

HELP ME OUT

HOW OUTDOOR EDUCATION
IMPACTS AND EMPOWERS
YOUTH TO THRIVE

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Outward Bound Canada is a national organization and our head office lies within the shared traditional territories of many nations including the Mississaugas of the Credit, the Anishnaabeg, the Chippewa, the Haudenosaunee and the Wendat, and home today to many diverse First Nations, Métis and Inuit peoples.

The land that our programs take place upon continues to be stewarded by Indigenous people and has been since time immemorial. We also acknowledge our shared colonial history and our team is committed to reconciling relationships with the first peoples of the land.



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EXECUTIVE SUMMARY

All Canadians have been affected by the COVID-19 pandemic in some way, But Canadian youth are facing challenges unlike any generation before them. They're coming of age while trying to catch up on months of lost learning, navigate a difficult job market, and rebuild their dreams - all while coping with mounting anxiety about the future.

Experts in the field warn of a youth mental health crisis that has been exacerbated by the pandemic. (*Herein, we define youth as those between 15 and 30 years old¹*). Mental wellbeing is critical to their health and success, as well as the future health and prosperity of Canada. The recent spotlight on the mental health crisis calls for action. Young people are Canada's most important stakeholders when it comes to our global future. Therefore, we need to begin thinking long-term to help construct a society, economy, and international community that cares for all.

The COVID-19 pandemic led to incredibly tough times, but it has also given us the opportunity to build back better. Outdoor experiential education programs are uniquely positioned to help with this by supporting the well-being of youth and ensuring they have the skills they need to thrive. This report includes a literature review on the impact of the COVID-19 pandemic on Canadian youth, and the positive role of nature and outdoor experiential education learning in supporting young people's mental health as we transition to a post-pandemic world.

The pages that follow highlight research on how outdoor experiential learning can help youth to build resilience and social-emotional skills to allow them to embrace challenges, recover from setbacks, maintain a positive outlook, and meet the challenges of today and tomorrow with confidence.

KEY LEARNINGS

- The COVID-19 pandemic exposed Canadian youth to new or increased stressors, leading to overall poor mental health that jeopardizes their future wellbeing;
- Recent evidence shows significant increases amongst youth in eating disorders, substance abuse, suicide attempts, and a higher risk of stress relating to social isolation;
- Youth with stronger connections to nature have fared better during the pandemic;
- Black, Indigenous, and People of Colour (BIPoC) youth in Canada were more likely to report a reduction in physical activity, and lower-income households reported a lack of access to outdoor spaces;
- Outdoor education and recreation programs are well-suited to address the mental health effects of the pandemic by cultivating resilience, social-emotional skills, and social connections in youth;
- Resilient individuals have coped better during the pandemic and have experienced fewer mental health declines; and
- Social connectedness and mental health are closely intertwined. People who feel connected to others have lower levels of anxiety and depression

INTRODUCTION

Today's youth are coming of age in a world rife with real and existential crises. Even before the COVID-19 pandemic upended the lives and livelihoods of families around the world, the socio-economic systems of the past had threatened the health of our planet and the path to fulfilling lives for many.

Canadian youth represent about one-quarter of Canada's population. Over the last two years, they've had their lives turned upside down by the COVID-19 pandemic². Ongoing lockdowns and restrictions have led to social isolation, disruptions to schooling and childcare, financial worries, loss of employment, housing insecurity, and increased family conflict³. All these stresses are directly impacting the mental health, wellbeing, and social and emotional development of Canadian youth.

Herein, following the definition by the World Health Organization, we define mental health as a "state of wellbeing in which an individual realizes his or her abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community"⁴.

Mental health is fundamental to our ability to live happy and fulfilling lives.

It has been determined that many young people thrive in environments that are predictable, safe, and structured⁵. The imposed COVID-19 public health measures have disrupted these protective factors, making it difficult for youth to anticipate, adapt, and flourish⁵.

Ongoing school closures have had significant impacts on youth mental and physical health⁵. Schools often serve as a place for youth to get active through physical education and extracurricular sports. The pandemic restrictions and school closures resulted in youth being less active.

According to Statistics Canada, **only one-third (37.2%) of youth aged 12-17 met physical activity recommendations during the pandemic**, a decrease from half (50.8%) of youth pre-pandemic⁶. This decline was not found in Canadian adults⁶. In tandem with decreased physical activity was an increase in the time children and youth spent in front of a screen. Sixty-four percent of parents were concerned by the amount of screen time their children engaged in during the pandemic, with nine in ten stating that their children engaged in screen time daily^{6,7}.

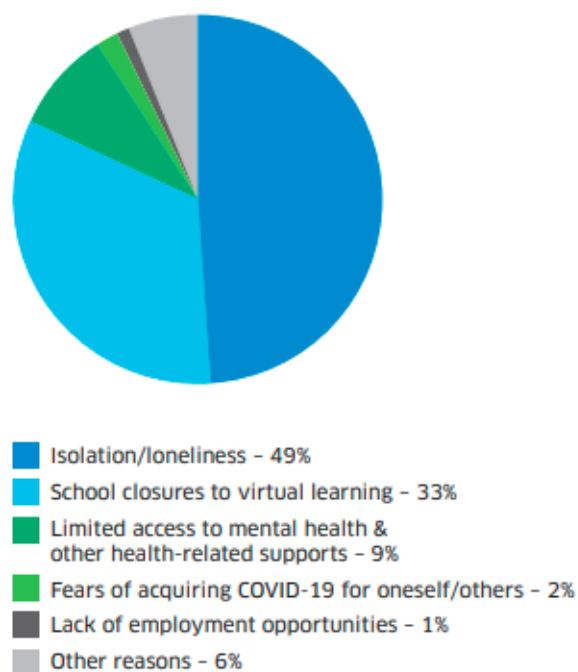


Figure 1: Results of Headstrong COVID-19 Survey- challenges faced by youth (Image Source: [Mental Health Commission of Canada](https://www.mentalhealthcommission.ca/))

The Headstrong COVID-19 survey examined the effects of the COVID-19 pandemic on 137 young people across Canada⁸. The questions focused on challenges youth faced, and any coping strategies used to help support their physical and mental health. The survey results showed that youth faced many diverse challenges during the pandemic. The main challenges included “feeling isolated and lonely (48%), followed by closures of in-person schools and moving to remote learning (33%), limited access to mental health and other health-related supports (9%), fears of acquiring COVID-19 for oneself or loved ones (2%), lack of employment opportunities (1%) and other challenges (6%)”⁸.

With remote learning and more time spent in front of a screen, school closures have also led youth to feel isolated from their peers and friends⁸. Fewer interpersonal interactions combined with the novel stresses of online learning and decreased access to in-school mental health supports created a perfect storm for a youth mental health crisis in Canada.

Canada’s mental health crisis

For the past few years, the global mental health crisis has been a top headline, but many of us are still unaware of just how large, and potentially damaging, the crisis is at both the personal and societal level⁹. The World Health Organization has noted that around 450 million people currently struggle with mental illness, making it the leading cause of disability worldwide^{9,10}. Here in Canada, 6.7 million of us are affected by mental illness, and **one in two Canadians experience mental illness by the age of 40**¹⁰.

The economic cost of mental illness to Canadian society is immense. Every week, mental illness prevents nearly 500,000 employed Canadians from attending work¹⁰. Further exacerbating the issue, the cost of disability leave due to mental illness is roughly double that of disability leave due to physical illness¹⁰. Overall, the total economic

burden of mental illness in Canada is estimated to be \$51 billion per year, which includes healthcare costs, lost productivity, and decreases in health-related quality of life¹⁰.

Youth have not been shielded from the mental health crisis. In fact one in five Canadian children and youth have met the diagnostic criteria for at least one mental disorder, a rate that has not decreased for the past 30 years¹¹.

We can therefore conclude that the COVID-19 pandemic didn't create a youth mental health crisis, but it certainly worsened an area of health that was already on a precipice.

In a Statistics Canada crowdsourcing initiative, youth were the most likely to report deteriorations in their mental health since the COVID-19 pandemic began⁶. Almost two-thirds **(64%) of participants aged 15 to 24 reported that the pandemic harmed their mental health**⁶. The findings of two cross-sectional studies, conducted on over 2,000 Canadian children and youth aged 9–16 years in the spring and fall of 2020, revealed that more youth were bored (34%), worried (27%), and sad (15%) during the pandemic than before the pandemic⁵. **Over 75% were anxious about the pandemic and concerned about losing out on important life events**⁵. In the early months of the pandemic, Canadians aged 15 to 24 were the **most likely (41%) to report symptoms consistent with moderate or severe anxiety**⁶. In another Canadian survey of 664 adolescents and young adults, over half reported increased stress/anxiety and depression attributed to the pandemic¹². Some youth also reported increased alcohol and cannabis use along with increased conflict with parents, siblings, and intimate partners¹².

We recognize that much of the data on youth

Fast Facts About the Canadian Youth Mental Health Crisis

Mental illness indirectly affects *all* Canadians at some time either through their own experience, or that of a family member, friend, or colleague.

When it comes to mental illness, youth is a critical period: most people living with a mental illness see their symptoms begin before age 18.

Approximately 20% of Canadian youth are affected by a mental illness or disorder

In 2011, 11% of those aged 15-24 reported experiencing depression.

Between 2008–2009 and 2018–2019, among youth, there was a 61% increase in emergency department visits and a 60% increase in hospitalizations for mental disorders.

Suicide is the second leading cause of death among youth and young adults between 15 and 34 years.

In Canada, only 1 out of 5 children receive appropriate mental health services.

Source: Canadian Mental Health Association: [Fast Facts about Mental Health and Mental Illness](#)

mental health during the COVID-19 pandemic comes from earlier stages, and that the pandemic isn't "over" yet. Many of the challenges and impacts remain, but these reports provide important context to predict the current mental health climate.

Physicians across Canada have spoken up about the changes they've seen in children and adolescents since the start of the pandemic, coining the term "social malnutrition" to describe the result of isolation measures¹³. Dr. Saba Marchant, a pediatrician in Vaughan, Ontario, notes a "skyrocketing number of cases involving anxiety, depression, suicidal thoughts, inattention, obesity, eating disorders, obsessions, and compulsions in children"¹³. The emergency room at **Toronto's Hospital for Sick Children saw a 25% increase in cases involving suicidal ideation or suicide attempts in 2020 compared to 2019**¹⁴. To make matters worse, alongside rising mental health needs was a decrease in access to mental health services. A study by the Centre for Addictions and Mental Health (CAMH) found that for those with existing mental health challenges prior to the pandemic, half reported disruptions in their ability to access mental health services and supports^{8,15}.

These early impacts on mental health can have lifelong consequences. Mental health problems early in life are associated with significant impairment in broad life domains such as family life, social life, academic outcomes, and career path⁵. The longitudinal effects of mental health problems emphasize the need for early intervention. Access to initiatives like the [Youth Wellness Hubs in Ontario](#) and to outdoor education programs can help positively change the trajectory of the lives of young Canadians.

GETTING BACK TO NATURE

It can sometimes feel like everything has changed in our world - but head out into nature and you might lose that feeling. The forests, rivers, plants, and animals have been almost entirely unaffected by COVID-19. If anything, they may have benefited from our two-year hibernation. Nature is ready for us, and outdoor learning is now more relevant than ever. As Dr. Deena Shaffer, Instructor in Sociology at Toronto Metropolitan University wrote as early as May 2020, many Canadians were itching to get the outside in after just the first 2 months of the pandemic, causing overcrowding in Toronto's parks¹⁶. She states that 'our lust for nature is real', and that perhaps the rush to the outdoors reflects an innate understanding that nature is a source of well-being, a concept that E.O.Wilson, professor emeritus of Harvard University popularized in his 1984 book 'Biophilia'¹⁷.

A large body of scientific literature has proven that spending time in nature has restorative effects both mentally and physically¹⁶. Research has shown that those with the least access to nature also have the worst levels of physical health and mental wellbeing¹⁸. Access to nature became particularly relevant as COVID-19 restrictions were put into place. Researchers worldwide have been tracking changes in patterns of visiting natural spaces as a result of COVID-19¹⁹. Several studies have found that people visited nature more frequently and spent more time in it during the COVID-19 pandemic¹⁹. In particular, they spent more time in natural spaces in the areas surrounding their homes, as opposed to longer trips¹⁹. Many reported visiting natural spaces more often for health and well-being benefits, reporting that "**nature helped them to cope during the pandemic**"¹⁹.

Several large-scale studies have shown that less time spent outdoors is associated with higher depression and anxiety scores compared with no change in time outdoors during the pandemic^{20,21}. These results were consistent across racial demographic subgroups. The buffering effect of nature against the effects of lockdowns is seen in children and youth as well. British children who spent more time in nature during lockdowns suffered **fewer behavioral and emotional problems**²².

Even just *thinking* about the natural world in a harmonious way is correlated with improved mental health. A recent study surveyed American and Japanese adults on their worldviews on nature - specifically whether respondents felt in tune or connected with the natural world - as well as their stress levels and the effects of the COVID-19

pandemic on their lives. Researchers found that overall, participants reported heightened stress during the pandemic, however, **those with a harmony-with-nature worldview were coping best and showed improved psychological health**²³.

Within a Canadian context, a recent Canadian study found that young people who simply believed in the human connection with nature as a health benefit were found to have reduced prevalence of heightened psychosomatic issues, similar to those who were actively engaging in nature-connection²⁴.

One's connection to nature is defined as a cognitive, affective, and experiential relationship with nature²⁵. It is developed through regular contact with nature and is associated with increased participation in outdoor activities and pro-environmental behaviour²⁵. Childhood exposure to outdoor environments is recognized as a key precursor to the development of a connection to nature, and evidence suggests that once developed, this connection is relatively stable²⁵. This is likely because the relationship between outdoor participation and connection to nature is self-reinforcing. That is, participating in nature-related activities fosters a connection to nature, which in turn is a motivator for continued participation in nature-related activities²⁵. Several scales have been created to help measure connection to nature and a similar construct termed nature relatedness^{26,27}. Research using these scales has established a connection to nature as an important driver of physical and mental health and wellbeing²⁵.

What's more, **learning outdoors has been shown to improve academic performance in youth, not only through enhanced brain function**²⁸, **better sleep patterns**²⁹, **and increased cognitive function**³⁰ **but also by increasing attention span**. A 2009 study showed that children diagnosed with Attention Deficit Hyperactivity Disorder were able to concentrate on a task far better after just 20 minutes of walking in the park³⁰, and a Norwegian study showed that as the hours of outdoor activity increased (between 1 and 9 hours of outdoor time), inattention and hyperactivity symptoms decreased³¹. Outdoor learning stimulates all of the senses, which therefore satiates our brain's need for stimulus, allowing us to focus more on task, improving academic achievement, empowerment, and wellbeing³².

Recent youth research has found that a lack of connection to nature predicted declines in mental health during the pandemic²⁵. These studies discovered that connection to nature acted as a moderator in the relationship between outdoor activity and mental wellbeing both before and after the pandemic²⁵. **Youth with stronger connections to nature before the pandemic were more likely to continue participating in outdoor**

activities during the pandemic and experienced fewer declines in mental health²⁵. This suggests that developing a connection to nature can help buffer against declines in mental health during times of stress²⁵.

The literature is clear: connecting to nature is an effective means of improving youth mental health¹⁶. However, one large issue remains, **access to nature and the opportunity to spend time in natural spaces is not equal for all youth**. Across the globe, imposed public health measures have magnified pre-existing health and socioeconomic inequities. In the study of British children mentioned earlier, one-third had decreased links to nature during lockdowns²². The investigators found that these children tended to come from less affluent families and showed increases in acting out, sadness, and anxiety²². Results from a 2020 Canadian study showed that BIPOC children and youth were more likely to report “ (1) a decrease in physical activity; (2) going outside less, feeling less safe outside, and having fewer places to play or exercise outside of home; and (3) not spending enough time in nature or being physically active enough”³³. The study also found that **lower-income households were more likely to report not having access to enough indoor and outdoor space**³³. Studies like this underscore the need for outdoor education opportunities that can reach the vulnerable youth who need it most.

Outdoor education in Canada

Outdoor education (OE) is a broad term that refers to organized learning that takes place in an outdoor setting³⁴. It has a long and rich history within Canada, including programs in summer camps, elementary schools, post-secondary institutions, and private and not-for-profit organizations. The first summer camps in Canada were established in the early 1900s, and the Canadian Camping Association was founded in 1936³⁴. Following this, the first OE programs in public schools were created in 1953 and 1957 in Ontario and Manitoba, rapidly followed by a growth of programs in other sectors. Today, the Canadian Camping Association represents over 800 member camps across Canada³⁵. Outdoor education also takes place within traditional school settings. A recent study by Asfeldt and colleagues, identified over **200 elementary schools and 50 post-secondary schools in Canada offering at least one outdoor education course**³⁴.

Recent research has aimed to collect and examine how Canadian OE programs contribute to students' growth and learning. In 2019, Purc-Stephenson and colleagues conducted a systematic review of OE in Canada, looking at learning outcomes and psychosocial benefits of engaging in OE from the learners' perspective³⁶. Their analysis included data from 508 Canadian students across 21 studies and identified eight themes

of common goals and learning outcomes³⁶. Learners reported that their understanding of the environment had improved, that their outdoor travel and camping skills had improved, and that their awareness of culture, heritage, and place history had improved. Learners said they gained confidence and leadership skills as a result of the experience, and they were able to form a sense of community with their peers³⁶.

Through an analysis of literature on successful outdoor adventure programs, several common features have been identified. These features include³⁷:

1. The programs take place in an **unfamiliar natural environment**
2. They consist of **challenging activities** with authentic and clear consequences that usually involve cooperation with others
3. They take place in a small-group social setting
4. They are guided by **experienced and skilled instructors** that ensure participants' physical and emotional safety

Outdoor education and adventure programs are rooted in experiential learning theory and later sections of the report will explore how these theories can be used to explain their success.

Mental wellbeing outcomes of outdoor education

A rich body of literature has accumulated on the numerous benefits of outdoor education and outdoor education and adventure programs on youth. Benefits include: a more positive self-concept; increased self-esteem; improved cognitive autonomy; improved academic achievement; increased prosocial behaviour; increased group cohesion; prejudice reduction; increased connection to nature; and abstinence from substance use³⁷. Recent research has been focused on examining the relationship between outdoor education programs and mental wellbeing.

In a German pilot study on the effects of outdoor adventure on mental health, 14-year-old participants completed a nine-day hike through the German, Austrian, and the Italian Alps. Results showed an increase in life satisfaction and mindfulness³⁷. The same authors completed another study with a group of university students in the wilderness of the Norwegian Hardangervidda region compared to a control group. After eight days, **outdoor participants scored higher in life satisfaction, happiness, mindfulness, and self-efficacy, and lower in perceived stress compared to the control group**³⁷.

A study of American college students examined the effect of short-term adventure programs on stress levels³⁸. Physiological stress response was measured via salivary cortisol levels, and psychological stress was measured via questionnaire³⁸. Results showed that both physiological and psychological stress was reduced at the end of the trip. Future research should examine if and for how long the stress reduction is maintained³⁸.

FIVE EXPEDITION SKILLS THAT CARRIED US THROUGH A PANDEMIC^{39,40}

1. Dealing with the unexpected

- Terms like “unprecedented” and “rapidly evolving” have been used a lot in the last two years of the pandemic; we’ve all had to navigate conditions beyond our control
- During an expedition, you learn to expect the unexpected, for example when a sudden storm forces you to change course, you learn to remain calm and persevere

2. Working with less

- Calling back to The Great Toilet Paper Shortage of 2020, the pandemic has taught us how to make do with less
- During an expedition, you’re limited to what you can fit in a backpack, which reminds us to use only what we need

3. Comfort in solitude

- Throughout lockdown, the entire world experienced an unplanned “solo” (the component of an expedition where you learn to be alone and comfortable with yourself)

4. Community

- The last two years have taught us the importance of community and that challenge and adversity can bring us closer.
- There are countless examples of this on course from huddling together to keep warm on a cold night, to helping a fellow student lighten their pack. During an expedition, you develop teamwork and trust in the community around you to overcome the challenges you face.

5. Compassion

- The COVID-19 pandemic has shown us that sometimes we need to make sacrifices to keep each other safe.
- In the field you learn to put the needs of the group ahead of your own; e.g. slowing down if your pace is quicker than others in the group and speaking up for those who aren’t comfortable.

Research highlight: Evaluating the effect of an outdoor education program on mental wellbeing

The Outward Bound Trust in the United Kingdom recently published the findings of its pilot study into the effect of outdoor education programs on young people’s mental wellbeing⁴¹. Over five months from the end of October 2019 to March 2020, young

people on five-day courses completed the Warwick Edinburgh Mental Wellbeing Scale (WEMWBS) four times to track changes in their mental wellbeing⁴¹. A comparison group that matched the participants' age, gender, ethnicity, and socio-economic background as closely as possible also completed the questionnaires at roughly the same time⁴¹.

Following participation in the course, average scores for the outdoor education group increased by 3.3 points, compared to a 1.0-point gain for the comparison group over the same period⁴¹. A meaningful change is defined as an average change of three points or more⁴¹. According to these data, the course had an immediate positive influence on the participants' well-being.

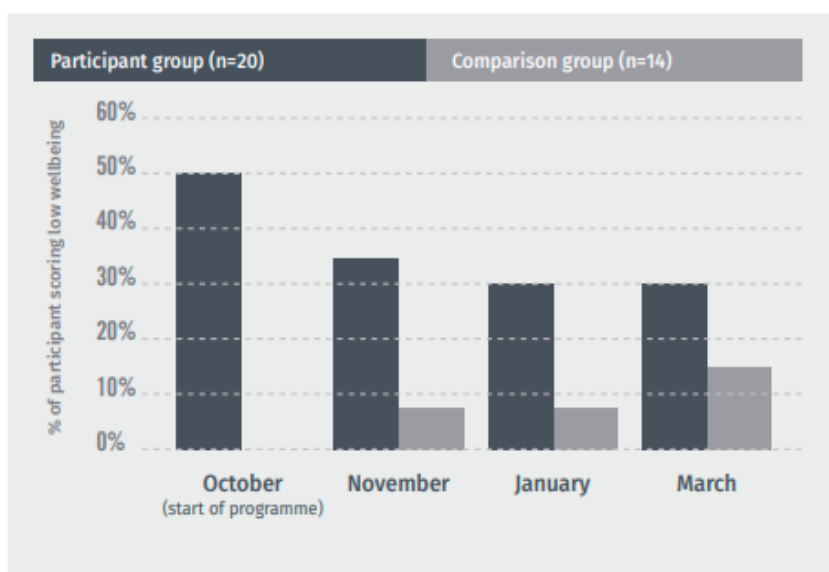


Figure 2: % of participants scoring low in well-being before and after an outdoor experiential learning program compared to the control group (Image Source: [OBUK](#))

Their analysis also revealed that the most substantial changes occurred among participants who had low mental well-being at the beginning of the program⁴¹. The percentage of individuals who reported low well-being reduced from 50% to 35% following the course and to 30% at the end of the study (Figure 2)⁴¹. In contrast, in the comparison group, the

percentage of people who reported low well-being continuously increased, although being lower at the start⁴¹. This shows that the program may have a particularly positive impact on young individuals with low mental well-being, assisting them in reaching levels of well-being similar to the average for their age.

Together this research suggests that through outdoor education youth develop the skills they need to maintain their mental well-being in the face of stress and challenges. This is accomplished through the development of two key characteristics: resilience and social and emotional learning.

RECOVERY AND RESILIENCE

Role of resilience in mental health and pandemic recovery

The global COVID-19 pandemic has exacerbated mental health issues such as depression, anxiety, and insomnia^{42,43}. Given these findings, there has been a proliferation of research on resilience and its role in sustaining mental health.

Resilience is defined as the ability to bounce back from adversity and crisis⁴⁴.

Individuals that are resilient engage in effective coping that helps them adjust in times of difficulty or change. Their coping prevents them from becoming overwhelmed by challenging or threatening circumstances⁴⁴.

"Resilience is that ineffable quality that allows some people to be knocked down by life and come back stronger than ever. Rather than letting failure overcome them and drain their resolve, they find a way to rise from the ashes."

-Psychology Today⁴⁴

The COVID-19 pandemic was a tumultuous time of uncertainty and crisis. Recent studies have shown that resilient individuals have been able to maintain their mental health even amidst the ongoing COVID-19 pandemic⁴⁵.

There is a direct relationship between resilience and mental health. Childhood resilience is associated with less mental illness in later life^{45,46}. Resilience is a virtuous circle: good mental health can contribute to resilience, and **resilient individuals can better navigate mental health issues**⁴⁷.

According to research on childhood resilience, children who are exposed to stressful life events and adversity have a much lower probability of reaching their full potential as adults³⁸. Childhood adversities are called "**risk factors**"— conditions that increase the probability of poor outcomes for young people⁴⁷. The long-term life outcomes that can be impacted are broad, including physical health, social and cognitive development,

education, employment, income, and mental health and wellbeing⁴⁷.

The adversity that is a global pandemic has created a universal risk factor for the youth of today. However, it doesn't mean that all is lost. Not everyone exposed to risk factors goes on to experience negative outcomes⁴⁷. Many people experience adversity and cope well and succeed. These individuals that succeed despite adversity are resilient. They possess skills that help them to cope and may have **protective factors** that help reduce the impact of their adversity⁴⁷.

Taking all this information together, it is clear that **resilience is not a singular attribute**, but rather a collection of skills that help individuals recover from stressful events⁴⁷. Most importantly, resilience is not an intrinsic characteristic - **resilience can be taught**. By understanding resilience and how to strengthen it we can teach it to help equip youth with the skills they need to overcome life's challenges.

Strengthening resilience through outdoor learning

Whether it's a tipped canoe in a white-water rapid or a multi-day rainstorm, the outdoors can challenge us like nowhere else - thus, there is no better place to learn how to build resilience.

In particular, outdoor education programs typically involve the guided facilitation of experiences in small groups⁴⁸. The nature of these programs facilitates the development of outside supports and inner strengths, which are **protective factors** -- conditions that increase the probability of positive outcomes for young people⁴⁹.



Figure 3: Outside supports and inner strengths work together to develop resilience (Image source: [Best Start Ontario](#))

Outside supports develop organically in an outdoor learning setting. The shared novel discomfort of the wild facilitates the camaraderie of the group and helps young people develop positive relationships with their adult instructors, and peers. There's something special that happens when overcoming a challenge as a group that once seemed insurmountable. Small group sizes provide opportunities for leadership, reflection, and feedback from the group⁴⁷. A supportive community develops and teaches

communication, cooperation, and trust⁴⁷.

Outdoor learning can play a key role in building inner strengths like self-confidence, and teaching coping strategies for stressful situations through challenging tasks⁴⁷. In the field, young people are encouraged to participate, make mistakes, and learn from their mistakes. They are taught that their mistakes do not necessarily equal failure, as failure is often a function of perspective or interpretation of an experience. Instead, they learn to frame these experiences as learning opportunities. For example, failure to reach a summit might reveal something about group teamwork or overconfidence. It may also teach participants that life is a journey, not a destination. Being able to reframe challenges and identify opportunities for change prepares individuals to be effective and resilient leaders within their own lives and their communities.

Coping and resilience

One topic of interest is the mechanism by which individuals build resilience. Psychological theories on coping and stress have been proposed as an explanation^{48,50}. “Coping” is defined as behavioural and cognitive attempts to manage stress⁴⁸. One such theory uses the stress inoculation model which proposes that people develop resilience similar to the way the body develops immunity against disease—that is, small doses of stress allow the system to build resilience⁴⁸. According to this theory, confronting stress can be beneficial by allowing the individual to engage in and develop adaptive coping behaviour, leading to increased adaptability and resilience when confronting future stress⁴⁸. Given the unfamiliar and challenging nature of outdoor adventure activities, they require participants to confront stress and engage in coping strategies. In doing so, outdoor education programs have been highlighted as a powerful way to build resilience.

One study looked at the different coping strategies participants engaged in during an outdoor experiential learning program and their contribution to any changes in resilience before and after the course⁴⁸. Results showed that 3 coping strategies partially explained changes in resilience⁴⁸. The first coping strategy is **positive reinterpretation**, which involves construing a stressful experience in positive terms (e.g. “I learned something from that situation”)⁴⁸. Participants who engaged in more positive reinterpretation achieved greater increases in resilience⁴⁸.

Two coping strategies were negatively correlated with resilience and their use predicted less improvement in resilience. **Acceptance** is a coping strategy that involves accepting

the reality of a stressful situation (e.g. “I learned to live with it”)⁴⁸. **Focusing on and venting emotions** is another strategy in which the individual focuses on what is distressing or upsetting and vents those feelings (e.g. “I felt a lot of emotional distress and found myself expressing those feelings a lot”)⁴⁸. These results provide valuable insights to outdoor educators as they can improve resilience gains by encouraging the use of effective coping strategies like positive reinterpretation.

Resilience outcomes from outdoor education programs

The measurable impact of outdoor education programs on resilience is well documented. For example, one such study enrolled 132 participants in a 13-day college outdoor education program and measured their resilience using Wagnild and Young’s Resilience Scale at the start and end of the program⁵⁰. Results revealed statistically significant gains from pre-course to post-course on psychological resilience, and the overall mental health wellbeing measure significantly increased⁵⁰.

Other independent researchers have studied the efficacy of outdoor education programs in building resilience.

- One study compared the effects of a 22-day outdoor adventure program in Australia for young adults and compared their resilience changes to a control group of university students⁵¹. Investigators found that all participants reported positive changes in their resilience, though these changes were not found in the control group⁵¹.
- A similar study was conducted in the United States of 14-30-year-old participants on 14-30 day expeditions, compared to an age-matched control group⁵². Like the Australian study, a significant positive increase in resilience was found in the expedition group, and no significant changes were found in the control group⁵².
- A 2015 study looked at resilience changes as a result of outdoor education courses and related it to coping skills⁵³. This study of 350 American participants aged 12-22 found increased resilience scores and the application of coping skills⁵³. These coping skills developed during an expedition can help youth to persevere through challenges and change in the future.

Resilience is an essential employability skill

Within the workplace, resiliency can be framed in several ways. Employers are looking for employees who are adaptable, able to embrace change, and have strong coping skills. This has been highly pertinent during the pandemic as workplaces have needed to remain agile with all the changes and uncertainty. Moreover, the ability to recognize different stress factors and cope makes for happier and more productive employees.

Resilient employees:*

- Remain engaged and focused, even when things are difficult
- Spot trends and turn them into opportunities
- Don't get bogged down by the past, but look toward the future
- Are curious – they keep learning
- Are able to evolve with the times

*Source: [University of Surrey's Employability and Careers Centre](#)

Outward Bound Canada commissioned Bain & Company, an independent consulting firm, to assess the long-term societal impact of an outdoor experiential education program. Bain found that the resilience gains were linked to a lower risk of future anxiety and depression, which generates **~\$1.7 million in societal savings on mental healthcare costs and ~\$5.0M in increased workplace productivity**⁵⁴. These results show that the impact of outdoor education programs extends beyond the individual to benefit society as a whole.

SOCIAL-EMOTIONAL LEARNING AS THE FOUNDATION TO SUCCESS

Defining social-emotional learning

Social-emotional skills (SES) are those non-cognitive skills (also called interpersonal and intrapersonal skills) that range from self-regulation to the ability to work in diverse groups. These skills are closely connected to mental health. Through social-emotional learning (SEL), children learn how to handle their emotions, get along with other kids, and how to empathize and connect with others. By cultivating these skills in youth we create safe school and community climates where being compassionate and supportive is expected⁵⁵. These are the type of environments help that to promote the mental well-being of all students.

By definition, social-emotional learning refers to the process “through which children and adults acquire the knowledge, attitudes, and skills they need to recognize and manage their emotions, demonstrate caring and concern for others, establish positive relationships, make responsible decisions, and handle challenging social situations constructively”⁵⁶. These skills are essential to students’ long-term well-being and for their ability to contribute to society⁵⁷.

Over two decades of research, five core aspects of socioemotional functioning have been identified as critical for a child’s wellbeing and educational attainment. These are:

- **Self-Awareness** is the ability to recognize and describe your own emotions, thoughts, values, and experiences and understand how they influence your behaviour. Developing self-awareness helps you to identify your strengths and weaknesses, giving you an accurate sense of your capacity to succeed in different situations and a well-grounded sense of confidence and optimism^{57,58}.
- **Self-Management** is the ability to deal with stress and regulate one’s emotions, thoughts, and behaviours. Developing self-management skills helps students to verbalize and manage stress, control impulses, and motivate themselves, thus helping them to set and work toward achieving personal and academic goals^{57,58}.
- **Responsible Decision Making** is the ability to develop constructive and respectful strategies to solve problems – whether they be academic, personal, or social. This

core aspect has a strong prosocial dimension, as students learn to consider moral, personal, and ethical standards when making decisions and to evaluate the realistic consequences of their actions to themselves and others^{57,58}.

- **Social Awareness** is the ability to consider others' perspectives and empathize with others from diverse backgrounds. Developing social awareness helps students to understand the social and ethical norms for behaviour and predict others' feelings and reactions by recognizing emotional cues to their own actions or words. Social awareness also helps students to learn to adapt to the mood of a group and respect and appreciate others' points of view^{57,58}.
- **Relationship Skills** refer to the ability to develop and maintain rewarding relationships with diverse individuals and groups. In developing relationship skills students learn to communicate and listen effectively, and how to address interpersonal conflict. They learn leadership skills and how to work with others toward common goals and resist negative social pressure^{57,58}.

These social and emotional skills are just as important as cognitive skills for academic success, while being more malleable than cognitive skills. Teachers have long recognized that students who can pay attention, persevere with tasks, solve problems, and collaborate well with others perform better in school than those who lack these abilities or whose abilities are hampered by stress, anxiety, depression, or anger⁵⁸.

Role of social-emotional learning in mental health and pandemic recovery

School closures and the pivot to online learning have taken a toll on students' social relationships, which are vital to their social-emotional development. They feel less connected to their teachers and peers and report lacking a sense of belonging and positive connection to others. In a February 2021 study of American school district administrators, **77% said that their kids had slipped behind in their social-emotional development compared to two years before**⁵⁹. Thirty-three percent of American teachers surveyed reported being concerned about students' social-emotional health, placing this worry second only to academic decline⁵⁹.

Focusing on social-emotional learning was important before the pandemic, but it is now absolutely essential as we recover from it. The difficulties of online learning and the uncertainty of the future make it imperative that we focus on students' emotional development and well-being.

Social and emotional abilities in children and adolescents are shown to be significantly more important for key adult outcomes than traditional academic achievement measurements like grades and standardized test scores⁶⁰. Accordingly, a lack of emotional self-regulation in childhood is a predictor of major life outcomes such as income, financial security, occupational prestige, physical and mental health, criminality, and gambling problems, even when controlling for family background and other factors⁵⁸. Early behavioural and emotional problems have been correlated with reduced wages in adulthood in studies that followed children from childhood through early adulthood and mid-adulthood⁵⁸.

In a modern labour market that places less focus on routine tasks and emphasizes skills like adaptability, problem-solving, and communication, social and emotional learning is central to employment success. **The Conference Board of Canada has identified interpersonal skills and personal management skills such as positive attitudes, responsibility, adaptability, and active listening among the fundamental skills for employability in the 21st century**^{58,61}. Their 2020 impact report titled "[*The Future Is Social and Emotional: Evolving Skills Needs in the 21st Century*](#)" outlines the increasing demand for social-emotional skills and deficiencies in these skills found in entry-level new hires⁶².

In their 2020-2021 Regional Sounding Tour, the Conference Board of Canada in partnership with the Future Skills Centre spoke with education and skills stakeholders across the country to hear their priorities, strategies, and perspectives on the essential skills needed for the present and future Canadian economy⁶³. Again, the demand for social and emotional skills was echoed. Numerous stakeholders highlighted how vital it is for learners and workers to be able to effectively listen, manage time, collaborate across cultures, be self-aware, evaluate challenges, and be creative⁶³. Communication, in particular, was seen as an important skill⁵⁴. They argued that **there needs to be increased systemic focus on increasing access to quality social-emotional skills training and development**⁶².

As the world emerges from the COVID-19 pandemic, ignoring social-emotional learning within the traditional school curriculum does a disservice to students, all of whom would benefit from learning and practicing skills like self-awareness, emotional regulation, and empathy.

Over the last decade, there has been increased interest in effective educational interventions for social-emotional learning, whether through specific programs or

broader pedagogical approaches such as a focus on teacher-student relationships. A large-scale analysis of 270,000 students engaged in SEL found numerous positive effects⁶⁴. First, prosocial behaviour, such as good classroom demeanour and good attendance, improved by 10%⁶⁴. At the same time antisocial behaviour like misbehaving in class, bullying and violence decreased by roughly 10%⁶⁴. Students reported an increased ability to manage stress and depression, and better attitudes about themselves, others, and school. The most intriguing aspect was that **academic achievement test results increased by 11%** compared to students who did not participate⁶⁴. Of course, these advantages extend beyond the school setting, by improving children's interactions with their friends, families, and community members.

Recognizing the importance of fostering the development of social-emotional skills, there has been a push towards advancing the social-emotional learning field and practice within Canadian school systems. So far, most traction has been gained within British Columbia and Ontario⁵⁸. In Ontario, the Ministry of Education has recently added social-emotional learning skills as a distinct section of the updated Grades 1-8 curriculum⁶⁵. In BC, the Personal and Social Competency is one of the three Core Competencies in their K-12 curriculum and assessment system⁶⁶. The integration of social-emotional learning competencies into education ministries' curricula was critical in legitimizing the field in Canada, but much work remains to be done⁵⁸. While teachers and decision-makers are receptive to social-emotional learning, the community of practice is still relatively small⁵⁸. They agree that social-emotional learning is important, but there is a lack of training and hands-on material on *how* to teach it⁵⁸.

Here is where outdoor educators shine: for decades, outdoor camps and experiential learning programs have helped youth to develop key social-emotional skills through an integrative approach.

Strengthening social-emotional development through outdoor learning

Outdoor educators have long recognized that the active process of struggling with challenges and problem-solving through experience leads to key social-emotional development. Outdoor education programs place youth in unfamiliar environments and challenge them in new and demanding activities such as backpacking, canoeing, and rock climbing. Throughout these activities, they face interpersonal challenges as they work together to meet common goals.

Outdoor education programs use experience, challenge, and working in small groups as

metaphors for how the participant exists within a community of other people and how the lessons have meaning beyond the outdoor classroom. Students learn that everything they do affects the others in the group. This provides the framework for powerful learning about how their choices as young people affect their families, their circle of friends, and their communities when they return home. The experience encourages them to be very aware of what they take from the community and what they give back in return.

Outdoor education programs can include various components to promote social-emotional learning. Leadership rotations give students specific roles that their peers rely on throughout the day. For example, a student can be designated as the navigator, cook, or campsite manager. Some other components that promote social-emotional learning include group reflective practices, group decision making, and technical skill development that moves toward mastery. Together these components act to contribute to students' growth and success.

Social connections as a key driver of wellbeing

Related to social-emotional learning is the ability to form and maintain social connections. Young people's social connections are a key driver of well-being, allowing them to learn important social skills and providing support networks to help them get through difficult times⁴¹. Research shows that people who feel stronger social connectedness have lower levels of anxiety and depression⁶⁷. They also have higher self-esteem, more empathy for others, and are seen as more trusting and cooperative, which makes others more willing to trust and cooperate with them⁶⁷. Overall, social connectedness can be seen as a positive feedback loop of social, emotional, mental, and physical wellbeing⁶⁷.

In recent times young people feel isolated, disconnected, and both anxious and afraid of meeting new people, and therefore struggle in their interpersonal relationships⁴¹. These feelings can jeopardize their mental health long-term⁴¹.

Because outdoor experiential learning courses are inherently a social experience in which young people spend an extended period of time together, living and working as a team, they have a strong impact on building skills for social connections and developing wellbeing⁴¹.

They learn to value each other's skills, perspectives, and ideas, and to rely on and support each other through difficulties and setbacks, as they take on challenges and solve problems together⁴¹. They sense connectedness to others as they experience feelings of belonging and appreciation from a group that understands and cares for them⁵⁸.

The extended time spent together on an expedition is particularly valuable for developing social connections. In spending days and nights together for days at a time, they get to know their peers in new ways and have the opportunity to form closer and stronger relationships with each other⁴¹. This develops a support network that not only helps them during the expedition but also brings them together long after it is over⁴¹.

Social-emotional learning outcomes from outdoor education programs

Numerous studies have found that outdoor education programs improve the five core aspects of socioemotional functioning. One such study examined the results of a two-day social-emotional learning camp held in Singapore for 93 students⁶⁸. The pre–post test questionnaire revealed that students had positive outcomes in all social-emotional competencies⁶⁸. Students were found to have improved self-awareness, relationship management, and self-management skills as a result of their camp activities and reflections⁶⁸. In an American study of courses offered by the National Outdoor Leadership School, researchers examined the constructs of communication, leadership, and small group behaviour in 663 participants⁶⁹. They found that participants increased in communication skills, with higher gains found in participants without previous outdoor expedition experience and those that were younger⁶⁹. Participants also increased in leadership, and again higher gains were reported in younger participants and those without previous expedition experience⁶⁹.

Social-emotional learning is an essential employability skill

Social-emotional skills are attractive to employers and are highly transferable between roles. SES skills improve a person's ability to transition between roles, which becomes particularly important during times of widespread job loss, such as during a pandemic. According to the Conference Board of Canada, jobs requiring strong people skills are "projected to increase from 59% of employment in 2015 to 63% by 2030. Thus, people with strong SES will be in high demand, especially for jobs that require leadership, cultural competence, resiliency, problem-solving, collaboration, and communication."

Employees with strong SES:*

- Have better overall employment outcomes
- Better adapt to the changing labour market
- Are often selected for leadership positions within their organizations
- Are more immune to the potential negative impacts of automation

*Source: [Conference Board of Canada](#)

Small-group behaviour, defined as being a positive and productive group member and scores, also increased post-course compared to pre-course⁶⁹.

Studies just being released show that these long-term benefits will benefit students long after they return home from an expedition. According to a societal return on investment study conducted by Bain & Company for Outward Bound Canada, participants who improved their leadership skills have a higher probability of earning higher wages and holding a managerial position in the future⁵⁴. They found that Outward Bound Canada's programming results in an **estimated \$40 million in increased lifetime earnings and welfare savings** for participants⁵⁴. These results highlight the importance of providing equitable access to outdoor experiential education programming so that all Canadian youth can realize its lifelong benefits.

CONCLUSION

“Youth” as a stage is a period of transition and uncertainty as young people navigate changes in work, study, living arrangements, and interpersonal and romantic relationships. These rapid developments can be experienced as stressful even under the most normal circumstances. Canadian youth have experienced these changes during a pandemic which created large-scale disruptions to their lives. Many lost their employment or had their work hours reduced; those in school had to quickly adapt to online learning. In a life period where young people strive to establish themselves as adults, many lost their social support systems and career-building opportunities.

As pandemic restrictions ease and the world begins to return to its pre-pandemic state, we must not forget that the mental health challenges to youth remain. A youth mental health crisis existed in Canada before the pandemic, and pandemic-related stressors have only worsened the situation for young people in Canada. The COVID-19 pandemic will be a defining period of their adolescence/adulthood and threatens their future wellbeing.

The last two years have shown us that spending time outdoors is a source of well-being. A connection to nature helped to buffer the physical and mental impacts of the pandemic for many¹⁶, yet access to the outdoors is not equal for all Canadian youth.

Now is the time to reflect and act to make outdoor education accessible to all young Canadians.

Quality outdoor education programs take the benefits of being in nature and magnify them. Through outdoor education, young people build the social and emotional skills, behaviours, and resilience needed to thrive in this rapidly changing world.

This report examined how outdoor learning builds resilience and social-emotional learning and explored outcomes from internal and external data.

After two years of isolation, youth may be lacking in these skills, but they will definitely need them now and in the future. By making quality outdoor education programs available to all young Canadians, we can help ensure they have the foundational skills needed to adapt to changing conditions and take on the challenges of today and tomorrow.

RECOMMENDATIONS

In summarizing the report's findings, we identified two key recommendations for policymakers to support capacity building in the outdoor education sector, with the overarching goal of improving the healthy development of Canadian youth.

- We call on the Federal Government of Canada to invest in community-led programming that provides outdoor education and recreation opportunities to youth disproportionately impacted by COVID-19, including historically and currently marginalized communities.
- We urge provincial education ministries across Canada to include outdoor education in their strategic plans and make high-quality outdoor education programming available to all public school students.

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