory. In the Hawke et al. (2021) study, social media was viewed as both a "lifeline" and a "burden I just don't know how to get away from."[184]

Research from BC suggests that social media has been used positively to amplify young adults' voices during COVID-19. Foundry's use of social media to support BC young adults and their families/caregivers has three goals, including the following:

1. Amplifying and translating key messages released by public health and government
2. Developing content that supports the needs of young people and their families
3. Developing and hosting opportunities through social media and website articles to engage young people and their families/caregivers by creating a sense of community and promoting togetherness and social connection during the COVID-19 pandemic[185]

Other studies[186,187] found that social media offers useful tools to support an emergency response for young adults[185] and can offer evidence-based information delivered in a friendly, accessible format[188] and reduce the spread of misinformation.[189] The role of social media in supporting the voices of young people and its increasing usability is being

recognized and applied,[185] especially when delivering health promotion messages to large, geographic areas when in-person initiatives are not feasible or possible.[190]

However, research by Hawke and colleagues also found many youth who spoke about the negative impacts of social media.[184] Many described that they were "addicted" and using social media "from sheer ultimate boredom." One youth said "there is only so much social media you can do."[184] In BC, several youth participants described online "zoom relationships" as exhausting and forced. One youth said:

> *"You can't always complain about the same things, it is all we talk about, but we don't hang up, we just keep talking about not being heard, not ever being able to be together, and trying to make these new relationships real. You cannot have new relationships, you can only just try and maintain what you got [sic]."*
> – (Hawke et. al., 2021)[184]

Another describes his feelings of dissociation and not making eye contact in online conversations.

> *"For me, I'm more independent, in the way I feel less connected to the world around me. I can work on more of my own stuff, like working out or meditating, but I believe I'm with people a lot less. Even with this group of people I'm talking to all of you but it feels like I'm really just talking to screen. I'm talking to you people, I'm not making eye contact with people. You don't get that same connection as when you are in the same room with people, and I feel that is something I'm missing out [on]."*
>
> – (Leadbeater et al., 2020)52

"IF YOU DON'T ENGAGE US, THINGS WON'T CHANGE — IT IS GOING TO BE UGLY FOR A LONG TIME"

Before the pandemic, a training protocol for researchers studying young people called INNOVATE, identified best-practice suggestions for engaging young people in research including: 1) capacity-building to enhance the capacity of researchers to engage youth in research, and 2) the need to establish a network of youth-engaged researchers to provide ongoing, sustainable youth input.[191,192] An example is the University of British Columbia's Faculty of Medicine's Youth Research Advisory Panel (YRAP) that informs COVID-19 research and planning for projects related to young people.[193] The panel consists of ten diverse youth members, with a youth lead. Although the measure of their impact has yet to be published, interest and participation of young people across the province is high, confirming that they want to be actively engaged in research and policy decisions. In a preliminary evaluation of the YRAP, one research team member noted the needs for systemic changes to embed youth involvement in the long-term, that operates across sectors and diverse populations.

> *"It is not about getting young people to the table, it is about building the table for young people to be able to co-design solutions to problems that directly impact young people."*[178]
>
> *"Young peoples' needs have to be considered in an intersectional matter that centres youth voice, equity, diversity, and the need for the future generation to be empowered."*[178]

It is imperative that young adults are engaged to inform the COVID-19 response for young people and to counteract the unequal impacts of COVID-19 restrictions. Prospective action is needed to avert these effects with the expertise of those who are experiencing the costs.

> *"Let us not wait for adolescents and young adults to protest for their voices to be heard. Let us proactively acknowledge the impact the current changes are having on young people today and include their voices when assembling stakeholders in strategic plans for restructuring policies, systems, workflows, and communities affected by COVID-19. As we look back on 2020, we may see many things that went wrong, but let us also see this as the time of opportunity, when youth engagement took center stage."*[194]

Community support and engagement is fundamental to recovery from disasters and pandemics. Surveys like BC SPEAK show that, instead of feeling more engaged by their communities during the pandemic, young adults feel a decreased sense of belonging to their communities.[27] Tapping the strengths and ideas of young adults is overdue. The use of small-scale community-engagement approaches to support contextually specific, acceptable and appropriate COVID-19 recovery measures will improve their relevance to and adoption by young people.

KEY POINTS

- Young adult voices are hidden by stereotypes that consider them all well, highly social, or irresponsible. Their input into a more nuanced experience of this important time of life is badly needed to ensure that there will not be a large generation of young adults who bear the weight of COVID-19 infections and restrictions well into their futures and ours.
- Systemic, cross-sector approaches are needed to engage young adults' input into needed responses (i.e., beyond one-off focus groups).
- Young adults across BC have seen major disruptions to education, economic, health, and relationship outcomes yet have had few opportunities to be part of the response to these concerns.

BCCDC Young Adult Task Force – Data Review

Do you have a project collecting quantitative or qualitative data on young adults in British Columbia aged 18 to 30 years? If yes, please complete the table below. Your work may be featured in the BCCDC Young Adult Task Force report on the health and well-being of young adults in British Columbia in the context of the COVID-19 pandemic.

Personal Impacts of Coronavirus Survey (PICS)

MAIN RESEARCH QUESTIONS/TOPIC

What are the mental health impacts of the pandemic on children, youth, families and adults?

CONTACT

Hasina Samji/Evelyn Stewart
Co-PIs
hsamji@sfu.ca

DETAILS

Project Dates: Nov 2020-ongoing
Sample Size: ~2,300
Type: Quantitative

DEMOGRAPHIC

Age Groups: Whole population
Sample Demographics: Men/women/children in Canada

PRELIMINARY RESULTS

Not yet available

Youth Mental Health and Substance Use in the Context of COVID-19: A Rapid Response Multi-Component Program of Youth-Engaged Research and Action

CONTACT

Skye Barbic/Joanna Henderson
Co-PI
skye.barbic@ubc.ca

DETAILS

Project Dates: July 2020-Aug 2021
Sample Size: 150
Type: Qualitative

DEMOGRAPHIC

Age Groups: 18-24
Sample Demographics: Clinical and non-clinical

Supporting Youth 12-24 During the COVID-19 Pandemic: How Foundry is Mobilizing to Provide Information, Resources and Hope Across the Province of British Columbia

CONTACT

Skye Barbic/Steve Mathias
PI
skye.barbic@ubc.ca

DETAILS

Project Dates: Apr 2020-Dec 2020
Type: Descriptive

Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-Being: A Rapid Survey of Clinical and Community Samples

MAIN RESEARCH QUESTIONS/TOPIC

This study examines youth mental health and substance use during the pandemic period.

CONTACT

Skye Barbic/Lisa Hawke

Co-I

lisa.hawke@camh.ca

DETAILS

Project Dates: Apr 2020-Aug 2020

Sample Size: 622

Type: Quantitative

DEMOGRAPHIC

Age Groups: 12-24

PRELIMINARY RESULTS

Yes. Click to view.

Tracking the Prevalence and Incidence of Modifiable Suicide Risk Factors During the COVID-19 Pandemic to Inform Targeted Suicide Prevention in British Columbia

MAIN RESEARCH QUESTIONS/TOPIC

We examined mental health indicators in Canadian adults aged 17+, with a focus on modifiable suicide risk factors (e.g., suicidal thoughts, depressed mood, substance use, poor sleep, hopelessness, isolation/loneliness).

CONTACT

Brianna Turner/Theone Paterson

PIs

briannat@uvic.ca
tpaterson@uvic.ca

DETAILS

Project Dates: Sept 2020-Aug 2021

Sample Size: n = 330 under 35 in BC; n = 6,652 total survey sample

Type: Quantitative

DEMOGRAPHIC

Age Groups: 17+

Sample Demographics: General population, Canada-wide

PRELIMINARY RESULTS

Yes. Click to view.

The Role of Self-Regulatory Competencies in Mediating the Impact of COVID-19 Distress on Academic Success

MAIN RESEARCH QUESTIONS/TOPIC

The purpose of this study is to examine the mediational role that self-regulatory competencies play in buffering the influence of COVID-related distress and languishing mental health on academic performance. We will do this by comparing three types of support delivered to students.

CONTACT

Allyson Hadwin/
Paweena Sukhwathanakul

Co-PI

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hadwin@uvic.ca

DETAILS

Project Dates: Sept 2020-Aug 2021

Sample Size: 450

Type: Quantitative

DEMOGRAPHIC

Age Groups: 18-30

Sample Demographics: Young adult population

PRELIMINARY RESULTS

Not yet available

Understanding the Perceptions and Attitudes of Young Adults of the Coronavirus Pandemic

MAIN RESEARCH QUESTIONS/TOPIC

The aims of this investigation are to: 1. Conduct focus groups in young adults to understand their perceptions and attitudes to best inform public health messaging, and 2. Test different potential messages in young adults.

CONTACT

Scott Lear

PI

SLear@providencehealth.bc.ca

DETAILS

Project Dates: Oct 2020- Apr 2021

Sample Size: 80

Type: Qualitative

DEMOGRAPHIC

Age Groups: 18-40

Sample Demographics: BC young adult population (resided in BC since March 1, 2020)

PRELIMINARY RESULTS

Summary of results for aim 1

Student Isolation Resulting from COVID-19: Research Project to Support Student Mental Health and Building Resiliency

MAIN RESEARCH QUESTIONS/TOPIC

What is the student experience of a pandemic? There is limited research in this area that captures student voices. This study also addresses the gap and contributes to the process of creating safeguards for this population in the future.

CONTACT

Jillian Roberts/Shailoo Bedi

PI/Co-PI/research assistants

jjroberts@uvic.ca (primary contact)
shailoo@uvic.ca

DETAILS

Project Dates: Sept 2020-Dec 2021

Sample Size: 24

Type: Qualitative

DEMOGRAPHIC

Age Groups: 18-24

Sample Demographics: Self-identified LGBTQAI+, racialized minorities, Indigenous

PRELIMINARY RESULTS

Draft findings based on pilot study have been written up. For more information, please contact Dr. Jillian Roberts.

COVID-19 and Anti-Asian Racism: Anti-Racism and Mental Health Resource for Youth

MAIN RESEARCH QUESTIONS/TOPIC

Development of a mental health promotion and anti-racism resource (zine) for Asian youth

CONTACT

Fred Chou/Jin-Sun Yoon/
Macayla Yan/Qwisun Yoon

PI/Co-PI/research assistants

fchou@uvic.ca

DETAILS

Project Dates: Apr 2020-Nov 2020

Sample Size: N/A

Type: N/A – Resource Development

DEMOGRAPHIC

Age Groups: N/A

Sample Demographics: Asian youth

PRELIMINARY RESULTS

Resource can be found here.

Par-IT: Promoting Adaptive Regulation with Innovative Technologies

MAIN RESEARCH QUESTIONS/TOPIC

Examining the socio-emotional, motivational, behavioural, metacognitive and cognitive challenges students experience over a semester while learning online during COVID-19 (includes MHWB scales)

CONTACT

Hadwin
PI
hadwin@uvic.ca

DETAILS

Project Dates: Ongoing

Sample Size: ~200

Type: Quantitative

DEMOGRAPHIC

Age Groups: 18-22

Sample Demographics: BC undergraduate students (primarily first year)

PRELIMINARY RESULTS

Summer

Investigating Academic, Social, and Emotional Self-Efficacy as Predictors of Academic Success and Well-Being in Online Learning

MAIN RESEARCH QUESTIONS/TOPIC

Investigating students' academic, social, and emotional self-efficacy beliefs as predictors of academic success and well-being in online learning settings

CONTACT

Sungjun Won
PI
swon@uvic.ca

DETAILS

Project Dates: Ongoing

Sample Size: ~320

Type: Quantitative

DEMOGRAPHIC

Age Groups: 18-22

Sample Demographics: BC undergraduate students (primarily first year)

PRELIMINARY RESULTS

Not yet

COVID-19 and Mental Health: A National Monitoring Study

MAIN RESEARCH QUESTIONS/TOPIC

Examining the mental health impacts of the COVID-19 pandemic in Canada, with a focus on whose mental health is most impacted. Highlighting widening mental health inequities among population subgroups.

CONTACT

Emily Jenkins/Anne Gadermann

Co-PIs

emily.jenkins@ubc.ca
anne.gadermann@ubc.ca

DETAILS

Project Dates: Apr 2020-ongoing

Sample Size: ~3,000/wave; wave 3 underway

Type: Quantitative

DEMOGRAPHIC

Age Groups: 18+, parent perspectives on children's mental health

Sample Demographics: General population, Canada-wide

PRELIMINARY RESULTS

Gadermann, A., Thomson, K., Richardson, C., Gagne, M., McAuliffe, C., Hirani, S., Morris, J., & Jenkins, E.* (Accepted, December 2020). Examining the impacts of the COVID-19 pandemic on family mental health in Canada. BMJ Open.

Richardson, C., Slemon, A., McAuliffe, C., Salway, T., David, A., Jenkins, E. (Accepted, December 2020). Use of virtual mental health resources for COVID-19 related stress among the general population in Canada: Findings from a nationally representative cross-sectional survey. Journal of Medical Internet Research. DOI: 10.2196/24868

Daly, Z., Slemon, A., Richardson, C., Salway, T., McAuliffe, C., Gadermann, A., Thomson, K., Hirani, S., Jenkins, E.* (Accepted, December 2020). Associations between periods of COVID-19 quarantine and mental health in Canada. Psychiatry Research.

Jenkins, E., McAuliffe, C., Hirani, S., Richardson, C., Thomson, K., Kousoulis, A., Morris, J., & Gadermann, A. (Accepted, November 2020). A portrait of the early and differential mental health impacts of the COVID-19 pandemic in Canada: Findings from the first wave of a nationally representative cross-sectional survey. Preventative Medicine.

FOCUS: France-Canada Observatory on COVID-19, Youth Health and Social Well-Being

MAIN RESEARCH QUESTIONS/TOPIC

1. Measure and monitor trends in the determinants of sexual health, substance use, and mental health-related outcomes among youth in Canada and France in the context of COVID-19.

2. Describe evolving COVID-19-related measures and structural adaptations influencing social and health outcomes among socially disadvantaged groups of youth in Canada and France.

CONTACT

Rod Knight/Pj Coulaud

PI/Director

rod.knight@bccsu.ubc.ca

pierre-julien.coulaud@bccsu.ubc.ca

DETAILS

Project Dates: June 2020-June 2021

Sample Size: 8,424 (4,287 in Canada, 853 in BC)

Type: Quantitative/Qualitative

DEMOGRAPHIC

Age Groups: 18/19-29

Sample Demographics: Young adults

MAIN RESEARCH QUESTIONS/TOPIC

Ongoing data analysis for the quantitative online survey (wave 1). Qualitative interviews: Feb-Mar 2021.

Correlates of Perceived Physical Activity Transitions During the COVID-19 Pandemic Among Canadian Adults

MAIN RESEARCH QUESTIONS/TOPIC

How did physical activity change during the early lockdown? What factors predict that change?

CONTACT

R. Rhodes, Liu, S., Lithopoulos, A., Zhang, C.Q., Garcia-Barrera, M.A.

PI

rhodes@uvic.ca

DETAILS

Project Dates: May 2020

Sample Size: 1,058

Type: Quantitative

DEMOGRAPHIC

Age Groups: 18+

Sample Demographics: General population, Canada-wide

PRELIMINARY RESULTS

Applied Psychology: Health and Well-Being, 12(4), 1157-1182.

Impact of COVID-19 Survey-Faculty of Health Sciences Graduate Caucus

MAIN RESEARCH QUESTIONS/TOPIC

This survey aims to assess the impacts the pandemic is having on students' personal and academic lives.

CONTACT

Amilya Ladak/ Genevieve White/ Amanda Rowlands

amilya_ladak@sfu.ca

DETAILS

Project Dates: Sept 11-Sept 27, 2020

Sample Size: 24

Type: Qualitative

DEMOGRAPHIC

Sample Demographics: SFU FHS graduate students

PRELIMINARY RESULTS

Yes. Click to view.

Impacts of COVID-19 on Trainees Engaged in Women's Health Research in BC

MAIN RESEARCH QUESTIONS/TOPIC

Impacts of COVID-19 on trainees engaged in women's health research in BC across academic, research, professional, and personal domains

CONTACT

Angela Kaida (SFU, WHRI)

PI

kangela@sfu.ca

DETAILS

Project Dates: May 6-June 30, 2020 (data collection)

Sample Size: 119

Type: Quantitative

DEMOGRAPHIC

Age Groups: Trainees (median age 29 years)

Sample Demographics: Trainees engaged in women's health research in BC

PRELIMINARY RESULTS

Yes. Click to view.

Interventions, Action, and Research in Cities Team (INTERACT)

MAIN RESEARCH QUESTIONS/TOPIC

How do changes to the built environment impact physical activity, well-being, and social connectedness? How has COVID-19 modified access/use of built environment and associated health outcomes?

CONTACT

Meghan Winters (SFU)

Co-PI

mwinters@sfu.ca

DETAILS

Project Dates: Aug-Dec 2020 (wave 2 cohort; wave 1 pre-COVID-19)

Sample Size: 1,500 (4 cities: Victoria, Vancouver, Saskatoon, Montreal)

Type: Quantitative/Qualitative

DEMOGRAPHIC

Age Groups: Adults 18+

COHESION

MAIN RESEARCH QUESTIONS/TOPIC

(https://cohesionstudy.ca/) Understand how daily activities, social interactions, and the mental health of Canadians are being affected throughout, and following, the pandemic.

CONTACT

Meghan Winters (SFU)

Collaborator

mwinters@sfu.ca

DETAILS

Project Dates: May 2020- ongoing

Sample Size: 1,200 (national sample)

Type: Quantitative

DEMOGRAPHIC

Age Groups: 15+ years

Learning to Teach Nature-Based Physical Activities for Physically Distanced Times in an Online Format

MAIN RESEARCH QUESTIONS/TOPIC

How to adjust learning strategies for outdoor activities in online formats

CONTACT

Sandra Gibbons/Jenn Gruno

Co-PI

sgibbons@uvic.ca

DETAILS

Project Dates: Sept 2020-May 2021

Sample Size: 40

Type: Qualitative

DEMOGRAPHIC

Age Groups: 23-30 years

Sample Demographics: Preservice elementary teachers

Food Access, Concerns and Perceptions During COVID-19 First Wave BC

MAIN RESEARCH QUESTIONS/TOPIC

How have food access behaviors and concerns changed during the pandemic? What were the perceptions on the global and regional food systems as a result of the pandemic?

CONTACT

Wallapak Polasub (KPU)
Co-PI
wallapak.polasub@kpu.ca

DETAILS

Project Dates: Apr 2020-Dec 2020

Sample Size: 179

Type: Quantitative/Qualitative

DEMOGRAPHIC

Age Groups: 19-29 years

Sample Demographics: BC residents

PRELIMINARY RESULTS

Yes. Click to view.

The SPRING Study – Severe Acute Respiratory Syndrome-Related Coronavirus 2 Prevalence in Children and Young Adults in British Columbia: An Observational Study

MAIN RESEARCH QUESTIONS/TOPIC

What is the age- and sex-specific seroprevalence of SARS-CoV-2 in children and young adults in BC?

CONTACT

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DETAILS

Project Dates: Nov 2020- ongoing

Sample Size: ~16,000

Type: Quantitative

DEMOGRAPHIC

Age Groups: 0-24

Sample Demographics: Children and young adults in BC

PRELIMINARY RESULTS

Results not available yet

Youth and Digital Technologies

MAIN RESEARCH QUESTIONS/TOPIC

Impacts of COVID-19 on technology use among young people, including digital inequalities; lack of access to, or overuse of technologies; privacy; and the role of social media in addressing new realities of social isolation and physical distancing.

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DETAILS

Project Dates: Sept. 2018- Dec. 2023

Sample Size: ~30

Type: Qualitative

DEMOGRAPHIC

Age Groups: 14-30

Sample Demographics: BC young people/young immigrants

PRELIMINARY RESULTS

Soon

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