The Influence of COVID-19 on Stress, Substance Use, and Mental Health Among Postsecondary Students

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Abstract
Emerging adults, including post-secondary education students, are disproportionately affected by the social and economic impacts of the COVID-19 pandemic. The speed with which society moved in attempt to minimize the spread of the virus left many students with uncertainty and concern about their health, mental health, and academic futures. Considering that post-secondary students are a population at risk, it is important to determine how students respond in the face of the pandemic, and what coping mechanisms or supports will result in improved mental health outcomes. This knowledge will be helpful for post-secondary institutions to understand how COVID-19 has influenced the health and well-being of their students, and may facilitate the implementation of strategies to support their students. This narrative review explores evidence on how COVID-19 has impacted students with the overall goal to provide a set of recommendations to post-secondary institutions to help meet the evolving needs of this population.

Keywords
COVID-19, stress, mental health, substance use, students, post-secondary institutions, treatment, services & support

Adolescence and emerging adulthood are periods of vulnerability for the development of mental health disorders such as anxiety and depression, which typically present during this time (Patten, 2017). Emerging adulthood, considered to occur between 18 and 25 years of age, can be a transitional and stressful period as it is filled with instability due to changes in education, living arrangements, and relationships (Arnett, 2000). It is also marked by biological and developmental changes, in which the brain is continuing to develop during this time (Bennett & Baird, 2006). This period of vulnerability coincides with the age of entry into college or university (Eisenberg, Golberstein, & Hunt, 2009; Kessler et al., 2005). In fact, estimates range from one-third to one-fifth of college and university students having a diagnosed mental health or substance use disorder (SUD; Auerbach et al., 2017, 2018). Indeed, in the spring of 2019, between 45.1 and 51.6% of post-secondary education students reported that they had felt “so depressed that it was difficult to function,” and 65.7–68.9% felt “overwhelming anxiety” within the previous 12 months (American College Health Association, 2019a, 2019b).

Individuals aged 20–24 years old, an age range that overlaps with post-secondary students, also display the highest rates of past year alcohol and other drug use (Centre for Behavioral Health Statistics and Quality, 2017; Statistics Canada, 2017). While the majority of post-secondary students do not use substances problematically, a subset of this population do engage in more harmful use; for example, when drinking alcohol in the past 12 months, 27% of university students forgot where they were or what they did; 16.6% injured themselves; and 6.5% seriously considered suicide (American College Health Association, 2019b).

Post-secondary students deserve a special focus when considering mental health or substance use in the context of the broader category of emerging adulthood. For example,
university students report distress levels that are twice that of their non-student peers (Durand-bush, 2015) and higher depression prevalence rates compared to other young adult populations (Ibrahim et al., 2013). The stressors that post-secondary students encounter such as academic performance, pressure to succeed, post-graduation plans, financial concerns, relationship with friends/family, and overall health (Beiter et al., 2015), are certainly linked to mental health disorders (Bruffaerts et al., 2018; Ebert et al., 2019; Karyotaki et al., 2020) and increased substance use (Metzger et al., 2017). To deal with high levels of stress, students commonly self-medicate through unhealthy coping methods such as smoking, alcohol use, and/or other drug use (Böke et al., 2019; Metzger et al., 2017; Sogari et al., 2018).

Taken together, post-secondary students who are also emerging adults, a well-known vulnerable population, clearly encounter unique stressors that further impact their mental health and problematic substance use. With the arrival of COVID-19, and the quick responses to reduce the spread of the virus, universities and college campuses closed across the world and transitioned to on-line learning. The speed in which universities closed left many students dealing with uncertainty, confusion, and concern about their academic future. Significant concerns exist that this transition would negatively impact the mental health and substance use problems among an already vulnerable population. Indeed, initial reports indicate that the mental health of young and emerging adults is the age group most negatively impacted by the pandemic (Cao et al., 2020; Findlay & Arim, 2020). However, in addition to these disruptions, post-secondary students experienced the added stressor of their education and future plans now also being uncertain (Mishra et al., 2020; Pieh et al., 2020).

The overarching purpose of this paper is to understand the impacts of the COVID-19 pandemic on post-secondary students so that universities and other post-secondary institutions, as well as health policy makers, can understand how the pandemic has influenced the mental health and well-being of students and may facilitate the implementation of strategies to support their students. We start by reviewing the various stressors initiated by COVID-19 that post-secondary students encounter and the impacts of this pandemic on their mental health and substance use outcomes. Next, we discuss the barriers to treatment and management options and how COVID-19 has changed the delivery of these services on campuses, and lastly, we provide a call to action to support post-secondary students during and after the pandemic. Considering that post-secondary students are already an at-risk population, it is important to determine how students respond in the face of the pandemic, the stressors they are encountering and what coping mechanisms or supports will result in improved mental health outcomes. Moreover, given evidence that the pandemic is disproportionately impacting disadvantaged and marginalized groups (Kapilashrami & Bhui, 2020; Mishra et al., 2020; Pieh et al., 2020), there is a need for interdisciplinary approaches to examine the complex impacts of the COVID-19 pandemic on students who are disadvantaged and/or marginalized (e.g. first generation students, students living in poverty, students of color, students living with disabilities, etc.).

**Student Stress During the COVID-19 Pandemic**

The COVID-19 pandemic has created a “perfect storm,” both introducing new and exacerbating a range of existing stressors for post-secondary students including (but not limited to) academic uncertainties, economic and financial concerns, social isolation and a loss of social supports, constant media information and misinformation about the pandemic, and reduced access and/or changes to mental health services. While not all students will experience each of these stressors equally, individual stress load prior to COVID-19, biopsychosocial vulnerabilities, and the loss of social networks that are important to cope with increased stress load, may ultimately lead to less effective coping strategies to mitigate the effects of COVID-19–related stressors. In this regard, socioeconomic factors preceding the pandemic may make some students more vulnerable to the stress produced by the pandemic. In North America these may include pressures related to being able to afford a post-secondary education, being a first-generation post-secondary student, being a member of a visible minority, or having a disability. This might be particularly salient in developing countries where economic mitigation programs are not available. As reviewed below, early data from the COVID-19 pandemic supports these predictions, particularly among emerging adults, including post-secondary students. The new wave of real and perceived stressors associated with the COVID-19 pandemic is rapidly generating a mental health crisis in this population, and this crisis promises to get worse as the pandemic continues to disrupt life around the world. It is therefore important to identify and anticipate the different forms of stressors impacting the post-secondary student population during the pandemic, as a primary means of creating strategies to lower the burden of these COVID-19 related stressors.

**Uncertainty as a Stressor**

Due to the novelty of COVID-19, new information regarding the nature of the virus is continuously being generated and communicated, resulting in evolving public health guidelines as the scientific community acquires new knowledge and the evidence mounts in support of (or against) specific health-related behaviors. The evolving information about the nature of the virus (e.g., why certain individuals become more ill than others, infection and reinfection rates, the effectiveness of masks, transmissibility of new variants, aerosol transmission, etc.), can therefore contribute to a sense of uncertainty, and growing fear around the spread of the disease. The potential of extended restrictions remain present even as vaccines arrive and individuals become inoculated, and the uncertainty about the magnitude of future waves (particularly given the emergence of new and more infectious variants) is likely contributing to the results of several studies pointing to the deleterious
impact of COVID-19 on mental health. Even as the vaccine reaches many countries around the world, post-secondary institutions will face new challenges with respect to adequate testing for COVID-19 and/or evidence of vaccination among their students. Critically, the perception of lack of control, and the variety of these stressors (perceived or real) can influence neural circuits underlying motivation and emotion, and contribute to symptoms of anxiety and depression (Bath et al., 2017).

Academic Stressors
According to the United Nations Education, Scientific and Cultural Organization (UNESCO) 87% of the world’s student population was affected by school closures (Araujo et al., 2020). The rapid pivot to online learning disrupted the educational routines of many post-secondary students, which poses a risk for their mental wellbeing (Shah et al., 2020). Universities continue to struggle with the rapid and timely dissemination of information relating to the availability of supports and services on campus. For example, one study investigating messaging from 153 college and universities in the New York metropolitan area found that only half the institutions provided information regarding remote counseling (Seidel et al., 2020). For many students, academic disruptions due to the pandemic continue and these generate uncertainty about how evaluations will occur given the cancellation of in-person examinations. In Canada, more than a quarter of post-secondary education students reported an academic disruption due to COVID-19, such as transitioning to online classes, and postponed or canceled courses, although this was much higher in fields studying in services, trades or health care (56%, 53%, 41%, respectively). Furthermore, 11% of respondents reported not being able to complete their degrees/diplomas on time (Doreleyers & Knighton, 2020). Adding to this is the fear for students of getting lower grades, losing scholarships, and delaying their degrees (Sahu, 2020). Indeed, there has been changes to policies relating to grading (e.g., pass/fail, satisfactory/unsatisfactory) in some institutions and it remains to be clear if these policies are in fact meeting the needs of the students. For others, difficulties adapting to online forms of learning or restricted access to online learning at home has impacted their ability to complete their degree. This has been particularly true for the training of health care professionals and those studying trades requiring hands-on training to get their degrees and certifications (Rose, 2020). Finally, decreased connectedness with campus may also impact motivation and/or ability to regularly attend online lectures (Douglas et al., 2020; Lee, 2020; Misirlis et al., 2020; Sahu, 2020).

Academic disruption in other countries has had similar effects, but the impact might be more severe among students from rural communities or from many developing countries (Crawford et al., 2020; Organisation for Economic Co-operation and Development [OECD], 2020). International students that returned home in the early months of the pandemic experienced significant disruption in their ability to return to the country where they conduct their studies and complete their degree, or in their ability to pay international student fees (Sahu, 2020). International students may therefore feel increasingly worried about the continuity of their degree (Misirlis et al., 2020). In addition, access to reliable internet service varies in different countries, and in some cases it might have been difficult for international students to get access to online lectures, tests or meetings with instructors (OECD, 2020).

Economic Stressors
Government-mandated closing of businesses has resulted in long-term economic hardships for many students around the world. A report from the Organization for Economic Co-operation and Development (OECD), which surveyed participants from 90 youth-led organizations representing 48 countries around the world, suggests that employment of emerging adults was profoundly affected by the measures set in place to control the transmission of COVID-19 (OECD, 2020). Certain industries have been affected more than others, such as the food and hospitality, tourism, and retail industry, which disproportionately employs many post-secondary education students around the world (OECD, 2020). For example, Ganson et al. (2021) sampled 4,852 young adults (ages 18-26) across the United States and found that 59% of respondents experienced direct or household employment loss as a result of COVID-19, and 38% anticipated employment loss in the near future. According to Statistics Canada as many as 35% of Canadian post-secondary education students surveyed reported a cancellation or delay in work placements due to COVID-19. In addition, 58% of respondents reported that they were very or extremely concerned about losing their jobs in the near future and 67% reported fears of having no future job prospects (Wall, 2020). Economic insecurity in post-secondary students in other countries follows the same trends observed by this Canadian survey. Public health measures have led to unemployment levels as high as 20-25% in several countries around the world including Mexico, Brazil, Italy and Turkey (OECD, 2020). This has led to greater concerns about mental health, income, and impact on future employment in emerging adults, including post-secondary students. Income interruption and economic stress have been shown to increase risk for poor mental health in this population. Indicators of poor mental health—specifically anxiety, worry and depression—were 2-6 times greater among those who either experienced or anticipated employment loss (Ganson et al., 2021). Government programs (e.g., Canadian Emergency Response Benefit) attempted to mitigate the loss of employment stressors, however, the prolonged duration of COVID-19 measures and the potential for future waves of infection may nevertheless result in further economic distress that cannot be relieved by further government aid.

Social Isolation and the Loss of Social Supports
The lockdown has resulted in limited in-person contact with friends, classmates and family members, and has ultimately resulted in increased feelings of loneliness, especially among young/emerging adults (Bricker, 2020; Luchetti et al.,
2020). In this regard, according to a survey conducted during COVID-19, 54% of the general Canadian population reported feeling lonely due to the physical distancing measures, compared to 69% of young adults aged 18-24 (Bricker, 2020). In fact, loneliness is now being recognized as a critical public health issue with the arrival and continued impact of the COVID-19 pandemic (Killgore et al., 2020). This is concerning as loneliness and social isolation are not just strongly correlated with depression among students and young adults (Bedard et al., 2017; McQuaid et al., 2021; Pitman et al., 2018) but can increase vulnerability to developing future depressive episodes (Cruwys et al., 2014). Alternatively, social connections and social support positively influence both psychological and academic outcomes of students (Cruwys et al., 2014; Haslam et al., 2015; Lamblin et al., 2017; McQuaid et al., 2016) and having multiple groups from which to draw social support protects student mental health (Cruwys et al., 2015).

At a time in which social distancing is the most effective measure to prevent the spread of the virus, these social restrictions certainly have implications in the way in which distressed individuals can seek social support. While social media platforms and online meeting applications (e.g., Zoom) may be an important factor attenuating some of the effects of prolonged social isolation (Son et al., 2020), they are not perceived as being the same or as effective in socializing as face-to-face interactions, especially when the groups are large (Oliveira Dias et al., 2020; Renn et al., 2019). Furthermore, with campuses closed indefinitely, the sense of connectedness with other students on campus is reduced, increasing the risk of loneliness and the sense of reduced social support (Ye et al., 2020). Social isolation results in motivation to interact socially with others (Tomova et al., 2020) which could pose a threat to higher infection rates due to young individuals seeking to socialize despite social distancing guidelines. Indeed, infections spiked in 2020 during the early and late summer among young adults aged 20-30 (Bosman & Mervosh, 2020), which is likely a result of many different contexts/situations.

**Social Media & the Stress of Misinformation**

Social media outlets such as Facebook, Twitter, Instagram, Snapchat, and TikTok may be important factors maintaining social connections and allowing for information about the virus to be shared rapidly (Chan et al., 2020; Gao et al., 2020). In an academic setting, many post-secondary institutions may turn to social media as a way to engage students and build community on a platform that many students are already using. These outlets, however, can also be a source of misinformation and constant stress especially when the nature of the pandemic is not well understood. Indeed, several reports show that social media platforms can rapidly distribute misinformation, and in many cases, information is distributed widely as a political tool (Depoux et al., 2020; Gao et al., 2020). Moreover, constant exposure to news and information about COVID-19 has been associated with increased levels of stress and anxiety (Gao et al., 2020), an effect also seen during earlier pandemics and epidemics, such as the H1N1 flu and Ebola, respectively (Blakey et al., 2015; Wheaton et al., 2012). Interestingly, some data suggest screen time and social media use have increased during the COVID-19 pandemic and, depending on the nature of these interactions, this increase could enhance negative affective states. For example, increased social media use has been associated with symptoms of anxiety and depression (Meyer et al., 2020; Smith et al., 2020) and a decrease in the use of social media can improve mood and symptoms of anxiety in emerging adults (Ghaemi, 2020). However, the relationship between social media use and depressive symptoms is confounded by the quality of factors and interactions in the social media environment (Seabrook et al., 2016). For example, when social media use involves primarily positive interactions (e.g., social support and social connectedness), this is associated with lower levels of anxiety and depression symptoms; however, negative interactions such as social comparisons relate to higher levels of anxiety and depression (Seabrook et al., 2016). Therefore, the links to anxiety and depression seem to be related to problematic social media use, not necessarily frequency of use (Cunningham et al., 2021).

**Loss of Opportunity to Cope Using Physical Activity**

One form of coping with stressors is engaging in physical activity, yet, at least early in the lockdown, many public parks and gyms were closed. Throughout the pandemic gyms and team sports have operated at a limited capacity around the globe, decreasing physical activity opportunities along with the social aspects associated with these activities. Exercise has antidepressant effects that are stronger than other non-pharmacological interventions such as meditation and relaxation (Chekroud et al., 2018; Cooney et al., 2014; Mikkelsen et al., 2017), whereas a sedentary lifestyle is associated with symptoms of depression and anxiety (Rebar et al., 2014). Thus, it is concerning that physical activity has been reduced while sedentary time has increased during COVID-19 confinement, effects especially apparent among students and young adults (Castañeda-Babarro et al., 2020). In this sense, it is suggested that the reduced access to gyms, team sports and fitness classes for a prolonged period of time could be a factor in catalyzing mental health challenges in post-secondary students (Colley et al., 2020; Pinto et al., 2020).

**Student Mental Health During the COVID-19 Pandemic**

Clearly, the COVID-19 pandemic has impacted the mental health of many individuals around the world (Casagrande et al., 2020; Findlay & Arim, 2020; Huang & Zhao, 2020; Odriozola-González et al., 2020; C. Wang et al., 2020). In response, a call for action has been issued, highlighting the urgent need for research that addresses how the mental health consequences for vulnerable groups can be mitigated under pandemic conditions (Holmes et al., 2020). While the pandemic has impacted most individuals, it is becoming
increasingly apparent that the mental health of younger individuals has been particularly affected (e.g., Casagrande et al., 2020; Findlay & Arim, 2020; Huang & Zhao, 2020; Liang et al., 2020; Odirozo-González et al., 2020; Odirozo-González et al., 2020; Statistics Canada, 2020a). To be sure, accumulating research indicates that the prevalence rates of psychological distress and poor sleep quality, as well as symptoms of PTSD, depression and anxiety are notably higher among younger individuals during the pandemic compared to older individuals (Casagrande et al., 2020; Findlay & Arim, 2020; Liang et al., 2020 Odirozo-González et al., 2020; Statistics Canada, 2020a). Indeed, these findings are consistent with the disproportionately higher rates of psychological symptoms and mental health disorders among youth and emerging adults during pre-pandemic times, relative to adult populations (discussed earlier). Yet, why the COVID-19 pandemic is affecting the mental health of younger individuals more so than other populations is not entirely clear. Although, as indicated in the section above that post-secondary students are part of the young adult demographic, it is likely that that their educational, economic and social lives have been uniquely impacted by the pandemic compared to older adults.

As described earlier, post-secondary students face several additional challenges attributed to the COVID-19 pandemic relative to the rest of the population. These additional stressors, particularly in the backdrop of an already challenging environment, might make post-secondary students especially at risk of developing mental health problems during the pandemic (Statistics Canada, 2020a, 2020b; C. Wang et al., 2020). As an example, in a cohort of 1442 health professional students at Sichuan University in China, during the COVID-19 pandemic, 26.6% demonstrated clinically significant psychological distress, and 11.1% met the criterion for a probable acute stress reaction. In a sample of over 7000 students from Changzhi medical college in China, 21.3% indicated they felt mild anxiety associated with pandemic (Cao et al., 2020). Among 2530 members of the University of Valladolid in Spain during the first weeks of confinement, moderate to extremely severe scores of anxiety, depression, and stress were reported by 21.34%, 34.19% and 28.14% of respondents, respectively. A total of 50.43% of respondents indicated moderate to severe impact of the outbreak (Odirozo-González et al., 2020).

The data on COVID-19 and mental health are likely to vary across country, educational institution, student population, the use of different mental health measures and when the data were collected. These discrepancies will certainly need to be kept in mind when interpreting emerging data across various regions and timeframes. This said, the available data suggest that early stages of the COVID-19 pandemic have had a negative impact of the mental health among a notable proportion of post-secondary students, and several studies have begun to elucidate factors which increase risk and resilience to poor mental health during the pandemic. For instance, a recent exploratory study suggested that COVID-19-specific worries, isolation in social networks, lack of interaction and emotional support, and physical isolation were associated with negative mental health trajectories (Elmer et al., 2020). Indeed, there have been reports of a disproportionate increase in loneliness occurring particularly among this younger cohort (Bricker, 2020), which has been linked to depression and anxiety during the COVID-19 pandemic (Killgore et al., 2020; McQuaid et al., 2021; Palgi et al., 2020). Moreover, female students appeared to have worse mental health trajectories when controlling for different levels of social integration and COVID-19 related stressors (Elmer et al., 2020), and some emerging data report that Black/African American and Hispanic students experience higher rates of severe anxiety as a result of COVID-19 compared to White students (Coakley et al., 2021). In another study, students who reported previous stressors such as childhood adversity, stressful life experiences during the past year, and internet addiction were at increased risks of both distress and probable acute stress reaction during the pandemic (Li et al., 2020). Similarly, it was reported that having relatives or acquaintances infected with COVID-19 was a risk factor for increased anxiety. Economic difficulties, disruptions of daily life and delays in academic activities were also associated with elevated symptoms of anxiety. By contrast, good family functioning was associated with reduced risk of distress and probable acute stress reaction (Li et al., 2020). Moreover, social support, living in urban areas, family income stability and living with parents mitigated the effects of the COVID-19 pandemic on symptoms of anxiety (Cao et al., 2020).

Not surprisingly, much more research is needed, including a consideration of age, race and ethnicity, sex and gender, academic year and program of study, and the availability of supports (both in-person and virtually) as well as a more comprehensive assessment of COVID-19 related challenges (e.g., transition to online learning). Addressing these research gaps, among others, can help identify students at risk and better inform the development mental health supports within educational institutions.

### Student Substance Use During the COVID-19 Pandemic

The association between stress, mental health and substance use is of particular interest during the COVID-19 pandemic, especially among youth and young adults. Given what we know about student mental health, coping with problematic substance use, stressors associated with COVID-19 and overall trends in substance use in this population, we can expect more problematic substance use among post-secondary-aged students. Indeed, data from both Canada and the United States suggest that individuals reporting fair or poor mental health during the COVID-19 pandemic were more likely to have increased their use of alcohol, tobacco (DiClemente et al., 2020; Rotermann, 2020) and cannabis (Rotermann, 2020) compared to those reporting excellent, very good or good mental health. According to the Canadian Perspectives Survey Series, individuals aged 15-34 were more likely to report an increase in substance use relative to individuals aged 55 and older, and this was particularly true for cannabis consumption (Rotermann,
2020). While the age range of participants in this survey certainly overlaps with the typical age range of post-secondary students, it should be noted that this particular survey was not specific to students and represents a broader demographic. Therefore, early data suggest youth and young adults are more likely to increase their substance use in response to the global pandemic. Furthermore, it is believed that substance use may be considered a risk factor for experiencing greater harms related to COVID-19. According to Volkow (2020), individuals who use substances, particularly individuals who smoke or vape (tobacco or cannabis), and individuals with a SUD are at increased risk for experiencing harms associated with COVID-19.

Alcohol

As would be predicted by the increase in alcohol sales (Statistics Canada, 2020b, 2020c), reports are also showing that, while the majority of individuals have not increased their alcohol use, a subset of individuals have increased their alcohol use in response to the pandemic (Chodkiewicz et al., 2020; Pollard et al., 2020; Statistics Canada, 2020c). In Canada, 21% of individuals aged 18–34 years old reported significantly increasing the amount of alcohol they drank at home during the COVID-19 pandemic (Canadian Centre on Substance Use & Addiction, 2020). The most common reported reasons for increasing alcohol consumption were a lack of a regular schedule (51%), as well as increased boredom (49%) and stress (44%). Similarly, university students under quarantine/strict self-isolation during COVID-19 in Russia displayed significantly higher rates of alcohol use than those not under restrictions in Belarus. The students who reported increased alcohol use displayed greater fear, loneliness and depression compared to those who did not increase use (Gritsenko et al., 2020). To further complicate matters, there have been false rumors spreading that alcohol consumption can prevent COVID-19 infection (Chick, 2020), when in fact evidence suggests that chronic, heavy alcohol consumption decreases immunity to viral infections (Barr et al., 2016). It is unclear whether these false narratives surrounding alcohol indeed influence rates of alcohol use, however, this is of concern given the importance of messaging to youth and the impact on substance use among this population.

Cannabis

The COVID-19 pandemic has not only changed the frequency of cannabis use in Canada, where recreational use of cannabis is federally legal, but it has also posed some unique challenges and health considerations related to cannabis use. For example, Statistics Canada reported a 19.2% increase in cannabis sales in March 2020 relative to February 2020, marking one of the biggest monthly increases in cannabis sales since legalization in October 2018 (George-Cosh, 2020). Every province and territory in Canada reported increased cannabis sales in March 2020 (except for Prince Edward Island) suggesting a national increase in cannabis consumption (George-Cosh, 2020). The increase in cannabis sales has been paralleled by a modest self-reported increase in cannabis use as a result of COVID-19, especially among individuals reporting poorer mental health (Rotermann, 2020). Outside of Canada, among Russian and Belarussian university students who use substances, a 27.3% increase in cannabis use was reported as a consequence of COVID-19 (Gritsenko et al., 2020). Of concern, cannabis consumption—specifically smoking or vaping—is associated with damage to lung tissue and an increased risk for pulmonary disease. Indeed, preclinical studies suggest that the lungs of individuals who smoke or vape cannabis products have a diminished capacity to respond to infection (Madison et al., 2019). Given the impact of COVID-19 on lung function, it is possible that individuals who consume products via vaping or smoking could be at increased risk of complications related to COVID-19 (Volkow, 2020).

Opioids

There are several concerns with respect to opioid use during the pandemic and harms associated with COVID-19. For example, Health Canada’s Controlled Substances and Cannabis branch released a bulletin stating the illicit opioid marketplace is growing increasingly unpredictable and reports from the United States suggest that the COVID-19 pandemic is fueling the opioid crisis (American Medical Association, 2020). Furthermore, the economic instability that many young adults have experienced as a result of the COVID-19 pandemic may add additional risk for opioid-related harms. For example, a 2017 study showed that the opioid-related death rate increased by 3.6% for every 1% increase in the unemployment rate (Hollingsworth et al., 2017). Finally, social distancing guidelines could increase risk of opioid overdose as it increases the likelihood of people using alone, thereby reducing the chances of someone being available to administer naloxone and call for help.

Considerations for the Management and Treatment Options for Students on Campus

Estimates from the United States suggest that ~50% of counseling center clients on college campuses have severe psychological problems, and approximately 8% are so impaired that they are unable to continue with their studies without significant psychological or psychiatric intervention (Oswalt et al., 2020). With many universities and post-secondary institutions facing the reality of online course delivery, universities are tasked with the challenge of pivoting many of their supports to the virtual world. Under normal circumstances, students experiencing mental health challenges have several ports of entry to receiving services. Typically, campuses have a medical center located on campus, offering psychological and/or psychiatric services. Other possible touch points include counseling services in residences, and intake via disability centers. Moreover, several universities may employ third party services that offer more flexible care (e.g., EmpowerMe). Nevertheless, even prior to COVID-19, there are many acknowledged
barriers to care, which must be further considered in the context of COVID-19 if institutions are aiming to provide altered service delivery to their students during and after the pandemic.

Waitlists and Accessibility

One commonly mentioned reason for not seeking support is the lengthy wait times to seek appointments with a counselor on campus and imbalanced quality of support (with the exception of urgent cases). While there is no systematic literature on this topic to our knowledge, the Canadian Alliance for Student Associations reported that wait-times to see a campus counselor can range from 1 week to 3 months. Internationally, the Association for University and College Counseling Center Directors (AUCCCD) reported that average wait time for a first appointment was 6.5 business days (LeViness, Bershad, Gorman, & Graun, Murray, 2018). It is important to note, however, that of the 478 counseling centers on college and/or university campuses surveyed by the AUCCCD, 66.3% did not have a waitlist. Of those institutions that did have a waitlist, the average wait time was 17.7 business days and there was an average of 51 student clients on the waitlist at any given point in time (LeViness, Bershad, Gorman, Graun, & Murray, 2018). Moreover, students are often unaware of what services are available: Jack.org, a Canadian charity with a focus on destigmatizing mental health and empowering youth to identify and reduce barriers to mental health services, reported that 74% of students surveyed were not aware of on-campus services or how to access them. This may partially explain why students do not make use of treatment services, even when they are available to them (Bruffaerts et al., 2019). With increasing mental health and substance use concerns among post-secondary students during COVID-19, the issue of waitlists and accessibility is expected to be exacerbated, unless post-secondary institutions are poised to meet the demand.

Equity, Diversity and Inclusion (EDI)

Prior to the pandemic, discrepancies in which students access mental health services have been documented, wherein white students, females, and heterosexuals are more likely to seek care (Eisenberg et al., 2011). The discrepancy between white students and students of color seems to persist even in the case where access to care is considered equal, suggesting that other factors such as discrimination and stereotyping among mental health services may be a contributing factor (Hunt et al., 2015). During the pandemic, it is becoming increasingly evident that traditionally oppressed and marginalized groups are disproportionately impacted by the effects of the public health crisis (Kapilashrami & Bhui, 2020), which will likely serve to further increase inequities. An additional burden may be placed among Black and Indigenous communities in particular, given global events during the pandemic that reveal stark structural inequalities and anti-Black and anti-Indigenous racism. Further compounding this concern is the discrimination and racism that is experienced by visible minorities and marginalized groups in healthcare systems resulting in unmet health needs (Feagin & Bennefield, 2014; Kitching et al., 2020), and distrust in accessing care from medical communities (Bazargan et al., 2021).

Help-Seeking Behavior and Social Support

Some estimates suggest that as many as 80% of students who struggle with a mental health condition do not seek treatment (Blanco et al., 2008; Drum et al., 2009; Garlow et al., 2008; Gruttdaro & Crudo, 2012). The most reported reason for not seeking support among university students is perceived lack of need, even among those who screen positive for a mental health disorder (Eisenberg et al., 2007; Garlow et al., 2008). Put simply, many students do not seek treatment because they do not feel they need it. In addition, stigma significantly contributes to the negative attitudes toward help-seeking (Eisenberg, Downs, et al., 2009) and therefore should be considered a barrier to accessing supports and services. For example, many individuals with SUD are especially hesitant to seek treatment due to stigma (Hubbard et al., 2018). In the COVID-19 era, students will invariably lose their on-campus support network, consisting primarily of their peers and professors; this is particularly pertinent among the incoming cohort of first-year students who may not yet have established social networks. Moreover, international students may also experience elevated isolation due to distance from family supports, or contrarily due to distance and disconnection from the campus community. Together, this might result in students losing critical ‘touch points’ with on-campus supportive care. Friends may not be able to detect subtle changes in eating or sleeping habits, professors may not be able to notice a student’s absence in a classroom. Considering that students may be disconnected from their peers during COVID-19, it is worth noting that social support is crucial for individuals in recovery from SUD, whereas social isolation is a risk factor for relapse (Moustafa, 2020).

Call to Action

Evidence suggests that students are more likely to perform well academically and remain at their institution if they have contact with on-campus counseling services (LeViness, Bershad, Gorman, Graun, & Murray, 2018). A recent report prepared by the Healthy Minds Network revealed that if students were struggling with mental health issues, they were twice as likely to leave an institution without graduating, regardless of the institution (Lipson et al., 2019). Thus, when universities invest in student mental health, it improves academic performance, persistence, and graduation rates (Eisenberg, Golberstein, & Hunt, 2009). How can these institutions continue to support student well-being in the era of COVID-19?

Proactive & Flexible Mental Health Support

It is necessary that universities update their mental health treatment services to ensure that students continue to receive necessary support in the upcoming terms. This will be particularly important as many students suffered an interruption to services and treatment access when post-secondary campuses closed,
and social distancing measures were put into place. Overall, universities should anticipate increased use of mental health services, and adapt their systems to accommodate care accordingly. In order to adapt to the continuously evolving challenges of the pandemic, universities should form multidisciplinary mental health teams that meet regularly to make decisions that provide timely and evidence-informed care to students (Holmes et al., 2020; Sahu, 2020). Any interventions aimed to mitigate the impacts of COVID-19 on mental health should be evidence-based and should be rigorously assessed (Holmes et al., 2020). Information regarding new treatment systems should be quickly and accurately conveyed to students, faculty, and staff at the post-secondary institutions. Moreover, universities should implement plans to increase the capacity and quality of mental health care providers, who themselves are facing elevated work demands and high levels of stress during this pandemic. Prior to the pandemic, data from the AUCCCD suggested that the average student-to-counselor ratio was 1:1411 (LeViness, Bershad, Gorman, Braun, & Murray, 2018). Therefore, one strategy to support service providers may be to enhance opportunities for group therapy sessions as a way to deliver services to a much larger number of students compared to traditional individual therapy. In addition, post-secondary institutions should ensure that supports and services are available to service providers to ensure their sustained capacity to deliver adequate care. For example, offering wellness and self-care workshops, mindfulness classes, support groups, and so on.

As many universities are conducting their academic year online, mental health services should aim to offer students flexible support via telemedicine or internet-based interventions. Online treatments may encourage more students who are concerned about stigma to seek treatment due to increased privacy. Recent data suggest that the convenience, anonymity, and availability of online counseling services may be appealing to young adults (X. Wang et al., 2020), and they appear to be an effective alternative to in-person treatment (Harrer et al., 2018). Indeed, youth appear to have positive attitudes around using tele-health or text services: in a qualitative study examining attitudes around texting services, youth expressed these platforms were less confrontational, e.g. “the counsellor can’t tell if I’m crying,” that they appreciated the opportunity to take their time while expressing their feelings, and being able to delete what they had written. Further, a wealth of studies have found compelling evidence that Cognitive Behavioural Therapy (CBT) delivered via videoconference is as effective as in person treatment for PTSD, mood, and anxiety disorders (Anandsson, 2016; Flygare et al., 2020). Data suggests internet-based interventions for problematic substance use are also beneficial (Hoch et al., 2016; Tait & Christensen, 2010). Telephone or videoconference psychotherapy may address the increased need for mental health services by allowing for more practitioner availability, reduced transit times, and more flexible and convenient scheduling (Kobewka & Forster, 2018). It may also allow for more populations, such as those with physical disabilities, and distance students, to be reached (Kobewka & Forster, 2018). Finally, incorporating peer support programs for mental illnesses such as depression may also benefit students while reducing wait times (Byrom, 2018; Pfeiffer et al., 2011). Students may be able to support each other and connect over shared experience and identity.

Enhance Services to Reflect Equity, Diversity and Inclusion

 Universities should make a concerted effort to increase the number of counselors and treatment providers that are representative of the diverse nature of the student population, as students from underrepresented groups (e.g., LGBTQA2S+, BIPOC & individuals with visible and invisible disabilities) may be more likely to seek supports from individuals that are representative and understand their unique needs. It is also essential that universities prioritize disadvantaged and marginalized communities within their student body (Morgan & Rose, 2020). A recent article in the Lancet Psychiatry provides clear and thorough evidence-based guidelines for practitioners to provide anti-racist mental health care to Black people (Cénat, 2020). This includes, but is not limited to, an increased awareness of racial issues, including the impacts of racism on mental health, as well as tailored and culturally appropriate care and interventions to each individual (Cénat, 2020). These insights need to be taken into account by post-secondary institutions when training and selecting practitioners to work with a student population. As such, universities ought to be mindful of putting equity, diversity, and inclusion (EDI) front and center when contemplating any changes to mental health supports. This will allow the students who are most impacted by the COVID-19 pandemic to receive the quality of care that they need. Moreover, support programs should be targeted toward inclusive spaces that allow students to receive support for the amplified concerns that the COVID-19 pandemic has caused them (Morgan & Rose, 2020).

Address Substance Use and Addiction Together With Mental Health Disorders

Problematic substance use issues are not typically considered on post-secondary campuses, aside from programs that aim to reduce the harms associated with use. Problematic substance use should instead be acknowledged as part of the mental health spectrum, and students should be educated on how continued engagement in problematic substance use can worsen existing mental health problems or provoke new ones. In this regard, considering that substance use and mental health often co-occur, providing integrated services that address both mental health and substance use concerns together should be the standard of care. Universities should distribute objective, evidence-based content to educate students, faculty, and staff on the potential harms of increased substance use, so that members of the post-secondary community can make informed choices. It is also essential that students in need of substance use related treatment continue to receive sufficient support.
The promotion of online treatment options may create a sense of anonymity and encourage students to reach out. Online group support programs may be beneficial, as social support is especially important for SUD recovery (Liu et al., 2020). In particular, online peer to peer emotional support appears to be effective in reducing substance use (Liu et al., 2020). Through consistent education and support, universities can attempt to mitigate problematic substance use, particularly in the era of COVID-19.

**Intervene Early as a Prevention Strategy**

Universities should support mental health literacy programs to educate students, staff, and faculty on signs of poor mental health. Universities should also focus on early intervention to promote positive mental health in the community (Oswalt et al., 2020) and provide online resources or workshops to educate students on methods to cope with the current situation (Sahu, 2020). Professors should also be encouraged to promote these resources and integrate health promotion into their course delivery where possible. Given that faculty who are teaching may represent the ‘face’ of the post-secondary school if an institution is entirely online, they may well be the sole point of contact for students to connect with in order to receive information on mental health services. Adopting these factors together with positive, clear, and consistent messaging from senior leaders at Universities could help reduce the stress and anxieties of this pandemic.

**Increase Social Connectedness**

As loneliness due to social isolation is a concern, it would be beneficial for universities to create online social environments for students to connect with one another. This could be especially helpful for international students and incoming first-year students who may feel especially disconnected from the community. These social environments could take the form of online support programs, where students can provide support for one another and make connections. As early intervention for loneliness is important (Holmes et al., 2020), these systems could allow for identification of students who may benefit from additional support. Cheng et al. (2020) detail an online peer support project that was implemented for healthcare professionals in Wuhan, China. Interdisciplinary mental health professionals volunteered to offer support and facilitate discussion in an online group chat and participants were able to discuss stressors and offer support to one another in a moderated environment (Cheng et al., 2020). This type of intervention could potentially be implemented in a post-secondary setting to help students feel a sense of connection and may also reduce load on counseling services. Furthermore, connecting with friends and family is part of the recommendations of coping during COVID-19 by Canadian organizations such as the Mental Health Commission of Canada (MHCC).

**Conclusion**

The COVID-19 pandemic has introduced a significant set of stressors into the lives of many post-secondary students, a population that was already at high risk of developing mental health and substance use disorders. At the same time, public health measures aimed at reducing the spread of the virus (e.g., physical distancing) have created barriers for students who might be, or already were, receiving supports, services and treatment on campuses. This might especially have negative impact on students with disabilities, those with pre-existing mental health and substance use disorders, internationals students, and/or students belonging to other disadvantaged or marginalized groups. Given that post-secondary students already faced several barriers to accessing treatments and services before the pandemic, it is crucial that universities take swift action to update their mental health services and supports to meet the evolving student needs.

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**Open Practices**

I hereby confirm that no raw data was used or analyzed for the preparation of this manuscript; therefore, no raw data are available for download, no analysis code, syntax, or coding manuals were used for quantitative or qualitative data analysis. Otherwise, all materials and sources used in the preparation of this manuscript are available for download and DOI (or other persistent identifiers) are included in the reference section as appropriate. This study did not use a preregistration plan for data collection and/or analysis. Data and materials for this study have not been made publicly available. The design and analysis plans were not preregistered.

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