

**MEDIA ANALYSIS OF COVID-19 AND THE PORTRAYAL OF YOUTH MENTAL  
HEALTH IN ONTARIO NEWS**

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## **Abstract**

The COVID-19 pandemic is an event that disrupted routines and mental health of youth. To control the spread of the virus, strategies such as extensive closures and school moving to online platforms took place across Canada. News articles were released daily about COVID-19 and its effects on youth mental health, the impacts of disrupted routines, and available supports. The purpose of this thesis is to explore how youth mental health was portrayed in news articles during the first year of the COVID-19 pandemic. I explored how journalists portrayed and disseminated information about youth mental health and corresponding supports and psychosocial services during this time was completed. News articles from two major Ontario news outlets published from March 11<sup>th</sup>, 2020, to January 31<sup>st</sup>, 2021, were retrieved from the ProQuest Canadian Major Dailies database by searching the terms “coronavirus” and/or “COVID-19”. The articles were then filtered to retrieve those related to child and youth mental health. In total, n=391 articles were included in the final analysis. The text and language in the media articles were analyzed following a six-step process of thematic analysis. My analysis revealed five themes: 1) Youth mental health challenges throughout the COVID-19 pandemic; 2) inequity and disproportionate impacts among youth; 3) effects of public health isolation and distancing measures; 4) impacts of the pandemic on schooling; and 5) managing the impacts of the pandemic. To summarize and integrate the themes, I created a conceptual model that shows the potential for intended and unintended impacts of the pandemic restriction measures on youth mental health. This analysis provides a view of youth mental health in Ontario news media during the first year of the COVID-19 pandemic, underscoring the importance of psychosocial services in future disaster risk management.

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## **Chapter 1: Introduction**

In early January 2020, the World Health Organization (WHO) made the world aware of a mysterious viral outbreak referred to as the “novel coronavirus” (Secon et al., 2020; WHO, 2020). The virus quickly spread through China and to other countries via travellers; on January 25, 2020, the first Canadian case of the novel coronavirus (SARS-CoV2) was announced. On January 30, 2020, the WHO declared a global public-health emergency, confirming viral infections in 18 countries outside of China (Blewett, 2020a). As more cases were found worldwide, the WHO named the disease caused by the novel coronavirus “COVID-19”. The WHO declared the outbreak as a global pandemic on March 11, 2020. New cases of the disease continue to be recorded internationally, and as of January 10, 2022, the cumulative global total of COVID-19 cases was 305,914,601, according to the WHO (2022). Although these are official numbers, this count likely underrepresents the number of infections worldwide. Countries are also facing multiple waves of the pandemic (Mohny & Citroner, 2021). For example, Ontario, Canada, faced a third wave of the virus in spring 2021 (McGrath, 2021), and a fourth wave in fall 2021 (Osman, 2021). As of the writing of this thesis, the omicron variant, discovered in November 2021, presents a new threat with its rapid spread.

Major actions were taken in Canada following the declaration of a pandemic. Medical assessment centres opened, the House of Commons and Senate shut down, extensive closures occurred at national museums, parks, and city facilities, and schools and universities moved classes to online platforms (Blewett, 2020 a, b; Bronskill, 2020). Individuals who could work from home were encouraged to do so, restaurants were forced to only offer take-out and delivery options, and hospitals implemented visitor restrictions. Provincial and Territorial Premiers began declaring states of emergency as of March 13, 2020 (Quebec), and non-essential services were

required to close (Rodrigues, 2020; Dawson, 2020; DeClerq, 2020a). As the pandemic brought waves of infection over months at a time, these actions changed, with restrictions lifting and being implemented at various times throughout the pandemic (Canadian Institute for Health Information [CIHI], 2021).

### **1.1 The COVID-19 Pandemic and Youth**

The COVID-19 pandemic completely disrupted normal routines as physical distancing measures came into effect, requiring people to stop gathering with family, friends, co-workers, and classmates. These changes were especially impactful for children and youth as schools closed, activities were cancelled, and sporting events were postponed (CIHI, 2021; Lee, 2020). The result was a complex ‘new normal’ which presented challenges for children who may have had difficulties understanding what was happening – and why many things were changing (School Mental Health Ontario, 2020; Lee, 2020).

Disasters disrupt children’s basic needs and routines, including changes in accessing food, water, shelter, and primary caregiving (Becker-Blease et al., 2010). These disruptions during the pandemic may have increased risk of mental health issues such as anxiety, depression, and aggression. Many of the settings where youth felt safe or happy (e.g., schools, community centres) suddenly shut down, leaving them bewildered or afraid. The re-opening of schools throughout the 2020-2021 school year prompted extensive media coverage about parents’ and children’s anxiety and nervousness, changes in daily school routines, increased testing for the virus, and vaccinations.

### **1.2 Role of the Media During the COVID-19 Pandemic**

The COVID-19 pandemic dominated the news for over a year, and as of January 2022, articles providing updates on COVID-19, and public health issues associated with it, continue to

be released on a daily basis. Mass media outlets, which disseminate news articles on health and disease to the public, are the Canadian public's primary source for information, thereby having the potential to influence perceptions of physical and mental illnesses (Gesser-Edelsburg et al., 2019; Baun, 2009). Prior to the pandemic, media outlets were known to ignore inequities or undermine potential solutions by portraying how health disparities, such as those related to accessing mental health resources, or how diseases may unequally affect populations (Watson et al., 2020; Niederdeppe et al., 2013).

Throughout this thesis, I attempt to address some of these issues, by focusing on child and youth mental health in COVID-19 media, published in Ontario, Canada. Below, I outline the rationale and purpose of this media analysis, followed by an explanation of the research questions. Chapter 2 contains a review of relevant literature, while Chapter 3 presents the methodology for the project, and details of how rigour was ensured. The results from the media analysis are presented in Chapter 4, while the final chapter provides a discussion and recommendations for future research.

### **1.3 Rationale**

Mass media plays an influential role in dominant discourses in any disaster (Baun, 2009; Boyd et al., 2019); including discourse surrounding the COVID-19 pandemic. Many articles are published in the news media, providing a steady flow of information about the pandemic, and increasing the amount of public information (Koeze & Popper, 2020). By analyzing the potential impacts between this information and the portrayed mental health of the public, we gain an understanding of the impacts of the COVID-19 pandemic on the lives of children and youth. Given the amount of information published, it is important to understand the portrayals, descriptions, and ideas presented in Canadian news media.

Analysis of how the media portrays mental health during a disaster, such as the COVID-19 pandemic, is also key to understanding health emergency and disaster risk management. Research areas of interest can include psychosocial risk management, community emergency management, and translation of knowledge to research for pandemic response decisions (Kayano et al., 2019; Pan-Canadian Public Health Network, 2018).

There is increasing research regarding the effects of the pandemic on youth and their mental health (Centre for Addiction and Mental Health [CAMH], 2020b; Fegert et al., 2020). The COVID-19 pandemic impacted the routines of children and youth and influenced how their basic needs are met. Research on youth mental health and responses to the changing pandemic context will help support the development of necessary youth mental health services and care. This will be helpful in providing care earlier in life, as most young adults with mental illnesses report symptoms beginning in childhood (Lamantia, 2020; Ministry of Children and Youth Services, 2015; Clark, 2013; Mental Health Commission of Canada [MHCC], 2016).

Children and youth's mental health are supported in many settings (e.g., schools, after-school programs) (MHCC, 2016), but closures due to COVID-19 placed limits on their availability. By understanding the impact of the COVID-19 pandemic on youth's basic needs and routines, care settings can better plan how to provide their services to those with mental health challenges. Considering the factors that influence youth's mental health and vulnerability can also assist youth in accessing supports and other resources, as not all individuals will seek the help they need, or are able to easily access care (MHCC, 2018, 2019).

The COVID-19 pandemic decreased opportunities for children and youth to be included in social settings (UNICEF Canada, 2020). Social inclusion is a significant determinant of health and is especially protective of mental health (Canadian Mental Health Association Ontario,

2008; Blue, 2017). In times of stress, companionship and engagement with networks can enhance one's ability to face adversity (Stewart & Townley, 2019). Research on the portrayal of youth mental health during the pandemic will enhance the knowledge of social inclusion as a determinant of health.

During the COVID-19 pandemic, health inequalities were portrayed in the media. Health inequalities exist for underrepresented minorities: people who are racialized, people who are incarcerated, people living with disabilities or other functional limitations, and Indigenous populations. This is evident with the unequal toll of COVID-19 cases and deaths among these populations (Berwick, 2020). By conducting a media analysis to continue research on health emergency and disaster risk management in a youth mental health context, the project can help contribute to current and future pandemic management. There is potential for practical implications as well, including the development of care services specifically geared towards underrepresented minorities.

#### **1.4 Purpose Statement & Research Questions**

The overarching purpose of this masters' thesis is to examine news media portrayal of youth mental health during the COVID-19 pandemic. While this research focuses on youth mental health, the literature tends to put “children” and “youth” in one category, despite differences between the two. “Children” can refer to individuals up to 17 years, whereas “youth” can refer to individuals aged 18 years and younger (Turcotte, 2015). Because of this overlap in terminology, literature on children is relevant to the study. Thus, throughout this thesis, I drew on literature and data related to both children and youth.

This thesis addressed the following research questions:

1. How was child and youth mental health portrayed in news media articles related to the COVID-19 pandemic?
2. How were mental supports and psychosocial services for children and youth described and portrayed in COVID-19-related media?

## **Chapter 2: Literature Review**

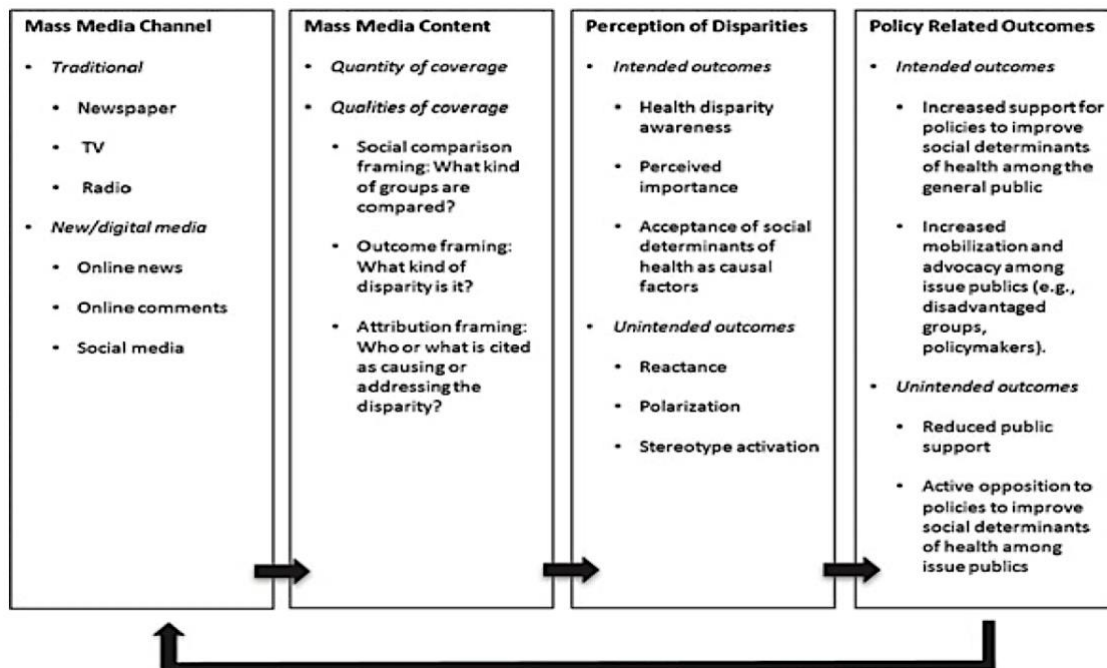
In this chapter, I review literature on media communication, media and mental health, disasters and youth mental health, the COVID-19 pandemic and the impacts on youth, the pandemic and the media, and finally, complexity and mental health systems.

### **2.1 Media Communication**

Communication enables everyday actions to be explained, information to be disseminated, and thoughts to be shared. For information to be circulated, easy access to media is needed. News articles are a form of communication easily accessible by digital and commercial means; digitally published information disseminates quickly, which can change public awareness of information, but also lead to uncertainties or false information being shared (Mheidly & Fares, 2020; Artz, 2018). Mass media outlets, such as newspapers, provide information to the public about all types of events – good and disastrous. The media, particularly commercial media, remains the predominant source for framing events and information in the news (Boesman, et al., 2015; Artz, 2018).

Media communications can impact both society and policy. For example, perpetuating health disparities in the media can have impacts on policy development. Niederdeppe et al. (2013) developed a conceptual model (Figure 1) to illustrate the relationships between media communication about American health disparities and public support of policies and mobilization. Their model describes how a media source (i.e., mass media channel) shapes the quantity and quality of information covered. The model acknowledges that basic spatial constraints (such as the time limit of a news broadcast or word count of an article) influence the extent to which mass media channels discuss issues such as health disparities. Additionally, they

argue that mass media reflects existing power structures and presents how power structures shape content about health disparities across different media channels.



**Figure 1:** Working model of pathways linking communication about health disparities in the mass media to policy support and mobilization (Niederdeppe et al., 2013; reprinted with permission)

In the conceptual model above, media communication works along a pathway, from type of mass media to potential outcomes. Figure 1 (Niederdeppe et al., 2013) shows this pathway in the context of communication about health disparities. It lists traditional and digital mass media channels and details the route to policy-related outcomes. The model proposes that news content is affected by the type of mass media channel, and quantity and quality of the news coverage is affected by the spatial limitations of the channel. The quality of the coverage is examined through social comparisons, outcomes, and attributions (e.g., individual-oriented causal attributions such as lifestyle choices). Following examination of the mass media content, perceptions of the covered issue (i.e., health disparities) arise.



When consuming media content as a passive member of the public, intended and unintended outcomes could arise, based on who is interpreting the media messages. Humans receive and interact with the information from mass media channels. As humans, it is not possible to completely predict the outcomes from interacting with this media, as we do not all have access to the same information to form opinions (Pidd, 2004). Based on both intended and unintended outcomes, individuals and governing bodies can develop policy-related outcomes to address an issue (e.g., health disparities). Once policies have been implemented to address the issues presented in the media, the cycle may repeat, as mass media channels deliver information about new policy-related outcomes.

The model presented by Niederdeppe et al. (2013) is useful for understanding how coverage of youth mental health in the media may lead to both intended and unintended outcomes. The model reflects health disparity issues, and how the media can have policy-related outcomes based on perceptions of the disparities. Research about the portrayal of youth mental health during the COVID-19 pandemic could potentially support important policy-related outcomes based on the information perceived through the media analysis. News articles reflect the views of journalists and new media organizations; therefore, the news content may be influenced by journalism power structures, institutional constraints, or perceptions.

An analysis of media framing around COVID-19 allows for a detailed view of Ontario's media portrayal of youth mental health throughout the COVID-19 pandemic. This knowledge can help to explore the extent to which news media covers various perspectives in health communication.

## 2.2 Media and Mental Health

Portrayal of mental illness in the media may uncover reflections of broader mental health perspectives and their impact on society. Journalists not only present concrete information regarding mental illness, but they can influence how readers see events and act in response to them, particularly on issues about mental illness and the community (Livingston, 2013). Journalists tend to report multiple views in their news stories, but many of their accounts under-represent people with mental illness and the perspectives of mental health professionals (Srivastava et al., 2018; Livingston 2013). Due to the limited perspectives of journalists included in news stories, the solutions presented typically align with journalists' interests, and biases may result (Hernández-Aguado & Chilet-Rosell, 2020; Stuart, 2006). As journalists look to “sell” the news, there is emphasis on negative behaviours of people with mental illness, including aggression, violence, and delusional and irrational behaviour (Nawková et al., 2012; Stuart, 2006). The biased representation of those living with mental illnesses can perpetuate stigma related to mental health and illness; stigma can stifle understanding of these problems, and how to identify and respond to them (MHCC, 2019).

Studies have shown that the negative portrayal of mental illness in the media includes themes such as: over-representation and distortions (Srivastava et al., 2018), dangerousness (Wahl, 2003; Stuart 2006), criminality, and unpredictability (Stuart, 2006). Wahl (2003) shared findings on how stigma and public fears arise from media portrayals, and the impacts of these fears. These include individuals' resistance to community care and increased coercion to get treatment by personal networks or societal pressures. News media not only provides an exceptional amount of negative mental health portrayal, but it emphasizes a dramatic and distorted image of mental illnesses (Stuart, 2006). These negative images can impact self-esteem,

help-seeking behaviours, and overall recovery for those with mental illness, including youth living with mental illness (Stuart, 2006).

Although negative portrayals of mental health in the media are prevalent, there are also positive outcomes from news coverage of mental health. Morris (2006) argues that the public's high exposure to news articles can be used for health promotion of mental illness. Media providers have worked to try and change these negative perspectives. Newspapers do focus on health promotion, and mental health issues and related stigmas are conveyed to the public through media publications (e.g., newspaper articles). Morris (2006) also describes how concepts of "empowerment" and "universality" may come into play for individuals with mental illnesses. When individuals view positive mental health portrayals in the media and understand there are others with similar symptoms (Bell Let's Talk, 2020), they may use the media to gain information as an initial means to know where to look for support when experiencing difficulties in seeking help (Morris, 2006). Positive actions such as promoting mental health treatments and resources may be present but are not always covered or portrayed sensitively in the media (Morris, 2006; Kilbourne et al. 2018).

### **2.3 Disasters and Youth Mental Health**

The frequency and severity of disasters continue to grow because of increasing risk drivers, such as unplanned urbanization and unmitigated climate change (Kayano et al., 2019; Greve, 2016); this has implications for population mental health. Children and youth worldwide who experience these disasters are heavily impacted (Evans & Oehler-Stinnett, 2006). Globally, children are estimated to bear 88% of the burden of diseases related to climate change (Philipsborn & Chan, 2018), with approximately 48 million children in 51 countries impacted by natural disasters and other emergencies every year (UN News, 2018).

Children and youth are generally regarded as a vulnerable group in disaster risk reduction policy, planning and developing of strategy documents, and research. Various factors affect children's vulnerability and mental health when facing disasters, such as age, gender, income level, socio-economic status, disability, and family structure (Amri et al., 2018). When disasters arise, children's basic needs and routines are disrupted. Basic needs and routines are positively correlated with mental health for children and youth.

The vulnerability of children, in a disaster context, makes them susceptible to more severe distress than adults (Fritze et al., 2008). This includes increased susceptibility to post-traumatic stress disorder (PTSD), behavioural problems, depression, and the ensuing stress from disruptions to routines and social networks (Amri et al., 2018; Burke et al., 2018). Despite children's greater risk for developing mental health issues, literature tends to focus on the impact of disasters on adults (Burke et al., 2018).

Youth mental health issues can manifest internally (e.g., depression, anxiety) and externally (e.g., aggression, disruption). Rubens et al. (2018) did a meta-analysis examining mental health issues arising from the impact of natural disasters on internalizing and externalizing problems in youth. They found that most of the research focused on PTSD following disasters. There are multiple outcomes of disasters on youth mental health; understanding internal and external outcomes can support development of effective interventions (Costello & Maughan, 2015; CAMH, 2014). Rubens et al. (2018) found that assessment of multiple mental health outcomes can capture the full impact of disasters on youth, and develop evidence-informed, comprehensive strategies to be used in the aftermath of disasters. Because disruptions to children's basic needs are known to arise from disasters, additional research on the outcomes from these disruptions is important.

Youth better overcome disasters when they are involved in work, activities, or supports related to disaster mitigation and risk reduction (Amri et al., 2018). This involvement by youth helps give a sense of control, readiness, and confidence to assist with reactions to disaster outcomes (Pfefferbaum et al., 2018). When the media covers youth engagement in disaster mitigation, the public can see how youth can overcome disasters and the sense of chaos in a way that makes them feel in control and increases readiness and confidence.

## **2.4 The COVID-19 Pandemic & Impacts on Youth**

The COVID-19 pandemic is an unprecedented disaster, forcing Canadian health systems to adapt quickly to meet population needs. Although the SARS-CoV-2 virus (responsible for COVID-19), is the seventh coronavirus to infect humans – and the third to emerge in the past two decades – little was known about it when the COVID-19 pandemic was declared (Arabi et al., 2020; WHO, 2020).

Having little information about SARS-CoV-2 and COVID-19 creates uncertainty in these unprecedented circumstances; people are affected differently, and uncertainty can cause stress and anxiety (Ottawa Public Health [OPH], 2020). Negative effects on mental health can arise in response to stressful stimuli resulting from COVID-19 (Canadian Psychological Association [CPA], 2020), this underscores the importance of considering how children and youth's mental health are impacted. Young children may not understand the required preventative actions, whereas older children may sense the anxiety and stress of their parents or caretakers and be worried about their health and those around them. (CAMH, 2020c).

As of February 2021, symptomatic cases of COVID-19 were more common in adults than children, particularly those under the age of 10 (Government of Canada, 2021; Ludvigsson, 2020). Despite this, COVID-19 may lead to serious health concerns and consequences in

children who are immunocompromised and/or have underlying health conditions (Hageman, 2020). One such serious health concern is multi-system inflammatory syndrome and hyperinflammatory shock in children that is associated with COVID-19 (Centers for Disease Control and Prevention [CDC] 2020; Riphagen et al., 2020). The inflammation in organs such as the heart, lungs, kidneys, and brain, is a serious side effect which can lead to death (CDC, 2020). Although little is known about the underlying causes and who is more susceptible to this inflammatory shock, this illness signals unique complications to be considered in the pediatric population (Riphagen et al., 2020). Both the fears of contracting COVID-19, and complications from the disease need to be considered during this pandemic; the impacts of COVID-19 on the health of children have not always been described, with information focusing instead on COVID-19 not being prevalent in children.

COVID-19 poses several risks to children. The uncertainty of the disease and the pandemic creates pressure on youth mental health. This includes the pressures of uncertainty and rare but serious illness. These risks, and their impact on youth mental health need to be considered in this media analysis, as youth will need supports and care to face these mental health challenges.

## **2.5 The COVID-19 Pandemic, Accessing Information, & The Media**

Future long-term impacts of COVID-19 and the resulting pandemic are still unknown. Medical professionals' predictions about the pandemic may not have been accurate while the disease continued to spread, particularly with no cure, and prior to vaccine approvals. Petropoulos and Makridakis (2020) note that at the beginning of the pandemic, there was a high volume of information about the infectivity of the virus, the consequent tolls of the virus, and how much people panicked (Petropoulos and Makridakis 2020; Salzberg, 2020). Petropoulos and Makridakis (2020) also mention how there is the continued possibility of global alarm due to the

virus “being the first ‘infodemic’ as the result of the hyper-connectivity offered by today’s social media” (p. 5).

Electronic media outlets allow the public to access information quickly, but also created the potential for misinformation to spread quickly, with devastating impacts as global feelings of distrust and tension arose at the onset of the pandemic (Garrett, 2020). In Garrett’s editorial piece from the early months of 2020, she described how media were initially lacking resources to respond to the COVID-19 pandemic, and proper funds not provided for the staffing needed for professional communications companies and outlets. She highlighted the imperative of this as: “the current global COVID-19 epidemic features mechanisms of delivery of scientific information that are unprecedented, adding to pressure for proper interpretation by the media and public” (p. 942). When available funds were poorly handled, journalists did not have adequate resources to report correct and professionally interpreted information in mass media outlets. Dangerous impacts from these underfunded and misinterpreted media sources arose during the pandemic, including world leaders criticizing the urgency of the virus, and public fear of workers and authorities. These dangerous impacts were a major problem through the first wave of the pandemic, and continued into subsequent waves of the pandemic (Hardy et al., 2021; Garrett 2020)

Media outlets are the main source of information for individuals, and the dissemination of COVID-19 and SARS-CoV-2 information is susceptible to misinterpretation by journalists and readers. Misinformation is the inadvertent sharing of false information without intent to cause harm and has been a concern in the health sector (Wang et al., 2019). Disinformation is a similar concept, which involves false information knowingly being created and shared to cause harm (Wang et al., 2019). The risks of misinformation and disinformation have been heightened

during the COVID-19 pandemic, due to the great deal of information that is being presented to the public.

Individuals perceive risks based on factors which apply to them (Yong & Lemyre, 2019), and portraying the risks of COVID-19 in the media may influence these perceptions. In a research study about different types of disasters, Yong & Lemyre (2019) found that when the public was informed about risk probabilities, irrational behaviours were expected but often did not arise. However, disasters thought to be catastrophic are perceived to be of higher risk. Additional factors such as social identities, worldviews, and social media amplification may influence what individuals find to be “risky”. These multiple factors can interact in complex ways to impact mental health due to risks.

## **2.6 Complexity and Mental Health Systems**

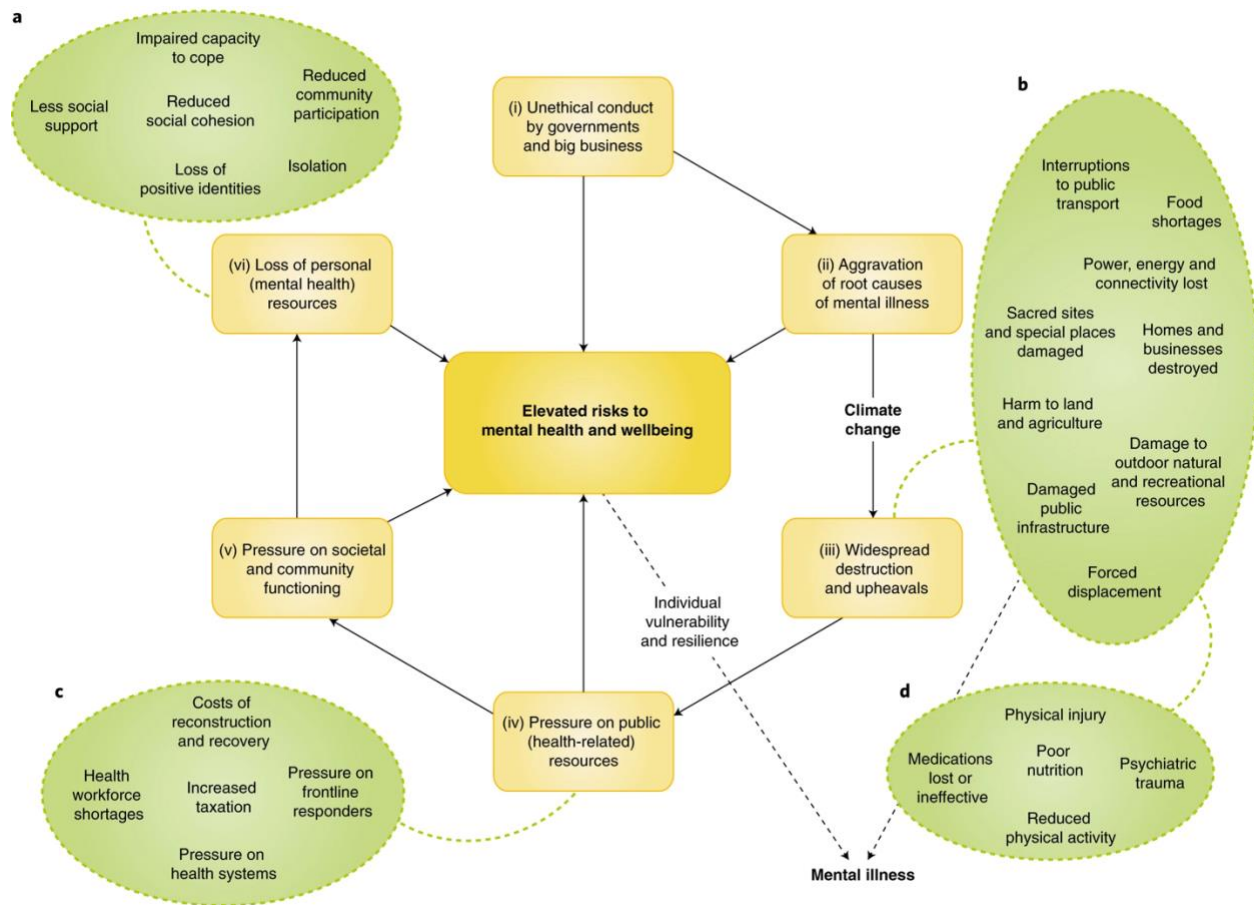
The complex relationship between vulnerability and mental health – particularly among children and youth – results in different health outcomes and support needs for this population (CAMH, 2014). The multiple components that make up the Canadian healthcare system must adapt to suit the needs of the population. Complexity science is useful to help leaders analyze and adapt to changing perspectives in healthcare systems (Coiera, 2011), and to create and adapt initiatives to promote disaster resilience (Khan et al., 2018; O’Sullivan et al., 2013). It is a useful lens to understand how components of a system are associated and interrelated, and the influence of these components on each other (Kannampallil et al., 2011).

Complexity science illustrates how multiple autonomous parts of a system constantly interact and associate with one another (Bird & Strachan, 2020; Graham, 2009). The study of complex adaptive systems, their patterns, and how they sustain, self-organize, and produce outcomes, can help individuals within healthcare systems better understand how to adapt and



react when faced with an external change (Burns, 2001). If individuals working within mental health care systems understand how their complex adaptive systems interact, this can help them adapt to other aspects of the system when an exogenous shock occurs. When faced with an exogenous shock, systems naturally change and adapt (Merali & Allen, 2011), such as the case of the shock of the COVID-19 pandemic and youth mental health support systems. When individuals working within these systems understand the complexity within, and can adapt and react to these changes, youth mental health can be supported based on the present and future impacts of the pandemic.

The complexity of interacting factors that produce outcomes and create interventions when faced with a disaster, was reflected in a study by Berry et al. (2018) on climate change and mental health. Factors of mental health and climate change were found to be highly connected, with feedback loops demonstrating the interrelationships (Figure 2). Berry et al. (2018) showed the association between disasters, disadvantage, and compromised mental health in the relationship between climate change and mental health. The complex associations and interrelations among these known factors demonstrate that components not initially thought to interrelate can do so in research and policy development. The complexity lens described by Berry et al. (2018) can be used in this media analysis of youth mental health reflected in Ontario news outlets. Understanding the associations between youth mental health challenges, the available mental health resources, and the long-term impacts of a disaster are important. When these interrelationships are known, youth (and individuals in their lives such as parents, teachers, and mental health care providers) can adapt to support youth mental health when faced with an exogenous shock, such as the COVID-19 pandemic.



**Figure 2:** Top-level causal process diagram showing major domains of distal, intermediate and proximate harm linking climate change and mental illness (Berry et al., 2018; reprinted with permission)

Complex systems consist of united factors which adapt to changing environments to allow for the emergence and evolution of interactions within a viable system (Jackson, 2000). With changes to a system's environment, the factors in the system must evolve together to remain a functional system. The complex interconnections between numerous factors in mental health systems allow the system to evolve to fit the changing needs of a population. An example of how a health system can adapt to fit the needs of a population (such as youth), is through the framing of high-risk populations in pandemic planning processes (O'Sullivan & Phillips, 2019).

Following the SARS pandemic in 2003, pandemic plans in some jurisdictions were revised and

the term “vulnerable” populations was replaced with “high-risk” or other less stigmatizing terms. The use of terms such as “vulnerable” to frame populations is a deficit-oriented frame with negative connotations; deficit-oriented frames present people as weak and focus on limitations (e.g., disabled person). Replacement of the term “vulnerable” (when referring to persons at heightened risk) to person-first language places individuals ahead of the limitations associated with their risk categories; it is more dignified and inclusive of the whole-person (O’Sullivan & Phillips, 2019). Inclusive, empowering discourse in pandemic planning documents is an example of how systems and communication can support resilience within the whole population (O’Sullivan & Phillips, 2019; O’Sullivan et al., 2014).

## **2.7 Summary of Literature Review**

Mass media outlets are a primary information source for the public, with information created by journalists, disseminated to the public, and results in various outcomes (intended or unintended). For this media analysis, it is important to consider how coverage of youth mental health in the media could lead to both types of outcomes. Specifically, studies have shown that journalists tend to negatively portray mental health in the media (Wahl, 2003; Stuart 2006). Positive portrayals of mental health in the media also exist (Morris, 2006), but are less common.

Escalating risk drivers have increased the frequency and severity of disasters (Kayano et al., 2019; Greve, 2016), with children and youth heavily impacted by the resulting disasters (Evans & Oehler-Stinnett, 2006). Research has shown that children’s mental health is more likely to be affected than that of adults’ (Amri et al., 2018), due to children’s susceptibility to the effects and stress of disruptions to routines and social networks (Burke et al., 2018). The more disruptions, the greater the associations to mental health issues in children and youth (Becker-Blease et al., 2010). However, involving youth in work, activities, or supports related to disaster

mitigation and risk reduction, can help them overcome disaster experiences, and assists with their reactions to disaster outcomes (Pfefferbaum et al., 2018; Amri et al., 2018).

Unknown circumstances also cause stress, and the uncertainty of the SARS-CoV-2 virus leaves the potential for misinformation and disinformation (Wang et al., 2019). Although SARS-CoV-2 is the seventh coronavirus shown to infect humans, data on this virus is relatively new, which is one reason that led to increased global concerns regarding the COVID-19 outbreak (Arabi et al., 2020; WHO, 2020). The uncertainty about COVID-19 has caused stress and anxiety (OPH, 2020), leading to negative effects on mental health (CPA, 2020), and it is important to understand how this uncertainty is portrayed in the media.

The relationship between the vulnerability of children and youth mental health is complex, resulting in different health outcomes and needs (CAMH, 2014). When faced with a disaster, the complexity of interacting factors produces outcomes, but creates difficulties in predicting behaviours, and developing interventions for desired results for disaster management and mental health (Berry et al., 2018). The complex relationships in the systems related to youth mental health need to be considered, including the relationships between youth in risk situations, media, mental health services and support responses.

The literature shows that media is a powerful outlet that can impact mental health in positive and negative ways. Discourse and language in the media, combined with the complexity of health systems, highlight how there are many interrelating factors of mental health that need further research. The gaps that exist in the literature reviewed are summarized in Table 1 below.

**Table 1:** *Summary of the Topics Discussed in the Literature Review and the Existing Gaps Used to Develop this Thesis.*

| <b>Literature Topic</b>                     | <b>Gaps in the Literature</b>                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Media Communication                         | Media sources shape the content, but it is important to consider the resulting impacts of the information portrayed about a disaster, such as the COVID-19 pandemic.                                                                                                                                                                                                                                                             |
| Media and Mental Health                     | Media typically portrays mental health negatively, which can lead to stigma and fear. Positive portrayals also exist but are not well-studied.                                                                                                                                                                                                                                                                                   |
| Disasters and Youth Mental Health           | Children and youth are considered a population at heightened risk, but research focused on their mental health impacts from disasters is not as developed as that focused on adults. Therefore, it is important to understand the impact of the COVID-19 pandemic on the basic needs and routines of children, and to consider factors that may influence vulnerability to mental health issues.                                 |
| COVID-19 Pandemic and Impacts on Youth      | It is important to consider how children and youth's mental health have been impacted by daily disruptions throughout the COVID-19 pandemic, and the ongoing uncertainty associated with the risks and transmission of the virus.<br>Both the possibility of, and actually contracting, COVID-19 by immunocompromised children is important to consider when understanding their mental health during the time of this pandemic. |
| COVID-19 Pandemic, Information, & the Media | Misinformation and disinformation are known concerns for COVID-19. It is not clear how these concerns will affect youth mental health.                                                                                                                                                                                                                                                                                           |
| Complexity and Health Systems               | Literature shows how health systems adapt in response to change, which supports the potential impact of the COVID-19 pandemic on youth mental health support systems.<br>Relationships among risk factors, actors and settings in the complex youth mental health system need to be analyzed including how various situations among children may leave them more susceptible to COVID-19.                                        |

## **Chapter 3: Methods**

### **3.1 Research Design**

This study was designed as a qualitative case study using thematic analysis (Braun & Clarke, 2006). I applied a social constructionist view (Phillips & Hardy, 2002; Braun & Clarke, 2006), which is based on the understanding that news texts are open to multiple readings and multiple meanings (White, 2004). The case was bound by the publication dates of the news articles, as well as specific Canadian news outlets. To explore the pertinent issue of youth mental health during the COVID-19 pandemic, data from two news sources (*The Ottawa Citizen* and *Toronto Star*), were analyzed to gain a complex and detailed understanding of the issue (Creswell & Poth, 2018).

### **3.2 Case Setting**

The setting for this case study— and unit of analysis— is two Ontario news outlets. COVID-19 appeared in the global news starting in January 2020, however lockdown measures did not start in Ontario until March 2020. Due to the high number of news articles published related to the COVID-19 pandemic, we selected specific timeframes between March 11<sup>th</sup>, 2020 – January 31<sup>st</sup>, 2021, as boundaries for data collection. COVID-19 was declared a global pandemic on March 11<sup>th</sup>, 2020, and discussions about actions, such as extended school closures, were also prevalent. This key date in the pandemic timeline was chosen as the beginning boundary of the case setting. Additional timeframes were selected for their pertinence to major events in Ontario regarding children and youth. Multiple types of events were included, such as those related to public health announcements (e.g., state of emergency, school closures), and those related to children's social and personal routines (e.g., holidays and celebrations that possibly had to be celebrated differently during the pandemic). Milestone events in the time boundaries included

the new academic year, the return to in-person school for children following Christmas break, and the week of Bell Let's Talk Day for mental health awareness in January 2021. I chose January 31<sup>st</sup>, 2021, as the closing boundary, to encompass these moments of interest through the pandemic that could potentially impact youth mental health. Details on the selected timeframes are provided in Table 2.

**Table 2:** *Descriptions of Timeframes During the COVID-19 Pandemic From Which Media Articles Were Retrieved*

| <b>Timeframe period for article inclusion</b> | <b>Event description</b>                                                                                                                                                             |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | (Developed from Nielson, 2020; Government of Ontario, 2020; Office of the Premier, 2021, 2020a, 2020b; DeClerq, 2020b;)                                                              |
| March 11-March 31, 2020                       | Begins at the start of the pandemic and extends to the announcement that Ontario schools would be closed until May.                                                                  |
| April 14-April 30, 2020                       | Includes dates associated with announcements of extending the provincial state of emergency, closures of publicly funded schools to May 31, and the Three Stage reopening framework. |
| May 19-June 2, 2020                           | Includes the Stage 1 reopening date and the two weeks that followed in Ontario.                                                                                                      |
| June 12-July 8, 2020                          | Includes the Stage 2 reopening date and the two weeks that followed in Ottawa and Toronto.                                                                                           |
| July 17-August 14, 2020                       | Includes the Stage 3 reopening date and the two weeks that followed in Ottawa and Toronto.                                                                                           |
| August 1-September 30, 2020                   | Includes discussions about back-to-school preparations and safety protocol implementation across Ontario.                                                                            |
| October 9-October 16, 2020                    | Week that includes and follows the Canadian Thanksgiving holiday weekend.                                                                                                            |
| October 21-October 27, 2020                   | Begins the day of an announcement that Ontario was expanding mental health services for children and youth in the province, and extends through the following week                   |
| October 28-November 3, 2020                   | Period that includes Halloween, and the three days before and after the holiday.                                                                                                     |
| November 16-November 20, 2020                 | Week that encompassed discussions surrounding a possible extended winter break in Ontario schools.                                                                                   |



|                              |                                                                                                                                                                            |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| November 23-December 7, 2020 | Begins at the implementation of lockdown status in Toronto, and the two weeks that followed.                                                                               |
| December 8-December 31, 2020 | Begins the day before the first vaccine approval by Health Canada, and the two weeks that followed. Includes the week prior to Christmas, through to New Year's Eve, 2020. |
| January 1-January 15, 2021   | Includes New Year's Day, 2021, and the two weeks that followed the holiday.                                                                                                |
| January 16-January 31, 2021  | Includes the return to in-person school for children following Christmas break. Also includes the week of 'Bell Let's Talk Day' for mental health awareness.               |

### 3.3 Data Sources

The corpus for this study consists of news articles from Canadian Major Dailies, published in Ontario during the bounds of the case study. Articles were retrieved by searching the ProQuest database to obtain COVID-19 related news from *The Ottawa Citizen* and the *Toronto Star*. I selected these media outlets as they are based in two major Ontario cities with high numbers of confirmed COVID-19 cases early-on in the pandemic (see Appendix A for city demographics and COVID-19 case numbers). Ottawa and Toronto are capital cities (national and provincial, respectively), and there is a range and abundance of information for Ontario citizens available through these outlets. The news articles from these outlets are all searchable in the ProQuest database, allowing for easy access and retrieval of the data. Selection of articles from *The Ottawa Citizen* and the *Toronto Star* allowed me to gain an understanding of the information being published and shared throughout populated areas of the province. Ottawa and Toronto are surrounded by small towns, with populations who would read, and be reflected in, articles in

these publications. Narrowing the search in this way contributed to the feasibility of the study, due to the high volume of articles available.

### 3.4 Data Collection

Articles were searched for, and downloaded, from October 1<sup>st</sup>, 2020, through to February 17<sup>th</sup>, 2021, to ensure I captured the news articles published up to and including January 31<sup>st</sup>, 2021. ProQuest was searched with the terms “coronavirus” or “COVID-19”, to identify articles published within the bounds of the case. This initial data collection yielded 4544 articles from *The Ottawa Citizen*, and 7621 from the *Toronto Star*. The breakdown of the number of articles by timeframe and article source are shown below in Table 3. (The complete data collection process can be found in Appendix C).

**Table 3:** *Number of Articles From Each Described Timeframe and Media Sources When Searched in ProQuest With the Terms "Coronavirus" OR "COVID-19"*

| <b>Timeframe Period</b>         | <b>The Ottawa Citizen</b> | <b>Toronto Star</b> |
|---------------------------------|---------------------------|---------------------|
| March 11 – March 31, 2020       | 759                       | 591                 |
| April 14 – April 30, 2020       | 485                       | 665                 |
| May 19 – June 2, 2020           | 374                       | 527                 |
| June 12 – July 8, 2020          | 501                       | 814                 |
| July 17 – August 14, 2020       | 467                       | 867                 |
| August 15 – September 30, 2020  | 649                       | 1,354               |
| October 9 – October 16, 2020    | 113                       | 237                 |
| October 21 – October 27, 2020   | 98                        | 183                 |
| October 28 – November 3, 2020   | 105                       | 195                 |
| November 16 – November 20, 2020 | 80                        | 124                 |
| November 23 – December 7, 2020  | 212                       | 462                 |
| December 8 – December 31, 2020  | 338                       | 676                 |
| January 1 – January 15, 2021    | 174                       | 448                 |
| January 16 – January 31, 2021   | 189                       | 478                 |
| <b>Total</b>                    | <b>4544</b>               | <b>7621</b>         |

## **Data Set Refinement**

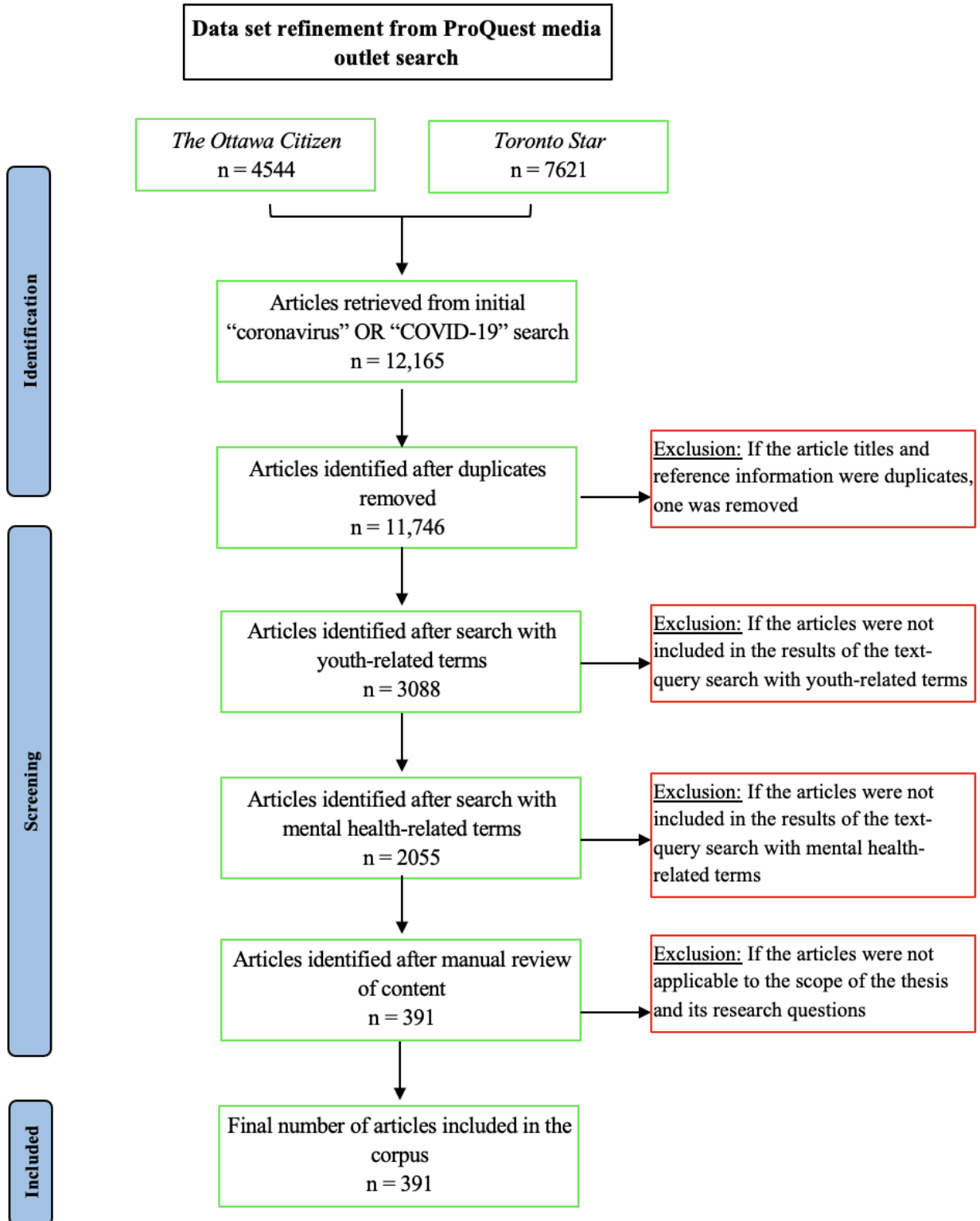
References from the search results were downloaded into an Excel sheet and the articles were downloaded as individual PDFs. Conditional formatting was set into each Excel sheet title list to highlight duplicate title names. If the dates and titles were the same, the articles were compared to see if the content was also identical. I imported the remaining articles into the NVivo12 software and sorted them based on the news source and the timeframe of the publication date (4544 from *The Ottawa Citizen* and 7202 from *Toronto Star*). A text query search was conducted to retrieve the articles of interest relating to child and youth mental health. The terms used in the NVivo12 text search queries are displayed in Table 4. All text search queries included stemmed words of the terms.

**Table 4:** *Terms Used for Text Search Queries and the Resulting Article Numbers*

| <b>Text Search Query #1<br/>Youth-Related Terms</b>              | <b>Number of Articles Yielded following Query #1</b> | <b>Text Search Query #2<br/>Mental Health-Related Terms</b>                                    | <b>Number of Articles Yielded following Query #2</b> |
|------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------|
| youth OR<br>young OR<br>child OR<br>teen OR<br>kid OR<br>student | The Ottawa Citizen: 972<br><br>Toronto Star: 2116    | mental health OR<br>psych OR<br>stress OR<br>anxiety OR<br>anxieties OR<br>crisis OR<br>crises | The Ottawa Citizen: 632<br><br>Toronto Star: 1423    |

The first text search query used terms related to youth, and the resulting articles were then searched with mental health-related terms to yield the final corpus. The articles were filtered using NVivo12 software; this method was used in two other media studies conducted in my supervisor's lab (EnRiCH lab). Once filtered, I manually reviewed the resulting articles to remove articles not related to youth mental health during the COVID-19 pandemic. The resulting news articles (391) were used in the data analysis; this included 156 articles from *The Ottawa*

*Citizen* and 235 from the *Toronto Star*. A flow diagram demonstrating the data set refinement from initial search to the final corpus is shown in Figure 3.



**Figure 3:** Flow diagram of the data set refinement process

### **3.5 Data Analysis**

Data analysis was limited to text; pictures and other visual components of news articles were not analyzed. I analyzed the media articles and language used to create meaning in these news articles, as well as to identify how youth mental health was portrayed and described (Braun & Clarke, 2006, 2019). By reading news articles produced and disseminated during the pandemic, I was able to analyze how journalists described youth mental health in the pandemic context and look at how the articles contributed to society by making meaning of the content (Phillips & Hardy, 2002).

The analysis was completed using the thematic analysis methodology as described by Braun & Clarke (2006, 2019). The six-step process of thematic analysis was followed, beginning with reading the final data set of news articles, and concluding with the final analysis and manuscript. The process is outlined in Table 5 below.

Thematic analysis is open to flexibility and inductive analysis (Braun & Clarke, 2006). Data analysis was approached with a complexity lens toward youth and mental health system supports, to develop a proposed conceptual model based on the thematic analysis (Ghoreishi et al., 2017). The complexity lens took into consideration the actors in the youth mental health system (e.g., youth, healthcare providers, families), and the effect of the COVID-19 pandemic on this system. A conceptual model was developed from the final themes, based on the actors and environments of the systems impacting youth mental health (Figure 4).

**Table 5:** *Description of the Steps Used for Thematic Analysis*

| <b>Phase of Thematic Analysis</b><br>(Braun & Clarke, 2006, 2019) | <b>Description of Actions</b>                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Familiarizing myself with the data                             | I read all the news articles and made notes                                                                                                                                                                                                                                                                  |
| 2. Generating initial codes                                       | This step started with brainstorming codes (words, phrases) from the articles in the collected data set. I set boundaries of the codes to understand what data would be included in each code and reviewed the boundaries with my supervisor (TO) for agreement.                                             |
| 3. Generating initial themes                                      | I constructed lists and visual links to manually sort common codes into potential themes and sub-themes, of shared meaning united by a core concept.<br>An inductive approach to data analysis was emphasized by noting initial themes, and not attempting to fit in to pre-existing themes in the data set. |
| 4. Reviewing themes                                               | I conducted two rounds of review to refine the themes and corresponding codes. My supervisor (TO) read 100/391 articles and reviewed the themes to ensure they reflected the data. Articles were selected for reading after the initial review and spanned the 14 timeframes.                                |
| 5. Defining and naming themes                                     | Following review, I named the themes and explained the boundaries. The themes were finalized for presenting the results of the study.                                                                                                                                                                        |
| 6. Producing the report                                           | The final stage is the writing of this thesis, including the final thematic analysis of the data set based on the developed themes, and a corresponding conceptual model to illustrate the interrelationships amongst the produced themes and sub-themes.                                                    |

### **3.6 Development of a Conceptual Model**

Conceptual models provide a visual simplification of the factors, interrelations, and boundaries of a studied system (Braithwaite et al., 2018). The development of a conceptual model allows for a visual representation of the relationships between the resulting coded data and developed themes from this media discourse analysis.

My conceptual model was developed with the resulting themes of this study, and the linkages of the surrounding factors in the system (Marshall & Rossman, 2016). The themes reveal the complexity of the youth mental health system and how it reacts to the exogenous shock of the COVID-19 pandemic; the model depicts these adaptations by highlighting changes on the system's outputs due to the pandemic (Figure 4).

### **3.7 Reflexivity Statement**

As a graduate student and federal civil servant in the nation's capital, information surrounding the political and individual contexts of the COVID-19 pandemic is highly prevalent in my daily life. My exposure to media has been extremely high, as I have accessed news content on the television, the radio, social media, and releases from the university, to name a few sources.

My personal experience with physical distancing and isolation measures during this pandemic have undoubtedly made a personal impact. At the time of data collection and analysis I was 24 years old, an age that is included in some definitions of 'youth' in the literature. I recognized the need to bracket my own pandemic experience when reading the news media for this study, and by memoing when I conducted the data analysis. While reading the news articles, I made notes of personal reflections and feelings, to be aware of my preconceptions and areas for further reflection of the dataset (Tufford & Newman, 2012).



### 3.8 Ensuring Rigour

Rigour was ensured by establishing trustworthiness in this study through criteria proposed by Lincoln and Guba (Amin et al., 2020; Morse, 2015). Credibility of the study, or the “degree to which inferences made in a study are accurate,” (Polit & Beck, 2012, p. 745) was achieved through prolonged engagement. This was done by reading multiple news articles to understand the media culture relating to youth mental health during the COVID-19 pandemic. This engagement allowed me to become aware of potential distortions arising from the media or pre-conceptions about the topic of interest (Amin et al., 2020). Prolonged engagement was necessary to produce data familiarization, thick data, and descriptions of the social interactions and meanings of the media discourse to be presented and analyzed (Amin et al., 2020; Denzin, 2001). My supervisor (TO) read 100 of the news articles (25.6%), and then reviewed the inductive themes to agree the content of the articles was accurately reflected. These 100 articles were selected for her to read following my initial reading and spanned the 14 described timeframes. This ensured there was a reflexive and rich approach to the data analysis (Braun & Clarke, 2019). With steps taken such as data familiarization, code development, and researcher reflexivity, reliability was established throughout data analysis. (Braun & Clarke, 2019).

Dependability of the methodology was ensured by systematically reviewing the articles, multiple reads of the data sets, and making ongoing reflexive notes during the article review. Various steps throughout the analysis were taken to ensure replication in the data retrieval process. By indicating the applicable boundaries for articles’ publishing dates, the databases used for retrieval, and the search terms to filter the articles in NVivo12, we ensured replication of this data retrieval process would result in the same articles for analysis.

## Chapter 4: Results

This thesis is an exploration of how youth mental health and relevant supports and services were portrayed in the media related to the COVID-19 pandemic. Using thematic analysis, I identified five main themes: 1) youth mental health challenges throughout the COVID-19 pandemic; 2) inequity and disproportionate impacts among youth; 3) effects of public health isolation and distancing measures; 4) impacts of the pandemic on schooling; and 5) managing the impacts of the pandemic. In this chapter, I begin with a broad overview of pandemic-related communications, then describe each theme and subtheme, and conclude by explaining the conceptual model synthesizing the results.

The final corpus for this media analysis included 391 news articles (156 from *The Ottawa Citizen*, and 235 from the *Toronto Star*). Table 6 shows the breakdown of these articles by timeframe and media outlet.

**Table 6:** *Final Number of Articles for Each Timeframe and Media Outlet*

| <b>Timeframe Period</b>         | <b><i>The Ottawa Citizen</i><br/>(# Files)</b> | <b><i>Toronto Star</i><br/>(# Files)</b> |
|---------------------------------|------------------------------------------------|------------------------------------------|
| March 11 – March 31, 2020       | 40                                             | 15                                       |
| April 14 – April 30, 2020       | 18                                             | 24                                       |
| May 19 – June 2, 2020           | 16                                             | 20                                       |
| June 12 – July 8, 2020          | 12                                             | 29                                       |
| July 17 – August 14, 2020       | 15                                             | 33                                       |
| August 15 – September 30, 2020  | 17                                             | 52                                       |
| October 9 – October 16, 2020    | 2                                              | 6                                        |
| October 21 – October 27, 2020   | 3                                              | 3                                        |
| October 28 – November 3, 2020   | 2                                              | 5                                        |
| November 16 – November 20, 2020 | 4                                              | 1                                        |
| November 23 – December 7, 2020  | 3                                              | 15                                       |
| December 8 – December 31, 2020  | 7                                              | 14                                       |
| January 1 – January 15, 2021    | 5                                              | 4                                        |
| January 16 – January 31, 2021   | 12                                             | 14                                       |
| <b>Total</b>                    | <b>156</b>                                     | <b>235</b>                               |

The timing of when COVID-19 information was released by the media, was linked to mental health. At the onset of the pandemic, the quick releases of media information related to community closures, online learning and homeschooling, and anxieties about stay-at-home orders, all impacted youth mental health. Information was provided quickly, with many unknowns about school situations. Families were forced to make decisions with incomplete information, while facing the COVID-19 pandemic crisis.

The sheer volume of information related to the COVID-19 pandemic negatively impacted youth mental health, as they felt overwhelmed with all the information about this new virus and disease. The media was extremely ‘noisy’ throughout the COVID-19 pandemic, as public-health officials looked to quickly disseminate all available information. The public shared their own opinions and disinformation on social media. As mass media is a main source of information for the public, communication and language are impactful. During this unprecedented time of the COVID-19 pandemic, media related to this crisis led to stress and anxieties for youth.

#### **4.1 Theme 1 – Youth Mental Health Challenges Throughout the COVID-19 Pandemic**

Youth have faced mental health challenges throughout the COVID-19 pandemic and journalists reported higher incidences of negative mental health outcomes and crises among youth. Three sub-themes related to youth mental health challenges are described below.

##### ***Increased Incidence of Mental Health Challenges and Needs for Mental Health Services***

An increased incidence of mental health challenges brought a corresponding demand for mental health services. News articles reported an increase in rates of anxiety, depression, and a deterioration of youth mental health since the onset of the COVID-19 pandemic. This resulted in increased numbers of referrals and appointments for mental health care.

The news articles demonstrated that the COVID-19 pandemic changed the lives of youth, and that individuals experienced negative impacts on their mental health. For those struggling with their mental health prior to the outbreak of COVID-19, the trajectory of their mental health illnesses worsened. The media described how individuals lost access to in-person appointments, and there were increased gaps in access to online mental health supports. Significant increases in anxiety, depression, and suicidal ideations were described, with major concerns about the trajectory of increased mental health challenges noted in the data set.

*Rates of anxiety and depression have soared since the beginning of the COVID-19 pandemic, especially for those already struggling with mental illness, but even for those people who've never had to worry about their mental health before, according to research at the Royal Ottawa Mental Health Centre. "Even in the 'Average Joe, 'if you want to call them that, the pandemic has taken a really serious toll," said Rébecca Robillard, director of clinical sleep research at The Royal and author of the yet-to-be-published study. "Even for those without preexisting mental disorders, half of them had major signs of depression and a third had signs of anxiety disorder," Robillard said. (Crawford, The Ottawa Citizen, September 22, 2020)*

Hospitals reported drastic spikes in the number of mental health consults, as children and youth sought help for their mental and emotional health. There was also rich discussion about increased demands and needs for mental health supports and resources.

### ***Shortage of Available Services***

The increased incidence of mental health challenges throughout the COVID-19 pandemic outpaced the availability of services. Hospitals, resource centres, and mental health professionals were unable to keep up with the demand for their services.

*When it comes to mental health treatments, [Munter] said, the pandemic has contributed to a surge in demand for services that were stretched too thin to begin with... "We simply*

*are not equipped for a pandemic after the pandemic of mental health issues." Munter was one of three children's hospital heads voicing concerns...about the effect of health care delays and ongoing isolation on children's health. The head of Halifax's IWK Health Centre, Dr. Krista Jangaard, said the impact of COVID-19 on children has been underestimated. In addition to the impact of isolation on mental wellness and development, she said there should be focus on the negative impact longer waits for...health services are having on children's physical health. (Payne, The Ottawa Citizen, July 7, 2020)*

The cancellations and shortages of other health services, such as surgeries and scans, also had an impact on youth's physical health. The news articles highlighted how worry about physical illness and lack of physical health services could have consequences on the mental health of youth as well.

### ***Emotional and Behavioural Impacts on Poor Mental Health***

The negative impacts of stress on youth mental health, as well as how the pandemic negatively affects the feelings of youth, emerged in the data analysis. News articles described youth feeling negative emotions throughout the pandemic, including sadness, hopelessness, loss of motivation, and nervousness. This impacted their home lives and learning in school.

With all the uncertainty at the onset of the COVID-19 pandemic, the media reported how fear was an understandable emotion among youth. The media described different types of fear, including fear of other people during times of required isolation and social distancing, uncertainty of the virus and COVID-19, anxiety regarding viral transmission and potential outbreaks, and worries about the impacts of the pandemic on routines. These fears impacted youth mental health by causing trauma, anxiety, and confusion.

The media also reported on the physical expression of children and youth's negative mental health including suicide, self-harm, substance abuse, and eating disorders. When the

pandemic led to diminished accessibility of crucial care supports for these challenges, children and youth experienced greater physical distress.

*Pediatric and mental health experts say pandemic stress is driving a spike in eating disorders among adolescents and teens...could have long-term physical and mental health effects... Dr. Debra Katzman...at SickKids [Hospital] and co-founder of its eating disorders program...says children are in more acute physical and mental distress than past cases...because of delayed assessments if some families feared contracting COVID-19 by visiting a hospital early in the pandemic, she says...virtual care has made it more difficult for some recovering patients to maintain health goals... "We're seeing kids who are at significantly low weights, are extremely malnourished and have all kinds of medical and psychiatric comorbid complications," says Katzman. (Toronto Star, January 22, 2021)*

Children and youth who needed to access their required care while battling and recovering from eating disorders, were not always able to easily do so. The increased physical manifestation of youth mental health challenges throughout the pandemic highlighted the need for more supports for these individuals to care for their mental illness and crises.

Mixed messaging, incomplete instructions from authorities, and misinformation and disinformation all contributed to stress, confusion, and anxiety for youth. When faced with a crisis, complete and factual messaging is desired. Journalists described how incomplete messaging caused individuals involved in schools and childcare centres to be uncertain about what was best for the youth in their care. Inconsistencies in information provided by the media during the pandemic caused confusion for the public and affected risk perception.

*Humans have a hard time taking collective risk seriously. "We are wired by evolution to respond to immediate threats," said Robert Gifford, a professor of psychology and environmental studies at the University of Victoria...In a collective risk scenario like this one, those threats need to be communicated clearly, simply and without confusion for the*

*public to buy in. And far too often, when it has come to COVID-19, that hasn't happened*  
(Warnica, The Ottawa Citizen, March 27, 2020)

Actions that small children engage in, such as giving hugs and playing in close proximity, are important for their development and mental well-being. With new rules and public health guidelines, young children were told to not engage in these actions, but they did not necessarily understand why not. These changes created stressors on young children and their mental health. Descriptions of “COVID fatigue” and youth breaking public health guidelines were also prevalent in these communications.

In summary, this theme from the media articles shows how youth were susceptible to increased incidences of negative mental health and fear throughout the pandemic. Additionally, the media articles discussed the physical expression of negative mental health, including crises such as eating disorders, self-harm, and substance abuse. There were many news stories reporting on youth mental health challenges during the COVID-19 pandemic, which provided information to make the public aware of how the pandemic increased the incidence of mental health challenges, and the difficulties with accessing care.

#### **4.2 Theme 2 – Inequity and Disproportionate Impacts Among Youth**

Various inequities impacted youth mental health, and increased difficulties for youth accessing mental health services. Demographic differences, marginalized populations, and socio-economic status were described in the media as a few of these inequities.

##### ***Gender and Age Differences***

While the media articles identified that youth mental health was affected because of pandemic precautions and actions, the effects varied based on demographics, such as gender and age. These demographic differences created difficulties for youth to access mental health

supports and services throughout the pandemic, as not all supports are equally accessed by the public. For example, throughout the pandemic, younger people have lost access to more social and external supports than older individuals.

*The mental health toll has been particularly pronounced on younger people and women...Nearly half of those aged 18 to 34 (47 per cent) said their mental health had deteriorated since the arrival of COVID-19. Women overall reported almost the same effect, with 46 per cent saying their mental health was worse, including eight per cent who described it as "much worse."* (Crawford, The Ottawa Citizen, January 23, 2021)

The mental health of young people and those identifying as women was more affected by the pandemic than that of others. This finding supports the need to determine how to best overcome the accessibility differences for mental health care among age and gender demographics.

Physical activity was described by the media as a positive outlet for mental health, but not all youth have equal access to physical activities. In one article focused on physical activity in youth, the journalist reported that ‘boys’ were more likely to meet physical activity guidelines than ‘girls’ (Barker, The Ottawa Citizen, July 20, 2020). This trend was acknowledged before the pandemic but was noted across the corpus to be more pronounced following the onset of the COVID-19 pandemic.

### ***Racialized Populations***

In my analysis, it became clear there were disproportionate impacts of the pandemic on racialized populations. This included greater challenges in accessing mental health supports and services. News articles described how racialized youth, particularly Black youth, struggled with mental health challenges, and the many hurdles Black youth must overcome to access care. It was reported that Black care providers were finding ways to increase the accessibility of such services in the community for Black youth throughout the COVID-19 pandemic.



*...Pathways [To Care] researcher Tiyondah Fante-Coleman said...In her role with the project...she's keenly focused on making sure the care Black youth receive is safe and reflects their needs and the elements of their reality that may affect their mental health...many of the barriers that exist aren't that different from barriers that exist in other realms of the youth's daily lives..."What usually happens is that Black youth either have to try to find a new service that can meet their needs, which delays their care even further or they disengage from services completely," Fante-Coleman said..."The ultimate goal is to create a safer space for mental health care for Black children and youth across the province, and across the country, if that ripple effect happens," she said...grassroots funds for Black mental-health care have been growing amid the pandemic and racial reckoning. (Toronto Star, January 11, 2021).*

### ***Socio-Economic Inequities***

In addition to racial inequities, socio-economic differences also influenced access to mental health supports and services. A common socio-economic factor described in the media was housing. Youth living in cities were used to socializing in close quarters with other families, which had a positive impact on their mental wellbeing. With the onset of the COVID-19 pandemic, youth interactions with those in their usual social circles were restricted, reducing access to previously easily accessible mental health support. On the other hand, youth who lived in areas such as the suburbs, were able to socialize with others in more spacious and safe environments such as parks and backyards.

Income was reported as another barrier for youth in having consistent and equitable access to mental health supports; for example, being able to afford extracurricular activities or new technology for socializing and online school. During the COVID-19 pandemic, mental health care centres providing affordable or free care in the community had to close or reduce their available services and supports. This revealed the cost barriers in accessing mental health

supports. Youth who were unable to afford private counselling faced a disadvantage in accessing continuous treatment. Being unable to access proper and consistent care exacerbated mental health challenges for these youth.

### ***Youth with Complex Care Needs***

The mental health of youth with complex care needs was disproportionately impacted by the COVID-19 pandemic. The media reported on youth with neurological health challenges, such as those with autism. Prior to the pandemic, this youth population, and the individuals who support their care, could access many supports and programs to improve social, verbal, and living skills (e.g., personal care, cleaning up after themselves). But the need for physical distancing and closures of day programs caused these youth to change their routines and created emotional challenges such as confusion, stress, frustration, and anxiety. These feelings were compounded by difficulties for youth living with complex needs particularly in terms of properly following public health protocols, such as handwashing and mask-wearing. This resulted in additional mental health challenges, as well as the youth's close contacts being stressed and worried about the potential for the virus' transmission when working with these youth.

Complex care needs can also result from co-morbidities. Journalists described how youth living with multiple health conditions were in constant states of worry. Those with health conditions that affect their respiratory systems faced exacerbated anxiety throughout the COVID-19 pandemic. Complex care needs created additional emotional trauma for these youth, which was difficult to access proper support for during the pandemic.

### **4.3 Theme 3 – Effects of Public Health Isolation and Distancing Measures**

Public health measures such as provincial stay-at-home orders, lockdowns, and social distancing had impacts on family dynamics, and the emotional well-being of individuals. In

many households, family members were forced to stay at home for long periods of time.

Throughout the pandemic, the media described families' heightened tensions in their households, resulting in greater anxieties, exhaustion, and drained energy.

*Don't underestimate how much everyone [at home] realizes that reality. But with anxieties about COVID-19 always present and the intensity of living through lockdowns plus their particular issues, each [member of the household is] self-absorbed. You're immensely helpful just by listening and helping where you can. But you, [the eldest adult child at home] have taken on all these responsibilities for people too needy to not consider you the "lucky" one. Your Mom comes home from work to all their needs, too. (Teshler, Toronto Star, January 25, 2021)*

Conversely, some news articles noted positive impacts from lockdowns on youth mental health. Journalists described how youth enjoyed time at home baking, reading, and connecting emotionally with their families. However, media descriptions of the positive effects of isolation at the individual and family level were less prevalent than negative impacts.

### ***Effects on Youth Development and Routines***

Journalists reported on how the new and continuous physical distancing measures could potentially have long-term effects, as staying away from others may make it more difficult for children to fully understand their biological and social need to be near others. The fear of being around others caused by the contagious nature of the virus can affect youth long-term was also mentioned as a concern in the media. Since we do not yet know how long pandemic related measures will affect the lives of children and youth, it is also unknown how long it will take for youth to unlearn being fearful around others in social settings. Youth and their families need to think about the effects of society reopening measures on their post-pandemic lifestyles. We know

that eventually ending public health distancing measures will impact youth development, but it is concerning what these future effects will be.

During the COVID-19 pandemic, news articles have reported on youth's reactions to other crises such as civil unrest and climate change. The long-term effects of these crises may not all be negative, and the possibility for increased resilience and flexibility in youth over time was described. Children and youth learned about the importance of taking breaks from school and engaging in mindfulness opportunities to improve their mental health and develop resiliency when they face stressful events in their lives. Journalists noted that how often youth engaged in these mindful actions and breaks during their daily routines can impact how youth will react to stressors in future jobs.

*But [Nikki Martyn, program head of early childhood studies at the University of Guelph-Humber] believes, in the long term, this shift away from gold stars for perfect attendance might actually be a change for the better. And not just for public health. "This might be part of the silver linings that come out of COVID," she said. There's long been a "stigma" around kids taking a day off...Encouraging kids to check in and be more aware of their own health will teach them how to communicate their own best interests...It may even create more room to take, for example, mental health days, and children will develop resilience from adapting to changing situations. (Warren, Toronto Star, August 24, 2020)*

The potential for long-term effects of the COVID-19 pandemic on youth mental health are well-described in the corpus. Implementing public health measures, such as physical distancing, drove fear and anxiety in youth, due to fewer in-person social connections, and the uncertainty of the long-term effects on youth development.

The daily routines of youth were also affected by public health measures within the community. Many routines are based around access and use of community institutions, and the media described how lockdown measures affected these routines. The loss of routine, losing

support from institutions (e.g., schools, community organizations, recreation centres), and being required to lockdown at home (often physically smaller spaces) were among the negative impacts on youth mental health, in both emotional and physical ways.

### ***Effects on Youth in Unsafe Living Environments***

Closures of recreation centres left children with nowhere to play sports, physical distancing rules made it difficult for youth to actively interact with their friends and peers, and the loss of school routines had adverse effects on the mental health and welfare of children. At-risk youth were required to spend more time in potentially unsafe environments, such as harmful households, close living spaces which can increase the likelihood of COVID-19 transmission, and spending more time in situations with stressed adults who caused them further harm. News articles described how experts predicted increased rates of depression, trauma, drug abuse, and suicide, and concerns about increased rates of domestic violence, child abuse and neglect.

*"... I have never seen this many infants with serious maltreatment injuries", said [Dr. Michelle] Ward [a pediatrician and medical director for child and youth protection] ...It is a stressful time for parents and caregivers...it takes a village to raise a child. With staying at home during the pandemic, it can feel like the village is gone" ...Ward said injuries to very young children are linked with high levels of stress in parents, as well as crying babies."...everyone is struggling right now, everyone's stress level is higher and their coping skills are less,"... physicians in other parts of the country...are seeing similar increases in maltreatment injuries in infants...there have been fewer child abuse referrals among school-aged children during the pandemic - something that might be related to the fact children have been out of school and it is often school officials who observe suspected abuse. (Payne, The Ottawa Citizen, January 30, 2021).*

The isolation measures prevented these youth from accessing typically safer environments, such as schools, and left them in potentially abusive situations. Media articles described how

children and youth living in emergency housing institutions are in very small and contained physical spaces, with few facilities and food options. This led to unsafe situations for youth during shelter-at-home measures.

#### **4.4 Theme 4 – Impacts of the Pandemic on Schooling**

The COVID-19 pandemic caused school closures and transitions to online learning; the media articles reported on the impact of these changes. Five sub-themes emerged in my analysis that highlight the media's portrayal of education as an important element of youth mental health.

##### ***Disruptions to Education***

Students of all ages faced changes to their school curriculums, milestones, and credit requirements, causing uncertainty and worries about falling behind in school. With the switches between in-person and online learning, along with the creation of student cohorts and school closures, schedules were constantly disrupted.

*Her son is in Grade 12 and preparing to graduate; bumps in the road this year could have far-reaching ramifications...worries her daughter could fall behind, academically and socially. "I am worried for my mental health (and) my kids' mental health" [said Leticia Deawuo, a single mother of two living in Toronto's northwest corner, that has seen the city's highest rates of COVID-19] ...Studies have also shown that school interruptions - even just the regular summer break - can hurt students' academic skills, and the impact is bigger for lower-income kids. "When they came back to school after a break, you actually needed to do much more catch-up just to get back to where they were...And I think they're going to have exactly the same things in COVID." (Toronto Star, September 12, 2020)*

The media described instances like these where disruptions to learning and school routines affected youth mental health. Journalists also reported how before the pandemic, students needed time for catch-up work at the beginning of a new school year or following the winter break.

However, these disruptions were magnified with ongoing disruptions throughout the pandemic and increased the amount of required catch-up work. The media articles described how students shared these concerns about their courses and worried they will require more time to correct knowledge gaps in their education.

### *School Calendar and Credit Modifications*

Modifications to school calendars, schedules, and milestone events impacted youth mental health. With the onset of the COVID-19 pandemic, school closures and switching to online learning affected the school year calendar and schedules. Measures such as school cohorts, quadmester (four-term) systems, and extended/shifted breaks throughout the school year were implemented and communicated to the public through the media. The everchanging news about the structure of school days caused concern, and negatively impacted their mental health.

Articles described how milestone events, such as high school graduation ceremonies and proms were cancelled due to the pandemic. These events are special for youth, as they are exciting and mark special occasions. Students talked positively in the media about how they always dreamed of these experiences in their senior year of high school, and that these milestones needed to be celebrated. The media also described how grateful students were about being able to stay healthy, while celebrating these milestone events the best they could with public health guidelines in place. Media articles reported how students tried to make the best of the situation by capturing memories virtually, celebrating safely with families and small groups of friends, and maintaining high spirits during these events when offered online. However, not all discussions and feelings regarding milestone events were positive. Journalists described feelings of stress, uncertainty, loss, and grief amongst students when events, such as prom, were cancelled.

In addition to calendar and schedule changes, news articles disseminated information about changes to credit requirements for students. These requirements (including exams, final projects, standardized testing, and community service hours) are for students to successfully complete courses and curriculum requirements to earn their diplomas. For example, the media described secondary school students' stress about writing exams after missing class time. Major standardized tests (e.g., EQAO tests) were cancelled in efforts to support youth mental health in school. Another major requirement for secondary students to graduate in Ontario is completing community service hours. However, the pandemic caused many students to be unable to earn the required 40 hours. This requirement was dropped during the pandemic and students who did not meet the required hours, were still able to graduate. The removal of this requirement alleviated some stress for secondary students.

#### *Disruptions for Post-Secondary Students*

As high school graduates began their post-secondary education, they faced the reality that school orientations and welcome events were moved online. Frosh week events looked different than in previous years, with limited socializing options and students unable to fully immerse in their new lives. With constant uncertainty about their post-secondary lives due to the pandemic, many students described how they were stressed, lost, or confused about what to do after completing high school. The data revealed how students felt the pandemic made it impossible to plan for their next steps and left them in states of constant stress and anxiety.

For current post-secondary students, news articles reported about the students' return to family homes, after being independent at school. Re-integration into family homes was described as disruptive to students' mental health and the comfort of their routines and independence. Families had difficulties re-establishing boundaries with their adult children. Tensions were



described, and students had to remind their families that they are not always available, even when living at home. By implementing boundaries and mutual respect, some stress was alleviated for post-secondary students, whose routines were completely changed.

Post-secondary students faced financial barriers and stressors due to the COVID-19 pandemic. Tuition fees were still required in full, which was already a barrier for students, but was compounded by student unemployment throughout the summer of 2020. With increased unemployment rates, post-secondary students' worries, and mental health challenges increased. Students were reported as being worried about their ability to successfully return to school in the fall with the financial burdens and the loss of access to learning supports such as libraries, study spaces, and fitness facilities.

At the onset of the pandemic the media reported and described tragic and drastic events, such as suicides, on campus. Post-secondary students faced multiple stressors that impacted their mental health, and these tended to be reported in the media. When journalists reported on these events, they would include mental health supports and resources (i.e., suicide support hotline, campus counselling services) that are available to these post-secondary students. Media articles described increased levels of stress, anxiety, and mental health crises during the pandemic in the post-secondary student population. Journalists highlighted that effective communication about available mental health supports, such as the availability of counsellors and clinics, was emphasized as hugely important by the leaders at post-secondary institutions.

Post-secondary students' mental health was also affected by the switch to online learning. Students lost social interactions with each other and the campus community, as well as faced drastic reductions in access to libraries and on-campus study spaces. The articles described how

these social interactions and physical learning spaces are important for post-secondary students' education and associated mental health.

### ***Learning Environments***

Learning environments for students, such as school classrooms and at-home learning spaces, were altered from the onset of the COVID-19 pandemic. The media described how these changes to learning environments reduced viral transmission, but also had an impact on youth mental health.

### ***Online Learning***

The media reported that students' experiences with online learning had multiple negative mental health outcomes. They included difficulties learning, as aspects of face-to-face learning cannot be replicated in online learning settings. Elementary students had trouble focusing during online classes and on virtual projects. Secondary school students also had difficulties with online learning environments as they struggled with lost social aspects and academic growth throughout the year; they reported anxiety, lethargy, boredom, difficulty concentrating, and sitting still. Some students were described as feeling shame or embarrassment in online classes as they did not want others viewing the inside of their homes.

The amount of time spent per day on coursework also impacted students' mental health. Many reported spending as little as one to two hours a day on schoolwork. Students described concerns over how little time they had to learn compulsory course material, worry about gaining critical skills needed for post-secondary education, and fears about being behind in prerequisite courses for the next year.

Positive experiences of online learning for youth were also reported. Youth who suffered from health issues that put them at a higher risk for COVID-19 infections found comfort in

having the opportunity to learn safely online from home. Students with fear and anxiety about the SARS-CoV2 virus and/or becoming sick with COVID-19, noted that some of these fears were alleviated by not having to attend school in-person. Students spent time outdoors to take breaks from their online classes, found it appealing to use their computers to type up their daily coursework. In the cases of asynchronous learning, some students enjoyed being able to complete their work at whatever time of the day they felt they could be productive.

### *Physical Learning Environments*

Physical learning environments in schools were modified with rigorous cleaning procedures, spaced apart furniture in classrooms, student cohorts, and changes to activities and learning methods to allow students to maintain physical distancing. Although necessary safety measures, journalists reported how some health professionals suggested that these measures would be harmful to the mental health and well-being of younger students. Safety measures to prevent virus transmission created confusion and stress for students, as well as teachers. Educators described how they needed to find creative ways to teach that met public health guidelines, including taking classwork and lessons outdoors whenever possible. Being outdoors reduced stress on students and increased their motivation to learn and their overall mental health. Schools used the outdoors as their ‘classrooms’ as much as possible throughout the pandemic. Being outdoors is the safest for avoiding viral transmission and taking classwork outside allowed for students to build dens or obstacle courses, ask questions linking their science and math lessons with nature, and reduced stress.

### *Student Equity*

Analysis of the corpus revealed equity issues that were exacerbated by the COVID-19 pandemic. These included unequal access to school-related resources, and difficulties with

staying protected from viral transmission for various student populations. Children and youth living in lower-income areas with economic disadvantages faced higher inequities in being able to stay consistent with their learning and coursework throughout the pandemic. Varied access to the internet and electronic devices for online learning created disparities between students; those who had both were able to easily switch to online learning and afford education supports (e.g., home tutoring) and technology for online schooling.

*...Ontario unveiled its most...anticipated pandemic policy document: the government's plan for getting kids back into classrooms...But...one key term never appears: equity. Equity aims to ensure that every student, no matter their circumstances, has an equal chance at success - one of the ideals of public education...the word's omission reflects...a glaring blind spot in the province's back-to-school vision...There are growing fears that disadvantaged kids...are falling deeper into existing cracks and slipping into new ones created by the pandemic...Many lower-income parents say they've been forced to choose between their health and their kids' education...Stark inequality already existed within public education, but experts say the pandemic has led to new "tiering"...More affluent families are...hiring tutors to give their kids a leg up in this experimental new world of remote learning. (Toronto Star, September 12, 2020)*

Additionally, one journalist reported teachers' concerns about this inequity in access to resources, as there were students who were not able to adapt easily to online learning due to factors such as: learning exceptionalities, proficiency in English or French, socio-economic situations, or availability of technology at home (Blewett, The Ottawa Citizen, March 23, 2020).

Students in special-education classes belong to a high-risk population – these youth include students with physical and developmental disabilities, autism, and/or behavioural problems. The media described how youth in this population needed to go back to full-time school during the pandemic to maintain their daily routines, and consequently maintain their mental health and

wellbeing. But this population was not able to safely return to in-person school, as some students were unable to wear masks and practice proper safety measures for reducing viral transmission. Youth in these classes typically required close-contact care and guidance, which caused stress related to viral transmission for themselves and their educators.

*Several educators...don't understand why it has been deemed unsafe for students in mainstream classes to attend class, but not special-ed students. "The rest of the province is being told, 'We need to stay in lockdown and not go out,'...But [special-education classes] are being told, 'Let's send back the most vulnerable population of school-aged children. 'Some of them have low immune systems, the majority of them are unable to wear a mask, they may have problems keeping proper hygiene in terms of washing their hands, not touching their noses, their mouths, not touching other surfaces.'"...students with autism...tear off their masks because they find them to be sensory overload. (Miller, The Ottawa Citizen, January 11, 2021)*

As the quotation above illustrates, families of students in special-education classes were told their classes would remain in-person, while the general population of students were learning from home. Educators in special-education classes did not understand why it was safe for this vulnerable population to return to in-person learning, and not others. These educators also experienced stress from the increased potential for students and staff to get sick, emphasizing the need for schools to be safe, and minimize stressors. Children and youth with high-risk health concerns who are susceptible to lasting damages from COVID-19, such as those with asthma or genetic disorders, were inequitably at risk when returning to school.

### ***School-Related Communications***

Throughout the pandemic, journalists reported ongoing school closures, return-to-school plans, and the need for the provincial government to tailor these plans to regional case counts.

The media described how school safety plans could fail if more school closures needed to take place, creating additional stress and worry for students.

When schools re-opened, communications about safety measures were unclear. There were ongoing concerns about student safety in schools, and how to limit transmission of the SARS-CoV2 virus. The need to implement basic public health measures such as handwashing, thorough cleaning, and staying home if sick were communicated to students and families, but little else was known about the school day prior to provincial announcements of schools reopening. Journalists described how students and their families/households felt stressed and anxious when they lacked information about safety measures. Impacts on youth mental health were revealed through descriptions of virus fatigue (e.g., feelings of exhaustion and questioning the need for stringent public health measures such as building capacity limits and non-essential trips), and high emotions, when faced with information in the media about return-to-school. The ongoing pandemic required students to face their school years with more resilience, exhaustion, and confusion – all of which were described as having impacts on youth mental health.

Another challenge was that school communications did not always align with the public health guidelines. For example, two metres was the recommended distance for physical distancing measures in public health guidelines, but provincial education ministers suggested that one metre of space would be sufficient. Differences in information communicated contributed to negative youth mental health with confusion, uncertainty, and worry about safety in school.

### ***Mental Health Supports Available in Schools***

All levels of government funded supports for safe returns to school, student mental health (e.g., expanded services from psychologists and social workers), and workplace safety measures for teachers and staff.

*The province is pledging \$10 million for school boards to boost mental health services for students to help them cope... "We know that the COVID-19 outbreak has impacted student mental health and well-being," said Education Minister Stephen Lecce, noting the additional funding will "help ensure critical front-line and wraparound supports are helping those Ontario students who need it most." ...The additional \$10 million is on top of a previously announced \$25 million used to hire about 180 mental health workers for Ontario high schools. (Toronto Star, June 19, 2020)*

Providing quantitative values in the media about the funds that were invested provided detailed information for parents, guardians, students, teachers, and staff. This helped school administrators plan and implement mental health supports for their students.

#### *Supports Available for Youth*

Media articles described how specialized staff were brought into schools to support the increase in youth who experienced mental health issues.

*The pandemic and its resultant mental health crisis have exposed holes in our academic priorities for young people...as we re-evaluate education models, we should also examine these priorities. Kids need resilience, emotional awareness, stress management and communications skills... During the pandemic, a surge of articles appeared on how to bring social and emotional learning into the home...That work can't end when in-person classes resume. We need to prioritize the emotional health of students. (Kielburger, The Ottawa Citizen, June 23, 2020)*

Journalists described how children and youth increased their resilience, emotional awareness, stress management, and a sense of connectedness to learn effectively at school. Supports for youth included increasing outdoor education and in-school services provided by psychologists and social workers. Having these supports and services reported by the media, and

shared in schools, reassured youth, and their families, that the well-being and mental health of youth are important to school staff and educators.

### *Supports Available for Teachers and Staff*

With the return to in-person learning, teachers and staff faced the responsibility of ensuring safety measures were respected in their classrooms. Having this responsibility caused stress and many staff members were anxious about how they, and the students, would safely return to school each day. Supports for staff mental health throughout this time were described in the news and included devoted time for training on health and safety guidelines, changes to school schedules, and options for transitioning to back to at-home learning, if needed. School schedules introduced cohorts to allow time for staff to clean their learning environments thoroughly and screen for potential COVID-19 exposures. Additional support personnel were brought in (when available) to help staff sustain teaching smaller class sizes and innovative learning environments (i.e., outdoor classes to teach science and math). With teachers and staff playing such an important role in the daily routines for students, support for their mental health is important, as their mental health may influence students.

### *Supports Available for Parents and Guardians*

Parents and guardians are important figures in students' lives, and by supporting the mental health of parents and guardians, they can be a stronger figure for the youth in their care. During the pandemic and phases of reopening, each family's decision about what to do was emotional and stressful on parents and guardians. They wanted to keep their family members safe, but parents and guardians felt the need to help their children's mental well-being by having them return to school and to their daily routines. Media articles described available services for parents and guardians struggling with these negative impacts on their mental health, including web pages



with resources for navigating the abundance of information about school safety. Parents and guardians needed to balance benefits and risks with sending children to school; having resources available to them was beneficial through this stressful and uncertain time.

#### **4.5 Theme 5 – Managing the Impacts of the Pandemic**

The COVID-19 pandemic forced individuals to manage the impacts of the pandemic on their lives and access supportive resources. Journalists described how children and youth were finding multiple ways to care for their mental health. To manage challenges such as grief, anxiety, and sadness, youth learned resiliency methods from their parents and guardians, and reacted to their own emotional changes. For instance, one journalist provided advice in their article on how accepting negative emotions can help youth preserve their psychological well-being:

*Accept the anxious thoughts and emotions rather than trying to push them away. Same goes for sadness stemming from the loss of our regular ways of living, worry about lack of supplies or apprehension about kids getting cabin fever. Research has shown that avoidance of such emotions will only make them stronger and longer-lasting. Notice negative emotions, thoughts and physical sensations as they come up, look into them with curiosity, describe them without judgment and then let them go. (The Ottawa Citizen, March 18, 2020)*

By connecting with their family members, and understanding their personal emotional challenges, children and youth felt their emotions were valid during this time and developed resilience. This allowed for children and youth to trust that they had a safe discussion space for their mental health, to acknowledge their experiences, and to reflect on their emotional tolls and mental health impacts throughout the pandemic.

*The list of stress inducers is familiar: Working online, separation from friends and family, others' disregard for social distancing, fear of illness and death. This list...came*

*from a group of sixth graders...responding to a prompt by...a psychotherapist who runs a mindfulness session...to help the students process the issues...help them cope with the challenges of life during COVID-19...[a] pre-recorded play, watched both in classrooms and individually by students online, is followed by a live digital talkback that allows the young audience to engage directly with the show's creators...the play follows a group of six students as they adjust to online school and prepare a group project for their health class. There's a lot of humour and verve...but it doesn't sugar-coat how tough things are right now, a combination the students seemed to appreciate...this was their first virtual play...they said the form worked for them..."It's really different from all the other plays that I saw...I felt like I was talking to them myself." The play takes place...on a Zoom call so it's almost as if...you're on the Zoom call, as well...Some people gave some very personal examples of how the play resonated with them...Rather than just having a random discussion, there was something to relate it to...this piece could provoke some conversations and dialogue between students and their teachers, to help them to unpack, to think about, to talk through, to feel this moment, and the trauma that young people are experiencing that we don't even know." (Toronto Star, November 1, 2020).*

As illustrated above, when youth were engaged in expressing their feelings, concerns, and staying well-informed of the changing news surrounding the COVID-19 pandemic, they were supported in being able to overcome the impacts on their mental health. Youth appreciated being heard, safe, and in control during a time of chaos, and parents and guardians understood the pandemic from the youth's point of view.

Journalists reported on how it was helpful for children and youth to engage in strategies to overcome challenging impacts on their mental health. To gain a sense of control in their lives, some children and youth engaged in creating handwashing songs at school to help understand viral transmission, or acted as leaders to protest other crises. To increase the positive impacts on their mental health, youth were encouraged to develop their critical thinking skills (e.g., developing new initiatives to help their communities), opportunities for creativity (e.g., baking

and crafting at home), and their opinions on what would make them feel good for themselves, family, and community. When youth participated in initiatives put into place during the pandemic, such as assisting healthcare workers with childcare, or vulnerable populations with grocery shopping, youth were able to develop these above-mentioned skills, and felt they were doing something to help the pandemic. Youth's mental health then benefitted from exploring solutions and solving problems themselves. When youth acknowledged their feelings and engaged in coping strategies, they gained a sense of ownership and understanding about potential losses and stresses.

When libraries, arenas, day camps, pools, and recreation centres were closed due to lockdowns, youth were creative with the ways they managed these impacts. Going outside, such as hiking or playing outside, were positive coping methods for youth. Journalists described how youth engaged in easy coping strategies for their mental health, such as taking short walks outdoors and safely worked or socialized in public outlets such as coffee shops or patios (when available). This simple change in the physical environment, in their homes, schools, or outdoors, allowed for children and youth to be able to deal with their mental health challenges during the pandemic in their own way, and typically easily accessible. Maintaining healthy exercise habits also impacted youth physically, allowing them to better manage this time of stress and crisis.

*So significant was the slowdown in physical activity during the first wave, a Canadian team of health and exercise professionals from the University of British Columbia, the Hospital for Sick Children in Toronto and ParticipACTION suggested that "attenuating the loss of incidental physical activity should be a public health priority in response to future pandemics or a second wave of a COVID-19 infection, as it may have significant long-term implications for the physical and mental health of Canadians" (Barker, The Ottawa Citizen, January 25, 2021).*

We know that exercise and physical activity are beneficial to the physical and mental health of all individuals. Additionally, the loss of social connections, extracurriculars and school routines has led to youth being stuck, lost, and confused, throughout and following the pandemic. By engaging in daily movement or exercise, youth found ways to manage the impacts of organized sports and recreation closures.

As shelter-in-place measures were required throughout the pandemic, children and youth were required to stay in the same physical space most of the time. The media described this pandemic safety measure as having an impact on youth mental health, particularly with young children. When children and youth built a personal space, such as a fort, basement nook, or in their bedrooms, they fixed their physical environment to belong to themselves and created a safe space. These safe spaces helped youth to manage the stress and confusion from the stay-at-home measures.

*"We don't have a large space, but I feel like she needs her own little place...to process what's going on or to be alone." [says a mother of a nine-year-old girl]. Forts have always been a part of childhood...They are universal...driven by "biological genetic disposition" as children develop a "sense of self," separate from parents...Kids begin to build forts indoors around age four...then start venturing outside around age six or seven to construct dens, treehouses and other fort-like structures more independently, a practice that continues into their tweens. Metaphorically and physically, building forts reflects children's growth as individuals, Sobel [professor emeritus at Antioch University's education department] says. They create a "home away from home," free from parental control. Forts also foster creativity. "A lot of magic happens inside," he says. (Margolin, The Ottawa Citizen, May 21, 2020)*

When children and youth had their 'own' physical environment, they were able to process the changes in their routines and stressors from the uncertainty and fears throughout the pandemic.

To manage the impacts from the loss of routines and in-person social connections, different social coping strategies were reported, such as connecting with others via apps like Zoom and FaceTime to make up for missing social interactions. Deepening relationships with those in their social circles was important, and many youths stayed in touch with others and engaged in thoughtful conversations with family members and friends. These socializing methods in times of social distancing were important for maintaining youth mental well-being.

### ***Formal and Societal Resources***

Difficulties related to youth mental health were supported through formal and societal resources. The media reported about how companies made donations to support youth mental health, such as the Canadian clothing company Ardene, which donated clothing to shelters, and sales profits to WE Well-being, in support of youth mental and physical well-being education. Journalists described long-term impacts on available mental health resources and supports for youth due to the COVID-19 pandemic. Increased mental health funding was reported in the media, with the intention to use these funds for services such as counselling for children and youth. Organizations such as The YMCA Canada, the Boys and Girls Clubs of Canada and The Royal Canadian Legion were described in the articles as recognizing the importance of long-term access of mental health resources and supports, and priorities should be developed for child and youth mental health.

Funds were allocated by all levels of government to resources to bolster youth mental health, such as funds from the federal government to support Kids Help Phone. Formal resources were made more available for youth populations throughout the pandemic, as the need for them soared with the increases in mental health challenges. Resources adapted to increase their

availability by offering services in more languages and having more counsellors and volunteers, changes that Kids Help Phone was able to put into place:

*This year also marked the first time Kids Help Phone began offering counselling services in Arabic alongside French and English...As the number of young people reckoning with unprecedented stress on their mental health grows, so does the reliance on easy-to-access, centralized national services like Kids Help Phone...explaining the spike in calls for help..."Kids Help Phone had the advantage of having a national single number, a single brand that people understood would be where you could get help,"[Henderson, a youth psychologist and the executive director of Youth Wellness Hubs Ontario, said]...But while Kids Help Phone offers an essential service for youth in crisis...it's important that youth have access to ongoing counselling and mental health services, as some may need more consistent care than one conversation with a crisis line counsellor...Another issue...is that young people are facing very long waiting lists when trying to access mental health services, and many approach Kids Help Phone as they wait for longer-term help. Others reach out at odd hours, when their counsellor or other service provider may not be able to help. "For us it is really about being that go-to place that young people know they can trust at any time," [Kids Help Phone's senior vice-president of innovation, Alisa Simon] (Yousif, Toronto Star, December 13, 2020)*

By increasing the availability of counselors and volunteers, and having more multilingual staff, youth felt validated and found comfort in not having to face excessive wait times for help during this unprecedented crisis.

Organizations redirected resources to help youth who may be struggling differently from the impacts of the pandemic, such as the Children's Hospital of Eastern Ontario (CHEO), when they created a drive-thru diabetes clinic to ensure young patients still got their critical blood tests done. Healthcare institutions also developed formal initiatives to support youth facing mental health. For example, The Royal Hospital (a tertiary mental health hospital) saw the need for increased mental health services and opened a clinic to help support youth.

*"...if you build it they will come...a whole extra group of folks came to us who had pretty high rates of depression and anxiety and suicide risks." [said Susan Farrell, vice-president for community mental health at The Royal]. The Royal rolled out its C-PROMPT clinic (the C stands for COVID) in early May, accelerating the hospital's existing plans for a speedy, virtual assessment and psychotherapy service. It drew upon 48 doctors and counsellors whose time had been freed up when The Royal restricted its operations because of the pandemic...Over its 17-week run, the clinic received 910 referrals...almost 14 new clients a day. It served 540 of them, with the rest either declining help or finding services elsewhere...almost an unprecedented number for such a short time period...About half were...[of] unexpectedly young age to be accessing mental health services...Two thirds were women. (Crawford, The Ottawa Citizen, August 19, 2020)*

Media articles in the corpus listed resources for youth, such as contact information for support centres and helplines. With increased use of technology throughout the pandemic, having information such as website posts and chat rooms helped youth access formal resources and societal programs for mental health resources. By providing formal resources such as additional funding during the pandemic, and societal initiatives such as new clinics to meet mental health demands, youth gained some respite in facing mental health impacts. To try and help youth be more aware of available resources, journalists reported on the increased number of online services, such as chat platforms and websites, to connect youth with mental health and counselling services.

Despite the abundance of potential resources for managing the pandemic's impacts, not all youth were aware of them, or able to easily access the resources throughout the pandemic. The media reported care staff's concerns, such as youth assuming that services (e.g., counselling, group therapy) were closed instead of transitioning to online/telephone means, or that it was more dangerous for those needing the services to call (due to stay-at-home orders causing

individuals to be stuck all day in dangerous environments). Although there were massive shifts to video and telephone services, not all youth were able to easily access these virtual care options.

Children and youth living in group housing or with limited access to technology faced barriers to accessing virtual care and connecting with others. Children and youth living in spaces where they could see friends and family at safe distances and able to connect to virtual counselling services or appointments, coped better with mental health challenges brought on by the pandemic. The media reported on Black youth struggling to find free and accessible mental health supports, as well as facing barriers with providers not understanding their needs tied to race and identity.

Not all strategies and resources to manage the impact of the pandemic were equally available for all children and youth and recognizing these imbalances can direct increased resources to where they are needed most.

#### **4.6 Conceptual Model**

My thematic analysis revealed five themes pertaining to how youth mental health is portrayed in the media covering the COVID-19 pandemic. A summary of these themes is shown below in Table 7, as well as the corresponding sub-themes.



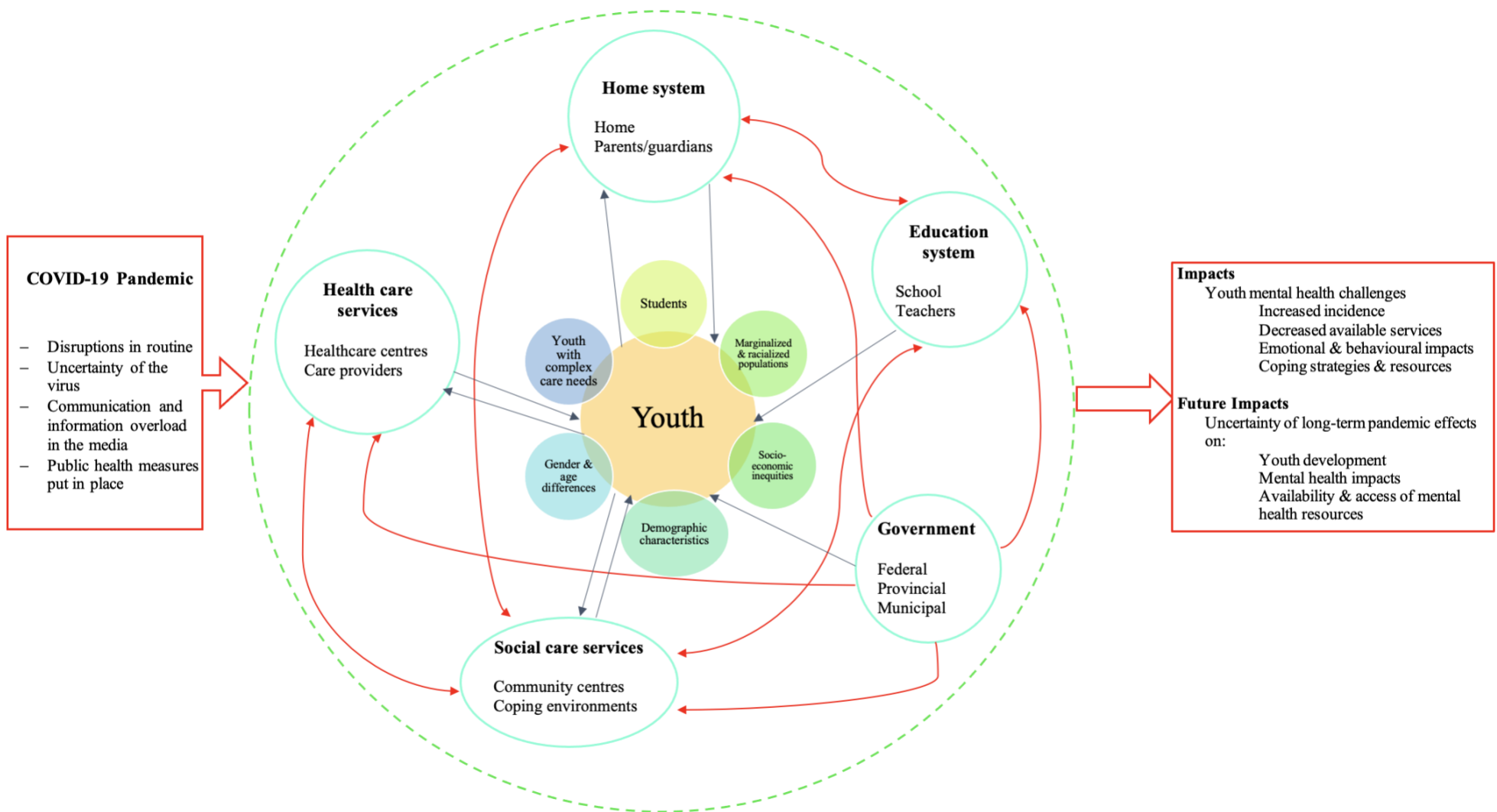
**Table 7:** *Summary of Themes and Sub-Themes Finalized From Thematic Analysis*

| Theme                                                              | Sub-Themes                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) Youth mental health challenges throughout the COVID-19 pandemic | <ul style="list-style-type: none"><li>• Increased incidence of mental health challenges and needs for mental health services</li><li>• Shortage of available services</li><li>• Emotional and behavioural impacts on poor mental health</li></ul> |
| 2) Inequity and disproportionate impacts among youth               | <ul style="list-style-type: none"><li>• Gender and age differences</li><li>• Racialized populations</li><li>• Socio-economic inequities</li><li>• Youth with complex care needs</li></ul>                                                         |
| 3) Effects of public health isolation and distancing measures      | <ul style="list-style-type: none"><li>• Effects on youth development and routines</li><li>• Effects on youth in unsafe living environments</li></ul>                                                                                              |
| 4) Impacts of the pandemic on schooling                            | <ul style="list-style-type: none"><li>• Disruptions to education</li><li>• Learning environments</li><li>• Student equity</li><li>• School-related communications</li><li>• Mental health supports available in schools</li></ul>                 |
| 5) Managing the impacts of the pandemic                            | <ul style="list-style-type: none"><li>• Emotional</li><li>• Physical</li><li>• Social</li><li>• Formal and societal resources</li></ul>                                                                                                           |

The themes are independent, yet related, and together provide a comprehensive and dynamic understanding of this issue. Through reading the articles, coding the data, and finalizing the themes, I developed a conceptual model to depict the linkages between the actors in the youth mental health system, the various environments, and the outputs of the system. The components of youth mental health span multiple systems, including the actors and environments of the: home system, education system, health care services, social care services, and government. The conceptual model depicts the reactions of these systems to the shock of the COVID-19 pandemic (Figure 4).

This conceptual model built upon the frameworks presented by Niederdeppe et al. (2013) and Berry et al., (2018) to support the results of this thesis. I expanded on the understanding of how coverage of youth mental health in the media can have intended and unintended consequences (Niederdeppe et al., 2013), by displaying the impacts on youth mental health throughout the pandemic, and in the future. In their framework, Berry et al. (2018) showed the complex associations between disasters, disadvantage, and compromised mental health in the relationship between climate change and mental health. This complexity lens was built upon in this media analysis of youth mental health described in Ontario news outlets. Throughout this study, the complexity between the actors and environments of the multiple systems affecting youth mental health were described. The analysis and consequent themes referenced multiple actors and environments which are interrelated and respond together when faced with an exogenous crisis, such as the COVID-19 pandemic. These actors and environments are all part of multiple systems that interact and impact each other in the context of youth mental health. Within the youth population, characteristics of interest include students, marginalized populations, demographic differences, and those with complex care needs. An additional level of

actors in this system encompasses those that work to support youth mental health (e.g., parents/guardians, teachers, care providers, government). The resulting themes also helped to understand the environments the above-mentioned actors are situated in. These environments include home, school, healthcare centres, community centres, and coping environment.



**Figure 4:** Conceptual model depicting the actors, environment, and outputs in the youth mental health system, when impacted by the COVID-19 pandemic (adapted from Niederdeppe et al., 2013; Berry et al., 2018).

## **Chapter 5: Discussion**

COVID-19 news media provided abundant information about the pandemic and its impacts. In this thesis, I presented a media analysis exploring how youth mental health was impacted during the COVID-19 pandemic as portrayed in two Ontario news outlets. I described how mental health supports and psychosocial services for children and youth were identified and portrayed in COVID-19 related media.

I developed a conceptual model that visually represents the interrelationships in youth mental health systems, and the impacts from the exogenous shock of the COVID-19 pandemic. The conceptual model depicts how vulnerable youth mental health is to external shocks, because of the complexity and interrelationships between the various systems. This model builds on the model presented by Niederdeppe et al. (2013) to demonstrate the potential for intended and unintended consequences from media coverage of youth mental health throughout the pandemic and in the future. My model is also situated within the complexity lens presented by Berry et al. (2018), which reflected the complex and interacting factors that produced outcomes and created interventions when faced with a disaster. The complex associations among components not initially thought to interrelate (e.g., information overload in the media, and the profound effect on mental health) are important considerations for research and policy development in the context of mental health and the COVID-19 pandemic. Health emergency and disaster risk management planning can help systems (e.g., youth mental health systems), to adapt to ensure the outputs benefit everyone within them (Rumsey et al., 2014; Marshall & Rossman, 2016). As youth continue to face the effects of the pandemic, policy audiences and decisionmakers can use my conceptual model as a visual tool to help understand the interrelationships within youth mental health systems.

The volume of published communications throughout the COVID-19 pandemic impacted child and youth mental health. When reporting about uncertainty in disasters, journalists should be aware of the consequences from the overload of new information. As the corpus findings supported, the increased incidence of mental health challenges due to inaccurate information during a disaster can result in negative mental health. At the onset of the pandemic, little information was known about the virus. When unknowns of the virus were combined with the high volume of media outputs (including information about the infectivity of the virus and consequent health tolls), this left the public with feelings of panic, stress, and anxiety (Petropoulos and Makridakis, 2020). An abundance of information in the media has been shown to result in stress and confusion, supported by the findings of Gesser-Edelsburg et al., (2019), which described the connection between media and mental illnesses. Previous studies have shown that news media has the potential to negatively impact the public's mental health and create negative perceptions of mental health (Cardoso et al., 2020; Stuart 2006). This thesis contributes to these previous findings, in the context of the COVID-19 pandemic, and the impact of the media on youth mental health.

As more disasters occur globally, journalists and decision-makers need to be aware of the potential negative consequence of how disasters are reported in the media and the public's mental health. In both this thesis, as well as additional pandemic-based research (Hardy et al., 2021), the COVID-19 pandemic was an event that showed the strong influence the media can have on the public's mental health, thinking, and decisions. With the unknowns of this unprecedented disaster, the public uses what journalists publish (without always fact checking), to create their thoughts about how to react to the information (Garrett 2020). The stress and uncertainty of the new information related a growing disaster each day creates tension, worry,

and anxiety for youth and their mental health. Decision-makers need to be aware of how the media can influence youth mental health during disasters. To properly develop new, helpful, and consistent care services, the impact of information in the media on youth mental health needs to be known and properly addressed. As Niederdeppe et al. (2013) suggest, there is the potential for intended and unintended consequences through media publications, and journalists need to be aware of this potential of their reporting.

Through this media analysis, I found in the context of the COVID-19 pandemic youth mental health challenges increased, and consequently led to a shortage of available services for care. The journalists portrayed multiple mental health challenges, increased incidence of emotional and behavioural impacts, and the downstream demands for youth mental health services. This impact was not unique to this study, and additional research throughout the pandemic, such as Ashcroft et al. (2021), also reported this relationship between increased mental health challenges and decreased availability of care services among high-risk populations (such as youth). These findings are also supported in medical findings, as Canada's children's hospitals have declared a mental health emergency among children and youth throughout the pandemic (Raymond, 2021). Disproportionate impacts among youth populations were evident, as well as inequities in accessing supports. Other pandemic research discussed the need to consider the disproportionate impacts of the pandemic on youth mental health when developing mental health care and supports, as youth face the most ongoing impacts (Organisation for Economic Co-operation and Development [OECD], 2021). When these disparities are understood, policies and supports can be developed by healthcare leaders —and youth themselves— to support their recovery (Larcher et al., 2020; Niederdeppe et al., 2013).

The results from this study showed media reports about how the COVID-19 pandemic disrupted school and perpetuated inequity; school calendar and credit modifications, school-related communications, and the need for mental health supports in schools were profound. Youth populations were most affected by these school disruptions, as much of their routines stem from school and related activities. Recent publications from the OECD emphasized these impacts on schooling during the COVID-19 pandemic, (OECD, 2020), and how these school-related mental health impacts were unique to youth populations (OECD, 2021). Based on the information published in both public and media reports, school administration, care providers, and government officials can develop adequate risk management plans and ensure equitable access to mental health services. Since the pandemic has shown how youth are at a higher risk of long-term effects on their mental health, decision-makers should use published findings about school-related mental health impacts to guide their service development.

Global crises and disasters are impacting the lives of youth, and support for their mental health needs to improve. To help provide better youth mental health care in the future, decisions and actions taken now should look to benefit youth in supporting their mental health challenges, and to create services that are accessible for all youth. For example, this study revealed how inequities exist among youth in accessing school services, mental health care services, and coping resources (Crawford, January 23, 2021; Toronto Star, January 11, 2021). These inequities stem from determinants such as age, gender, race, and income. Media reports around institutions, such as schools, have shown that some students learn better online, whereas others struggle due to lack of resources. To provide mental health care during the pandemic, articles noted how some services had to turn to virtual means to provide care, which also highlighted these inequities. In their evaluation of the implementation of virtual mental health services for children and youth,



Dansec et al. (2021), described the potential for these inequities as well. Across Ontario, care centres switched to virtual means, which allowed for some children and youth to be able to easily access continued care. However, issues such as wireless connections and having the required equipment for virtual care appointments created barriers for other youth (Dansec et al., 2021). Additional studies (both during and prior to the COVID-19 pandemic), have shown that decision-makers can use this information related to inequities, to develop proper care solutions and risk management plans that allow for equity in mental health care for children and youth (Strudwick et al., 2021; CAMH, 2020a; Alegría et al., 2018; MHCC, 2016].

Throughout the pandemic, researchers such as Shelus et al. (2020), described how media news articles communicated COVID-19 related information to the public and use varied discourse in messaging. The COVID-19 pandemic led to an immense number of publications in the media related to the disease, public health measures, and impacts of the pandemic on children and youth. Other studies reported that the high volume of information in the media impacted youth mental health and resulted in increased demands and high usage for mental health care and supports (Clemente-Suárez et al., 2021; Benton et al., 2021). This thesis adds to these findings, as a prevalent theme was the increased incidence of youth mental health, and the resulting shortages and difficulties in accessing mental health care. The potential influence of the media is an important consideration for journalistic practice because as the public continues to use the media for information, the impact of information on mental health crises will need to be addressed. With the resulting increase in disasters and consequent mental health crises, populations should be provided the proper supports from the onset of a disaster (Codreanu et al., 2014). As the demands and needs for mental health care increase, policymakers and care

providers need to plan and be prepared to better support Canadians, especially Canadian youth, through the pandemic recovery, and future crises (e.g., climate change).

The long-term effects of the COVID-19 pandemic are still uncertain. The long-term implications on youth development, mental health, and accessing mental health resources and supports were all determined from the media analysis in this study. When planning the development of future care and supports in post-pandemic recovery, the uncertainty of the long-term mental health effects should be considered (Ihm et al., 2021). As we begin to gain an understanding of the long-term impacts on youth mental health, the development of care services and planning of policies can seek to effectively support youth long-term following the COVID-19 pandemic (Nicholas et al., 2020; Green et al., 2021). Today's youth will be living with the ramifications and impacts of this pandemic the longest; mental health care services and policies need to be developed to properly fund, care, and strengthen their mental health, for them and their future communities. Without these changes and supports, this generation of youth (including their mental health and routines) will continue to face challenges.

My analysis found children and youth managed the impacts of the pandemic using emotional, physical, and social mechanisms, and were supported by various resources and conducive environments. These supports included engaging youth in coping strategies and physical environments to address the negative impacts of the pandemic, understanding the formal and societal resources identified in the media, and the analysis of the access and availability of coping strategies and resources. Research on the engagement of youth in disaster risk reduction has shown it enabled youth to gain the confidence to be positive changemakers in their community (Amri et al., 2018), and enhanced their personal development, self-efficacy, and relationships (Pfefferbaum et al., 2018). Engaging youth to participate in disaster preparedness

and risk management not only resulted in children and youth having the confidence to be prepared in facing a disaster, but also the confidence in advocating for strategies and programs that are effective for risks unique to youth (Lopez et al., 2012). The strategies used to manage the impact of the pandemic found through my analysis helped develop an understanding of how youth dealt with their mental health challenges throughout the COVID-19 pandemic. Previous research has shown that based on the mechanisms children and youth used to cope, policymakers and care providers can use these findings to develop future youth mental health coping supports (Palinkas et al., 2021).

This study is important in contributing to understanding the everchanging mental health challenges youth face each day. The COVID-19 pandemic has changed the routines and lifestyles of children and youth, and they will be facing long-term impacts and repercussions of this crisis on the economy, politics, and physical and mental health (Panarese & Azzarita, 2021). Mental health services for children and youth need to be invested in now, and in the future, as the COVID-19 pandemic and other crises (e.g., climate change, racial injustices) continue to impact youth's lives (Vaillancourt et al., 2021). These services should engage youth to help them feel a sense of control, and which are equitably accessible for all youth populations.

Combining the stress and anxieties that stem from information in the media (which may not always be accurate), with the abundance of published information, also impacts the adults who consume this information. When the adults in the lives of youth (e.g., parents, teachers, family members) are emotionally impacted by media during the pandemic, youth will be affected as well (Weikle, 2020; Christner, 2021). These interactions between the lives of children and youth and the media can affect many individuals, and journalists need to consider the reach of their reporting practices on children and youth.

The analysis of this study stemmed from how journalists wrote, and conveyed information related to youth mental health during the pandemic. The results from the thematic analysis of the final corpus presented five themes related to how child and youth mental health, and how mental supports and psychosocial services for children and youth were identified and portrayed in COVID-19-related media. These themes demonstrated the portrayal of youth mental health, but based on my preliminary analysis, I did not believe that the media used a specific framing of youth in the context of the pandemic. Framing youth in the media would have instead included defining constructs mentally to make sense of the data in the media articles, such as in the study framing Canadian homeless populations by Mao et al. (2011). The articles were written in a direct manner, with all the information written very clearly. The journalists concretely discussed youth mental health, its challenges, and the corresponding supports. My approach to the thematic analysis did not identify a particular framing of youth mental health (as previously proposed), and a different data set or analysis may have placed more focus on the language used in the media.

## **5.1 Limitations**

There are several limitations inherent to this study. Since I collected news articles published by two Ontario news outlets (*The Ottawa Citizen* and the *Toronto Star*), this limited the scope of the findings to urban areas in one province in Canada. Given the different responses to COVID-19 across regions in Canada, the scope of the findings did not reflect the national portrayal of youth and mental health. There is a lack of representation of Indigenous Peoples in the corpus, as well as populations in more Northern or rural areas in Canada. These populations are susceptible to different mental health challenges that are not reflected in the analysis.

Including these populations would further equity and diversity in youth mental health research during the pandemic.

The analysis was based on these two outlets, and the analysis could have shifted based on the political leaning of other media outlets. The *Toronto Star* is a media outlet with a predominantly left-wing lens, and *The Ottawa Citizen* tends to have a more right-centre lens (Maliszewski, 2021). Outlets with a right-wing political lens may have published different information that would have impacted the results of this study.

The language of the data was also limited to English, despite French being an official language in Canada. There may be additional news articles published over this timeframe in languages other than English. The media method for this study was solely news articles, given the abundance of information from this media. Compared with social media, this does limit the views of the data. Social media analysis uses a different set of data that lay outside the scope and purpose of this study but could build on the results found in my study for future media studies on youth mental health and the pandemic. It is also important to consider the readers of news articles, and who is being reached through the published news information. Typically, news article readers are adults, and youth may not be reached through this medium of information. Social media analysis would allow for research of a means in which youth typically receive more information from.

The impact of the COVID-19 pandemic also created limitations. The pandemic was ongoing throughout data collection and analysis, and the media continued to publish new information and data related to it daily. Data was collected from articles published during a specific timeframe in the pandemic. The ongoing pandemic will also create developmental differences that are to be considered when examining impacts on youth mental health. Children

and young youth will have different experiences in the next few years following the pandemic (e.g., school and friend related), whereas older youth will face impacts on post-secondary education and job experiences.

## **5.2 Implications and Recommendations**

Throughout this thesis, I sought to better understand how child and youth mental health was portrayed in news media articles related to the COVID-19 pandemic, and how mental supports and psychosocial services for children and youth were described and portrayed. By analyzing how journalists integrated sources of information about a disaster (e.g., the COVID-19 pandemic), and child and youth mental health, recommendations can be made on how families, physicians, policymakers, decision-makers, and politicians can work together to respond to the long-term negative mental health impacts (Benton et al., 2021). Media analysis findings, such as this one, can support youth mental health care, through means including program development, policy making, or medical and social supports (Macnamara, 2005). For example, the media corpus in my study demonstrated how youth managed the impact of the pandemic by engaging in initiatives to care for other vulnerable populations. These actions allowed youth to feel more confident and as if they were making a difference; consequently, their mental health improved. If programs could be developed by policymakers to safely engage youth at the onset of a disaster, youth mental health could be supported in a positive manner.

This media analysis also demonstrated the ongoing need for more mental health care services. The findings from this analysis can be used in conjunction with other research by policymakers to plan and develop an increased availability of mental health care services. The COVID-19 pandemic has had negative consequences on youth mental health and will have long-term effects. With the vast amount of information in the media describing the negative

consequences of mental health on youth throughout the pandemic, this crisis could be the inciting event for investing in and creating more availability of mental health care services and supports.

The complexity of the interactions between youth mental health and the COVID-19 pandemic in the media is relevant to study. Since media outlets are influential in helping the Canadian population understand the COVID-19 pandemic, and there is a high prevalence of news articles being published daily (Bridgman et al., 2021), it is increasingly relevant to study the portrayal of mental health impacts of members of society, including youth, in COVID-19 related media (Su et al., 2021; Madden et al., 2021; Anwar et al., 2020). My thesis provided views on the various ways that child and youth mental health, as well as mental supports and psychosocial services were portrayed in COVID-19 related media. Journalists should keep the consequences on youth mental health in mind when portraying these impacts in the media. To support reporting on mental health, guidelines could be developed for journalists on how to properly discuss mental health challenges in the media. This would allow for information to be properly shared with the public, but also reduce the potential for harm on the mental health of vulnerable populations (Sinyor, 2018).

Future studies could examine the impacts on youth mental health, through interviewing and consulting with youth about their mental health challenges throughout the COVID-19 crisis, and studying the actual experiences of youth, care providers, and families. Media analyses such as these do not provide information about the impacts of the COVID-19 pandemic directly from youth; the views of the journalists are ultimately being shared in the media and analyzed by the researchers. By interviewing youth, care providers, and families, about their mental health challenges during the pandemic, the collected data could be used to inform care development

that is more effective at creating sustainable help for youth long-term. Engaging youth in discussions and the design of care interventions has shown to benefit the promotion of mental health initiatives (Wasserman et al., 2018). Previous research groups have been established with the purpose of involving youth in the research process to reshape youth mental health services (Mawn et al., 2014). To properly develop mental health services that adapt to the needs of youth during and after the COVID-19 pandemic, next steps for research should include hearing about youth's experiences, directly from the population themselves.



## **Conclusion**

In this thesis, I examined news media of youth mental health during the first year of the COVID-19 pandemic, by completing a thematic analysis on media articles from two major Ontario news outlets. I explored how journalists reported on child and youth mental health in the COVID-19 pandemic media coverage, as well how mental health care supports, and services were described in the media. This media analysis provided a glimpse into how youth mental health was affected throughout the first year of the COVID-19 pandemic, and the impact on care services and supports. The analysis of prevalent themes in the media regarding youth mental health and psychosocial supports and services allowed for an understanding of how the shock of a disaster, such as the COVID-19 pandemic, can heavily exacerbate youth mental health challenges. The pandemic has brought issues such as increased youth mental health challenges, inequity, and difficulty in accessing supports and services, and youth coping mechanisms, to the forefront of the media.

The portrayal of youth mental health in media reporting on the COVID-19 pandemic continues to be prevalent in our daily lives. At the time of writing this thesis, the Omicron variant of the virus continues to rampage throughout Canadian cities. Safety measures and return-to-school plans are again making the headlines in the media, with talk about the importance of child and youth mental health (CBC News, 2022). As we enter the third year of the COVID-19 pandemic, the negative impacts on youth mental health are severe and cannot be ignored. There is a mental health crisis among children and youth now, and there will be lingering impacts long after this pandemic ends.

Youth will need to face the consequences and impacts from the COVID-19 pandemic for years to come, as societal, economical, and health recovery continues to take place. With

vaccinations being made available to children and youth, and students returning to more regular and in-person school routines, changes for mental health care services need to be taken into consideration for risk management following this pandemic. Not all youth populations have equal access to care supports and services to manage these long-term effects. As we continue to understand the increased need for youth mental health services, and the inequities that exist for accessing them, we need to ensure there is proper development of equitable care.

As the media continues to provide prevalent and abundant information to the public in our developing lifestyles, youth need to be supported. The development of care and disaster management for youth needs to be highly invested in by policy leaders and decisionmakers. Youth mental health care must engage youth in their coping mechanisms, creating equal access to care services, and ensuring all youth populations see themselves represented (e.g., through race, gender, culture) in the populations of care providers. We do not have the time to wait for reform, we must act now – there are too many crises affecting our world that today’s children and youth will face. This population are the future leaders and carers in our society and investing in proper care for them following this crisis will help support them for years to come.

## References

- Alegría, M., NeMoyer, A., Falgàs Bagué, I., Wang, Y., & Alvarez, K. (2018). Social Determinants of Mental Health: Where We Are and Where We Need to Go. *Current psychiatry reports*, 20(11), 95. <https://doi.org/10.1007/s11920-018-0969-9>
- Amin, M., Nørgaard, L., Cavaco, A., Witry, M., Hillman, L., Cernasev, A., ... Amin, M. (2020). Establishing trustworthiness and authenticity in qualitative pharmacy research. *Research in Social & Administrative Pharmacy: RSAP*. <https://doi.org/10.1016/j.sapharm.2020.02.005>
- Amri, A., Haynes, K., Bird, D., & Ronan, K. (2018). Bridging the divide between studies on disaster risk reduction education and child-centred disaster risk reduction: a critical review. *Children's Geographies*, 16(3), 239–251. <https://doi.org/10.1080/14733285.2017.1358448>
- Anwar, A., Malik, M., Raees, V., & Anwar, A. (2020). Role of Mass Media and Public Health Communications in the COVID-19 Pandemic. *Cureus*, 12(9), e10453. <https://doi.org/10.7759/cureus.10453>
- Arabi, Y., Murthy, S., Webb, S., & Arabi, Y. (2020). COVID-19: a novel coronavirus and a novel challenge for critical care. *Intensive Care Medicine*. <https://doi.org/10.1007/s00134-020-05955-1>
- Artz, L. (2018). The Political Economy of Attention: Global News Agencies and the Destruction of Democracy. In Y. R. Kamalipour, *Global discourse in fractured times: Perspectives on journalism, media, education, and politics*. Cambridge Scholars Publisher. Retrieved from <https://ebookcentral.proquest.com>

- Ashcroft, R., Donnelly, C., Dancey, M., Gill, S., Lam, S., Kourgiantakis, T., Adamson, K., Verrilli, D., Dolovich, L., Kirvan, A., Mehta, K., Sur, D., & Brown, J. B. (2021). Primary care teams' experiences of delivering mental health care during the COVID-19 pandemic: a qualitative study. *BMC Family Practice*, 22(1), 143–143.  
<https://doi.org/10.1186/s12875-021-01496-8>
- Barker, J. (2021, January 25). Let's encourage exercise for all; Regular physical activity should become a national priority as restrictions keep organized events out of bounds for many people. *The Ottawa Citizen*. Retrieved from ProQuest database:  
<https://search.proquest.com/newspapers/lets-encourage-exercise-all-regularphysical/docview/2480557122/se-2?accountid=14701>
- Barker, J. (2020, July 20). Screen your children; Keep an eye on the kids to make sure they're keeping active enough during the pandemic. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2425462244?accountid=14701>
- Baun, K. (2009, February). Stigma Matters: The Media's Impact on Public Perceptions of Mental Illness. Canadian Mental Health Association, Ontario. *Ottawa Life*, 31. Retrieved May 5, 2020, from [https://ontario.cmha.ca/wp-content/files/2012/07/olm\\_stigma\\_matters\\_200902.pdf](https://ontario.cmha.ca/wp-content/files/2012/07/olm_stigma_matters_200902.pdf)
- Becker-Blease, K., Turner, H., & Finkelhor, D. (2010). Disasters, Victimization, and Children's Mental Health. *Child Development*, 81(4), 1040–1052. <https://doi.org/10.1111/j.1467-8624.2010.01453.x>
- Bell Let's Talk. (2020). Taking Positive Action. *Bell Let's Talk*. Retrieved August 4, 2020, from <https://letstalk.bell.ca/en/taking-positive-action>

- Benton T.D., Boyd R.C., & Njoroge W.F. (2021) Addressing the Global Crisis of Child and Adolescent Mental Health. *JAMA Pediatr.* 175(11):1108–1110.  
doi:10.1001/jamapediatrics.2021.2479
- Berry, H., Waite, T., Dear, K., Capon, A., & Murray, V. (2018). The case for systems thinking about climate change and mental health. *Nature Climate Change*, 8(4), 282–290.  
<https://doi.org/10.1038/s41558-018-0102-4>
- Berwick, D.M. (2020). Choices for the “New Normal”. *Journal of the American Medical Association*, 323(21), 2125–2126. DOI:10.1001/jama.2020.6949
- Bird, M., & Strachan, P. (2020). Complexity science education for clinical nurse researchers. *Journal of Professional Nursing*, 36(2), 50–55.  
<https://doi.org/10.1016/j.profnurs.2019.07.007>
- Blewett, T. (2020a, March 17). Tracking the coronavirus, from Wuhan, China to Canada's capital: A COVID-19 timeline. *The Ottawa Citizen*. Retrieved April 3, 2020, from  
<https://ottawacitizen.com/news/local-news/tracking-the-coronavirus-from-wuhan-china-to-canadas-capital-a-covid-19-timeline/>
- Blewett, T. (2020b, April 3). UPDATED: COVID-19 Ottawa closures, cancellations and major changes: What you need to know. *The Ottawa Citizen*. Retrieved May 3, 2020, from  
<https://ottawacitizen.com/news/local-news/covid-19-closures-cancellations-and-major-changes-what-you-need-to-know/>
- Blewett, T. (2020, March 23). Educators, students gear up as schools remain closed; Teachers available by email as ministry launches online portal for Grades K-12. *The Ottawa Citizen*. Retrieved from ProQuest database:  
<https://search.proquest.com/docview/2381912454?accountid=14701>

- Blue, A. (2017, November 6). Poor Social Skills May Be Harmful to Mental and Physical Health. *The University of Arizona*. Retrieved June 15, 2020, from <https://uanews.arizona.edu/story/poor-social-skills-may-be-harmful-mental-and-physical-health>
- Boesman, J., Berbers, A., d’Haenens, L., & Van Gorp, B. (2015). The news is in the frame: A journalist-centered approach to the frame-building process of the Belgian Syria fighters. *Journalism*, 1-19. DOI: 10.1177/1464884915610988
- Boyd, A.D., Fredrickson, M.L. & Furgal, C.M. (2019). Media coverage of mercury contamination in the Canadian Arctic. *Polar Research*, 38(0), 1–14. <https://doi.org/10.33265/polar.v38.3353>
- Braun, V. & Clarke, V. (2019) Reflecting on reflexive thematic analysis, *Qualitative Research in Sport, Exercise and Health*, 11(4), 589-597, DOI: 10.1080/2159676X.2019.1628806
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Braithwaite, J., Churrua, K., Long, J.C., Ellis, L.A., & Herkes, J. (2018). When complexity science meets implementation science: a theoretical and empirical analysis of systems change. *BMC Medicine*, 16(63). <https://doi.org/10.1186/s12916-018-1057-z>
- Bridgman, A., Merkley, E., Zhilin, O., Loewen, P.J., Owen, T., & Ruths, D. (2021). Infodemic Pathways: Evaluating the Role That Traditional and Social Media Play in Cross-National Information Transfer. *Frontiers in Political Science*, 3. <https://doi.org/10.3389/fpos.2021.648646>

- Bronskill, J. (2020, March 13). Parliament suspends for five weeks over COVID-19 concerns. *CP 24 News*. Retrieved May 3, 2020, from <https://www.cp24.com/news/parliament-suspends-for-five-weeks-over-covid-19-concerns-1.4851501>
- Burke, S., Sanson, A., & Van Hoorn, J. (2018). The Psychological Effects of Climate Change on Children. *Current Psychiatry Reports*, 20(5), 1–8. <https://doi.org/10.1007/s11920-018-0896-9>
- Burns, J.P. (2001). Complexity Science and Leadership in Healthcare. *JONA: The Journal of Nursing Administration*, 31(10), 474–482. <https://doi.org/10.1097/00005110-200110000-00011>
- Canadian Institute for Health Information (2021, June 10). COVID-19 Intervention Timeline in Canada. *Canadian Institute for Health Information*. Retrieved June 18, 2021, from <https://www.cihi.ca/en/covid-19-intervention-timeline-in-canada>
- Canadian Mental Health Association Ontario (2008, November). *Mental Health Promotion in Ontario: A Call to Action*. Retrieved from [https://ontario.cmha.ca/wp-content/uploads/2008/11/mental\\_health\\_promotion\\_in\\_ontario\\_2008.pdf](https://ontario.cmha.ca/wp-content/uploads/2008/11/mental_health_promotion_in_ontario_2008.pdf)
- Canadian Psychological Association (2020, March 13). The U.S. Center for Disease Control (CDC) news release: Mental Health and Coping During COVID-19. *Canadian Psychological Association*. Retrieved April 29, 2020, from <https://cpa.ca/the-u-s-center-for-disease-control-cdc-news-release-mental-health-and-coping-during-covid-19/>
- Cardoso, P., Hawk, D. V., & Cross, D. (2020). What Young People Need to Make Better-Informed Decisions When Communicating With Digital Images: Implications for Mental Health and Well-Being. *Health Education & Behavior*, 47(1), 29–36. <https://doi.org/10.1177/1090198119885433>

CBC News (2022, January 13). Student mental health a growing worry as Ontario kids get ready to return to classrooms. *CBC News, Toronto*. Retrieved January 15, 2022, from <https://www.cbc.ca/news/canada/toronto/children-youth-mental-health-1.6312681>

Centers for Disease Control and Prevention (2020, May 20). For Parents: Multisystem Inflammatory Syndrome in Children (MIS-C) associated with COVID-19. *Coronavirus Disease 2019 (COVID-19)*. Retrieved August 4, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/mis-c.html>

Centre for Addiction and Mental Health (2020a, July). Mental Health in Canada: Covid-19 and Beyond CAMH Policy Advice. *Centre for Addiction and Mental Health*. Retrieved November 21, 2021, from <https://www.camh.ca/-/media/files/pdfs---public-policy-submissions/covid-and-mh-policy-paper-pdf.pdf>

Centre for Addiction and Mental Health (2020b, May 29). Pandemic impacting the mental health of young people in Ontario. *Centre for Addiction and Mental Health*. Retrieved June 15, 2020, from <https://www.camh.ca/en/camh-news-and-stories/pandemic-impacting-the-mental-health-of-young-people-in-ontario>

Centre for Addiction and Mental Health (2020c, March 31). Talking to children about COVID-19 and its impact: Coping with stress and anxiety during the COVID-19 pandemic. *Centre for Addiction and Mental Health*. Retrieved April 20, 2020, from [https://www.camh.ca/-/media/files/camh\\_covid19\\_infosheet-talking\\_to\\_kids-pdf.pdf?la=en&hash=59AC3799BC481EC9238ECD9044A98B40C5CEA253](https://www.camh.ca/-/media/files/camh_covid19_infosheet-talking_to_kids-pdf.pdf?la=en&hash=59AC3799BC481EC9238ECD9044A98B40C5CEA253)

Centre for Addiction and Mental Health (2014). Best practice guidelines for mental health promotion programs: Children (7-12) & youth (13-19). Canada. *Centre for Addiction and Mental Health*. Retrieved May 8, 2020 from



<https://www.porticonetwork.ca/documents/81358/128451/Best+Practice+Guidelines+for+Mental+Health+Promotion+Programs+-+Children+and+Youth/b5edba6a-4a11-4197-8668-42d89908b606>

Christner, N., Essler, S., Hazzam, A., & Paulus, M. (2021). Children's psychological well-being and problem behavior during the COVID-19 pandemic: An online study during the lockdown period in Germany. *PloS One*, 16(6), e0253473–e0253473.

<https://doi.org/10.1371/journal.pone.0253473>

Clark, B. (2013). Supporting the mental health of children and youth of separating parents. *Paediatrics & Child Health*, 18(7), 1-7. Retrieved January 23, 2022 from

<https://login.proxy.bib.uottawa.ca/login?url=https://www.proquest.com/scholarly-journals/supporting-mental-health-children-youth/docview/1540744492/se-2?accountid=14701>

Clemente-Suárez, V. J., Martínez-González, M. B., Benitez-Agudelo, J. C., Navarro-Jiménez, E., Beltran-Velasco, A. I., Ruisoto, P., Diaz Arroyo, E., Laborde-Cárdenas, C. C., & Tornero-Aguilera, J. F. (2021). The Impact of the COVID-19 Pandemic on Mental Disorders. A Critical Review. *International journal of environmental research and public health*, 18(19), 10041. <https://doi.org/10.3390/ijerph181910041>

Codreanu, T.A., Celenza, A., & Jacobs, I. (2014). Does Disaster Education of Teenagers Translate into Better Survival Knowledge, Knowledge of Skills, and Adaptive Behavioral Change? A Systematic Literature Review. *Prehospital and Disaster Medicine*, 29(6), 629–642. <https://doi.org/10.1017/S1049023X14001083>

Coiera, E. (2011). Why system inertia makes health reform so difficult. *BMJ*, 342, d3693–d3693. <https://doi.org/10.1136/bmj.d3693>

- Costello, E.J., & Maughan, B. (2015). [Review of Annual Research Review: Optimal outcomes of child and adolescent mental illness]. *Journal of Child Psychology and Psychiatry*, 56(3), 324–341. <https://doi.org/10.1111/jcpp.12371>
- Crawford, B. (2021, January 23). Nearly 9 in 10 say they will take COVID-19 vaccine: poll. *The Ottawa Citizen*. Retrieved from ProQuest database:  
<https://search.proquest.com/newspapers/nearly-9-10-say-they-will-take-covid-19vaccine/docview/2480036061/se-2?accountid=14701>
- Crawford, B. (2020, September 22). Survey finds increase in depression, anxiety; Mental health woes affecting nearly everyone, research at The Royal finds. *The Ottawa Citizen*. Retrieved from ProQuest database:  
<https://search.proquest.com/docview/2444755173?accountid=14701>
- Crawford, B. (2020, August 19). Clinic reveals need for faster access to mental health care; Temporary service at The Royal helped 'unprecedented' 540 clients in 17 weeks. *The Ottawa Citizen*. Retrieved from ProQuest database:  
<https://search.proquest.com/docview/2435347711?accountid=14701>
- Creswell, J.W. & Poth, C.N. (2018) *Qualitative inquiry and research design: Choosing among five approaches*, 4th ed. Thousand Oaks, CA: Sage
- Dansecu, E., Kurzawa, J., Sundar, P., Brown, J., & Huang, C. (2021). Evaluating the sector-wide implementation of virtual child and youth mental health services in response to the COVID-19 pandemic: Perspectives from service providers, agency leaders and clients. Implementation Research and Practice. <https://doi.org/10.1177/26334895211045690>
- Dawson, T. (2020, April 15). As the COVID-19 pandemic hit, provinces declared states of emergency. Now many are up for renewal. *The National Post*. Retrieved May 3, 2020,

from <https://nationalpost.com/news/provincial-states-of-emergencies-were-issued-a-month-ago-most-are-coming-up-for-renewal>

DeClerq, K. (2020a, March 24). Ontario orders all non-essential businesses to shut down. *CTV News Toronto*. Retrieved May 3, 2020, from [https://toronto.ctvnews.ca/ontario-orders-all-non-essential-businesses-to-shut-down-1.4864492?utm\\_source=ground.news](https://toronto.ctvnews.ca/ontario-orders-all-non-essential-businesses-to-shut-down-1.4864492?utm_source=ground.news)

DeClerq, K. (2020b, November 17). Ontario considering extended school closure as winter break approaches. *CTV News Toronto*. Retrieved June 17, 2021, from <https://toronto.ctvnews.ca/ontario-considering-extended-school-closure-as-winter-break-approaches-1.5192592>

Denzin N. (2001) *Interpretive Interactionism, Applied Social Research Methods Series*. (2<sup>nd</sup> ed.) Thousand Oaks, CA: Sage: Sage Publ; <https://doi.org/10.4135/9781412984591>

Evans, L., & Oehler-Stinnett, J. (2006). Children and Natural Disasters: A Primer for School Psychologists. *School Psychology International*, 27(1), 33–55.  
<https://doi.org/10.1177/0143034306062814>

Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and adolescent psychiatry and mental health*, 14(20).  
<https://doi.org/10.1186/s13034-020-00329-3>

Fritze, J.G., Blashki, G.A., Burke, S. & Wiseman, J. (2008). Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *International Journal of Mental Health Systems*. 2(13). doi:10.1186/1752-4458-2-13

- Garrett, L. (2020). COVID-19: the medium is the message. *The Lancet* (London, England), 395(10228), 942–943. [https://doi.org/10.1016/S0140-6736\(20\)30600-0](https://doi.org/10.1016/S0140-6736(20)30600-0)
- Gesser-Edelsburg, A., Shahbari, N. A. E., Cohen, R., Halavi, A. M., Hijazi, R., Paz-Yaakovitch, G., & Birman, Y. (2019). Differences in Perceptions of Health Information Between the Public and Health Care Professionals: Nonprobability Sampling Questionnaire Survey. *Journal of Medical Internet Research*, 21(7), e14105–e14105. <https://doi.org/10.2196/14105>
- Ghoreishi, M., Nadi, M.A., Manshee, G. & Saeedian, N. (2017). A Thematic Analysis of the Conceptual Framework of E-Learning in Higher Education. *Interdiscip J Virtual Learn Med Sci*. 8(1): e11498. DOI:10.5812/ijvllms.11498
- Government of Canada (2021). COVID-19 guidance for schools Kindergarten to Grade 12. *For health professionals. Coronavirus disease (COVID-19)*. Retrieved June 16, 2021 from <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/guidance-schools-childcare-programs.html#:~:text=Children%2C%20especially%20those%20below,may%20change%20with%20time>. Updated February 12, 2021
- Government of Ontario (2020). Reopening Ontario in Stages. *Reopening Ontario. COVID-19*. Retrieved August 21, 2020, from <https://www.ontario.ca/page/reopening-ontario-stages#section-5>
- Graham, K. (2009). A Child and Adolescent Mental Health Day Program Working at the Edge of Chaos: What Complexity Science May Tell Us About Team, Family and Group Systems. *Australian and New Zealand Journal of Family Therapy*, 30(3), 184–195. <https://doi.org/10.1375/anft.30.3.184>

- Green, C., Mynhier, L., Banfill, J., Edwards, P., Kim, J., & Desjardins, R. (2021). Preparing education for the crises of tomorrow: A framework for adaptability. *International Review of Education*, 66(5-6), 857–879. <https://doi.org/10.1007/s11159-020-09878-3>
- Greve A.I. (2016) Sustainable Development, Climate Change Adaptation and Disaster Management. In J. Uitto & R. Shaw (Ed.) *Sustainable Development and Disaster Risk Reduction*. Disaster Risk Reduction (Methods, Approaches and Practices). Springer, Tokyo [https://doi.org/10.1007/978-4-431-55078-5\\_2](https://doi.org/10.1007/978-4-431-55078-5_2)
- Hageman, J. (2020). The Coronavirus Disease 2019 (COVID-19). *Pediatric Annals*, 49(3), e99–e100. <https://doi.org/10.3928/19382359-20200219-01>
- Hardy, L.J., Mana, A., Mundell, L., Neuman, M., Benheim, S., & Otenyo, E. (2021). Who is to blame for COVID-19? Examining politicized fear and health behavior through a mixed methods study in the United States. *PloS One*, 16(9), e0256136–e0256136. <https://doi.org/10.1371/journal.pone.0256136>
- Hernández-Aguado, I., & Chilet-Rosell, E. (2020). The role of the media in the health policymaking process: perspectives of key actors in Spain. *Critical Public Health*, 30(3), 270–279. <https://doi.org/10.1080/09581596.2019.1575949>
- Ihm, L., Zhang, H., van Vijfeijken, A., & Waugh, M. G. (2021). Impacts of the Covid-19 pandemic on the health of university students. *The International Journal of Health Planning and Management*, 36(3), 618–627. <https://doi.org/10.1002/hpm.3145>
- Jackson, M.C. (2000). *Systems Approaches to Management*. New York, NY: Kluwer Academic/Plenum Publishers.

- Kannampallil, T., Schauer, G., Cohen, T., & Patel, V. (2011). Considering complexity in healthcare systems. *Journal of Biomedical Informatics*, 44(6), 943–947.  
<https://doi.org/10.1016/j.jbi.2011.06.006>
- Kayano, R., Chan, E.Y., Murray, V., Abrahams, J., & Barber, S.L. (2019). WHO Thematic Platform for Health Emergency and Disaster Risk Management Research Network (TPRN): Report of the Kobe Expert Meeting. *International Journal of Environmental Research and Public Health*, 16(7). <https://doi.org/10.3390/ijerph16071232>
- Khan, Y., O’Sullivan, T., Brown, A., Tracey, S., Gibson, J., G  n  reux, M., Henry, B., & Schwartz, B. (2018). Public health emergency preparedness: a framework to promote resilience. *BMC Public Health*, 18(1), 1344–1344. <https://doi.org/10.1186/s12889-018-6250-7>
- Kielburger, C. (2020, June 23). An unexpected lesson; Pandemic shows us the importance of social and emotional learning. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2416099108?accountid=14701>
- Kilbourne, A.M., Beck, K., Spaeth-Rublee, B., Ramanuj, P., O’ Brien, R.W., Tomoyasu, N., & Pincus, H.A. (2018). Measuring and improving the quality of mental health care: a global perspective. *World Psychiatry*, 17(1), 30–38. <https://doi.org/10.1002/wps.20482>
- Koeze, E. & Popper, N. (2020, April 7). The Virus Changed the Way We Internet. *The New York Times*. Retrieved June 15, 2020, from <https://www.nytimes.com/interactive/2020/04/07/technology/coronavirus-internet-use.html>
- Lamantia, A. (2020, March 17). Tips for Helping Children and Youth Cope Effectively Through the COVID-19 Pandemic. *Canadian Mental Health Association Calgary*. Retrieved May

- 11, 2020 from <https://cmha.calgary.ab.ca/tips-for-helping-children-and-youth-cope-effectively-through-the-covid-19-pandemic-2/>
- Larcher, V., Dittborn, M., Linthicum, J., Sutton, A., Brierley, J., Payne, C., & Hardy, H. (2020). Young people's views on their role in the COVID-19 pandemic and society's recovery from it. *Archives of Disease in Childhood*, 105(12), 1192–1196.  
<https://doi.org/10.1136/archdischild-2020-320040>
- Lee, J. (2020). Mental health effects of school closures during COVID-19. *The Lancet Child & Adolescent Health* (London, England). [https://doi.org/10.1016/S2352-4642\(20\)30109-7](https://doi.org/10.1016/S2352-4642(20)30109-7)
- Livingston, J. D. (2013). Mental illness-related structural stigma: The downward spiral of systemic exclusion. *Calgary, Alberta: Mental Health Commission of Canada*. Retrieved May 8, 2020, from  
[https://www.mentalhealthcommission.ca/sites/default/files/MHCC\\_OpeningMinds\\_MentalIllness-RelatedStructuralStigmaReport\\_ENG\\_0\\_0.pdf](https://www.mentalhealthcommission.ca/sites/default/files/MHCC_OpeningMinds_MentalIllness-RelatedStructuralStigmaReport_ENG_0_0.pdf)
- Lopez, Y., Hayden, J., Cologon, K., & Hadley, F. (2012). Child participation and disaster risk reduction. *International Journal of Early Years Education*, 20(3), 300–308.  
<https://doi.org/10.1080/09669760.2012.716712>
- Ludvigsson, J. F. (2020). Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults. *Acta Paediatrica*, 109(6), 1088–1095.  
<https://doi.org/10.1111/apa.15270>
- Macnamara, J. (2005). Media Content Analysis: Its Uses, Benefits and Best Practice Methodology. *Asia Pacific Public Relations Journal*, 6(1), 1–34. Retrieved from  
<https://resolver.1science.com/proquest/?id=f139cfb8239bea8ecafb3d64a6cbeacdadc8a68>

- Madden, S., Guastaferro, K., Skurka, C., & Myrick, J. G. (2021). When Home is Not Safe: Media Coverage and Issue Salience of Child Maltreatment during the COVID-19 Pandemic. *The Howard Journal of Communications*, ahead-of-print (ahead-of-print, online), 1–19. <https://doi.org/10.1080/10646175.2021.1932641>
- Maliszewski, D. (2021, October). The Bias in Media Bias Charts. *The Association for Media Literacy*. Retrieved March 6, 2022 from <https://aml.ca/the-bias-in-media-bias-charts>
- Mao, Y., Calder, M. J., Richter, S., & Burns, K. K. (2011). Framing Homelessness for the Canadian Public: The News Media and Homelessness. *Canadian Journal of Urban Research*, 20(2), 1–19. <https://link.gale.com/apps/doc/A296951969/AONE?u=otta77973&sid=bookmark-AONE&xid=fdea85b8>
- Margolin, S.C. (2020, May 21). Kids showing fort-itude; Children have always loved building safe havens and experts say it might be more important than ever. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2405430810?accountid=14701>
- Marshall, C. & Rossman, G.B. (2016). *Designing Qualitative Research* (6<sup>th</sup> ed.). SAGE Publications Inc.
- Mawn, L., Welsh, P., Stain, H. J., & Windebank, P. (2015). Youth Speak: increasing engagement of young people in mental health research. *Journal of Mental Health (Abingdon, England)*, 24(5), 271–275. <https://doi.org/10.3109/09638237.2014.998810>
- McGrath, J.M., (2021, March 16). Ontario’s third wave is here. We still have to live like it’s 2020. *TVO*. Retrieved June 18, 2021, from <https://www.tvO.org/article/ontarios-third-wave-is-here-we-still-have-to-live-like-its-2020>



- Mental Health Commission of Canada (2019). *Annual Report 2018-2019: #fiveinfive*. Retrieved from [https://www.mentalhealthcommission.ca/sites/default/files/2019-08/annual\\_report\\_2018\\_2019\\_eng.pdf](https://www.mentalhealthcommission.ca/sites/default/files/2019-08/annual_report_2018_2019_eng.pdf)
- Mental Health Commission of Canada (2018). *Building for the Future: 2017-2018 Annual Report*. Retrieved from [https://www.mentalhealthcommission.ca/sites/default/files/2018-08/annual\\_report\\_2017\\_2018\\_eng\\_0.pdf](https://www.mentalhealthcommission.ca/sites/default/files/2018-08/annual_report_2017_2018_eng_0.pdf)
- Mental Health Commission of Canada (2016). *The Mental Health Strategy for Canada: A Youth Perspective*. Retrieved from <https://www.mentalhealthcommission.ca/English/document/72171/mental-health-strategy-canada-youth-perspective>
- Merali, Y. & Allen, P. (2011). Chapter 1 – Complexity and Systems Thinking. In P. Allen, S. Maguire & B. McKelvey (Ed.) *The SAGE Handbook of Complexity and Management*. (pp. 31-52). SAGE.
- Mheidly, N., & Fares, J. (2020). Leveraging media and health communication strategies to overcome the COVID-19 infodemic. *Journal of Public Health Policy*, 41(4), 410–420. <https://doi.org/10.1057/s41271-020-00247-w>
- Miller, J. (2021, January 11). Special-ed workers worry about class safety. The Ottawa Citizen. Retrieved from ProQuest database: <https://search.proquest.com/newspapers/special-ed-workers-worry-about-classsafety/docview/2476740987/se-2?accountid=14701>
- Ministry of Children and Youth Services (2015). *Community-Based Child and Youth Mental Health: Program Guidelines and Key Requirements #01: Core Services and Key Processes*. Retrieved May 11, 2020, from

<http://www.children.gov.on.ca/htdocs/English/documents/specialneeds/mentalhealth/pg1.pdf>

Mohney, G. & Citroner, G. ed. Cassell, D.K. (2021, June 17). COVID-19 Updates: CDC Says Delta Variant Now Variant of Concern. *Healthline*. Retrieved June 18, 2021, from

<https://www.healthline.com/health-news/covid-19-updates>

Morris, G. (2006). Chapter 4 – Selling mental health (positive health promotion). In *Mental health issues and the media an introduction for health professionals*. (pp. 70-91). London: Routledge.

Morse, J. (2015). Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry. *Qualitative Health Research*, 25(9), 1212–1222.

<https://doi.org/10.1177/1049732315588501>

Nawková, L., Nawka, A., Adámková, T., Rukavina, T. V., Holcnerová, P., Kuzman, M. R., Jovanović, N., Brborović, O., Bednářová, B., Žuchová, S., Mioviský, M., & Raboch, J. (2012). The Picture of Mental Health/Illness in the Printed Media in Three Central European Countries. *Journal of Health Communication*, 17(1), 22–40.

<https://doi.org/10.1080/10810730.2011.571341>

Nicholas, D. B., Belletrutti, M., Dimitropoulos, G., Katz, S. L., Rapoport, A., Urschel, S., West, L., & Zwaigenbaum, L. (2020). Perceived Impacts of the COVID-19 Pandemic on Pediatric Care in Canada: A Roundtable Discussion. *Global Pediatric Health*.

<https://doi.org/10.1177/2333794X20957652>

Niederdeppe, J., Bigman, C., Gonzales, A., & Gollust, S. (2013). Communication About Health Disparities in the Mass Media. *Journal of Communication*, 63(1), 8–30.

<https://doi.org/10.1111/jcom.12003>

- Nielson, K. (2020, April 24; updated 2020, July 16). A timeline of the novel coronavirus in Ontario. *Global News*. Retrieved August 20, 2020, from <https://globalnews.ca/news/6859636/ontario-coronavirus-timeline/>
- O’Sullivan, T., & Phillips, K. (2019). From SARS to pandemic influenza: the framing of high-risk populations. *Natural Hazards*, 98(1), 103–117. <https://doi.org/10.1007/s11069-019-03584-6>
- O’Sullivan, T.L., Kuziemy, C.E., Corneil, W., Lemyre, L., Franco, Z... (2014) The EnRiCH community resilience framework for high-risk populations. *PLOS Curr Disasters*. <https://doi.org/10.1371/currents.dis.11381147bd5e89e38e78434a732f17db>
- O’Sullivan, T., Kuziemy, C., Toal-Sullivan, D., & Corneil, W. (2013). Unraveling the complexities of disaster management: A framework for critical social infrastructure to promote population health and resilience. *Social Science & Medicine* (1982), 93, 238–246. <https://doi.org/10.1016/j.socscimed.2012.07.040>
- Office of the Premier (2021, January 7) News Release: Ontario Extends Teacher-Led Online Learning Until January 25 to Keep Students and Staff Safe in Southern Ontario. *Government of Ontario*. Retrieved June 17, 2021 from <https://news.ontario.ca/en/release/59890/ontario-extends-teacher-led-online-learning-until-january-25-to-keep-students-and-staff-safe-in-southern-ontario>
- Office of the Premier (2020a, October 21). News Release: Ontario Expanding Mental Health Services for Children and Youth. *Government of Ontario*. Retrieved June 17, 2021, from <https://news.ontario.ca/en/release/58894/ontario-expanding-mental-health-services-for-children-and-youth>

Office of the Premier (2020b, November 20) News Release: Ontario Taking Further Action to Stop the Spread of COVID-19. *Government of Ontario*. Retrieved June 17, 2021, from <https://news.ontario.ca/en/release/59305/ontario-taking-further-action-to-stop-the-spread-of-covid-19>

Organisation for Economic Co-operation and Development. (2021, May 12). Supporting young people's mental health through the COVID-19 crisis. *Tackling coronavirus (COVID-19): Contributing to a Global Effort*. Retrieved November 20, 2021 from [https://read.oecd-ilibrary.org/view/?ref=1094\\_1094452-vvnq8dqm9u&title=Supporting-young-people-s-mental-health-through-the-COVID-19-crisis](https://read.oecd-ilibrary.org/view/?ref=1094_1094452-vvnq8dqm9u&title=Supporting-young-people-s-mental-health-through-the-COVID-19-crisis)

Organisation for Economic Co-operation and Development. (2020, June 29), Education and COVID-19: Focusing on the long-term impact of school closures. *Tackling coronavirus (COVID-19): Contributing to a Global Effort*. Retrieved November 21, 2021 from: <https://www.oecd.org/coronavirus/policy-responses/education-and-covid-19-focusing-on-the-long-term-impact-of-school-closures-2cea926e/>

Osman, L. (2021, November 5). Fourth wave of COVID-19 largely in decline across Canada: federal modelling. Retrieved November 19, 2021, from <https://www.cp24.com/news/fourth-wave-of-covid-19-largely-in-decline-across-canada-federal-modelling-1.5653848>

Ottawa Public Health. (2020, April 14). Mental Health and COVID-19. *Ottawa Public Health*. Retrieved April 20, 2020, from <https://www.ottawapublichealth.ca/en/public-health-topics/mental-health-and-covid-19.aspx>

Palinkas, L. A., De Leon, J., Salinas, E., Chu, S., Hunter, K., Marshall, T. M., Tadehara, E., Strnad, C. M., Purtle, J., Horwitz, S. M., McKay, M. M., & Hoagwood, K. E. (2021).

- Impact of the COVID-19 Pandemic on Child and Adolescent Mental Health Policy and Practice Implementation. *International journal of environmental research and public health*, 18(18), 9622. <https://doi.org/10.3390/ijerph18189622>
- Pan-Canadian Public Health Network (2018). *Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector*. Public Health Agency of Canada. <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/cpip-pclcp/assets/pdf/report-rapport-02-2018-eng.pdf>
- Panarese, P., & Azzarita, V. (2021). The Impact of the COVID-19 Pandemic on Lifestyle: How Young people have Adapted Their Leisure and Routine during Lockdown in Italy. *RELC Journal*, 29(4\_suppl), 314–332. <https://doi.org/10.1177/0033688217716506>
- Payne, E. (2021, January 30). CHEO warns of increase in infants getting injured; Hospital joins with agencies in urging pandemic-stressed parents to seek help. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/newspapers/cheo-warns-increase-infants-gettinginjured/docview/2484020595/se-2?accountid=14701>
- Payne, E. (2020, July 7). Children's health crisis looms; Hospital CEOs cite health-care backlogs, developmental delays, stress of isolation. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2420944161?accountid=14701>
- Petropoulos, F., & Makridakis, S. (2020). Forecasting the novel coronavirus COVID-19. *PLoS One*, 15(3). <https://doi.org/10.1371/journal.pone.0231236>
- Pfefferbaum, B., Pfefferbaum, R. L., & Van Horn, R. L. (2018). Involving children in disaster risk reduction: the importance of participation. *European Journal of Psychotraumatology*, 9(sup2), 1425577–6. <https://doi.org/10.1080/20008198.2018.1425577>

- Philipsborn R.P. & Chan, K. (2018). Climate Change and Global Child Health. *Pediatrics*. 141(6). <https://doi.org/10.1542/peds.2017-3774>
- Phillips, N., & Hardy, C. (2002). *Qualitative Research Methods: Discourse analysis*. Thousand Oaks, CA: SAGE Publications, Inc. DOI: 10.4135/9781412983921
- Pidd, M. (2004). Chapter 1: Complementarity in systems modelling. In M. Pidd (Ed.), *Systems Modelling. Theory and Practice* West Sussex, England: John Wiley & Sons Ltd.
- Polit, D.F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9<sup>th</sup> ed.). Philadelphia: Lippincott, Williams & Wilkins.
- Raymond, T. (2021, May 19). CHEO joins other children's hospitals in declaring mental health crisis among youth as pandemic drags on. *CTV News Ottawa*. Retrieved March 20, 2022 from <https://ottawa.ctvnews.ca/cheo-joins-other-children-s-hospitals-in-declaring-mental-health-crisis-among-youth-as-pandemic-drags-on-1.5433469>
- Riphagen, S., Gomez, X., Gonzalez-Martinez, C., Wilkinson, N., & Theocharis, P. (2020). Hyperinflammatory shock in children during COVID-19 pandemic. *The Lancet*, 395(10237), 1607-1608. [https://doi.org/10.1016/S0140-6736\(20\)31094-1](https://doi.org/10.1016/S0140-6736(20)31094-1)
- Rodrigues, G. (2020, March 18). Ontario government declares state of emergency amid coronavirus pandemic. *Global News*. Retrieved May 3, 2020, from <https://globalnews.ca/news/6688074/ontario-doug-ford-coronavirus-covid-19-march-17/>
- Rubens, S., Felix, E., & Hambrick, E. (2018). A Meta-Analysis of the Impact of Natural Disasters on Internalizing and Externalizing Problems in Youth. *Journal of Traumatic Stress*, 31(3), 332–341. <https://doi.org/10.1002/jts.22292>
- Rumsey, M., Fletcher, S. M., Thiessen, J., Gero, A., Kuruppu, N., Daly, J., Buchan, J., & Willetts, J. (2014). A qualitative examination of the health workforce needs during

- climate change disaster response in Pacific Island Countries. *Human Resources for Health*, 12(1), 9–9. <https://doi.org/10.1186/1478-4491-12-9>
- Salzberg, S. (2020, February 29). Coronavirus: There Are Better Things To Do Than Panic. *Forbes*. Retrieved August 4, 2020, from <https://www.forbes.com/sites/stevensalzberg/2020/02/29/coronavirus-time-to-panic-yet/#24cf2177fa6f>
- School Mental Health Ontario. (2020). Parents and Families - COVID-19. *School Mental Health Ontario*. Retrieved May 3, 2020, from <https://smho-smso.ca/covid-19/parents-and-families/>.
- Secon, H., Woodward, A., & Mosher, D. (2020, April 1). A comprehensive timeline of the new coronavirus pandemic, from China's first COVID-19 case to the present. *Business Insider*. Retrieved April 3, 2020, from <https://www.businessinsider.com/coronavirus-pandemic-timeline-history-major-events-2020-3>
- Shelus, V. S., Frank, S. C., Lazard, A. J., Higgins, I., Pulido, M., Richter, A., Vandegrift, S. M., Vereen, R. N., Ribisl, K. M., & Hall, M. G. (2020). Motivations and Barriers for the Use of Face Coverings during the COVID-19 Pandemic: Messaging Insights from Focus Groups. *International journal of environmental research and public health*, 17(24), 9298. <https://doi.org/10.3390/ijerph17249298>
- Sinyor, M., Schaffer, A., Heisel, M. J., Picard, A., Adamson, G., Cheung, C. P., Katz, L. Y., Jetly, R., & Sareen, J. (2018). Media Guidelines for Reporting on Suicide: 2017 Update of the Canadian Psychiatric Association Policy Paper. *The Canadian Journal of Psychiatry*, 63(3), 182–196. <https://doi.org/10.1177/0706743717753147>

- Srivastava, K., Chaudhury, S., Bhat, P. S., & Mujawar, S. (2018). Media and mental health. *Industrial psychiatry journal*, 27(1), 1–5. [https://doi.org/10.4103/ipj.ipj\\_73\\_18](https://doi.org/10.4103/ipj.ipj_73_18)
- Stewart, K., & Townley, G. (2019). Intrapersonal and social–contextual factors related to psychological well-being among youth experiencing homelessness. *Journal of Community Psychology*, 47(4), 772–789. <https://doi.org/10.1002/jcop.22152>
- Strudwick, G., Sockalingam, S., Kassam, I., Sequeira, L., Bonato, S., Youssef, A., Mehta, R., Green, N., Agic, B., Soklaridis, S., Impey, D., Wiljer, D., & Crawford, A. (2021). Digital Interventions to Support Population Mental Health in Canada During the COVID-19 Pandemic: Rapid Review. *JMIR mental health*, 8(3), e26550. <https://doi.org/10.2196/26550>
- Stuart, H. (2006). Media Portrayal of Mental Illness and its Treatments. *CNS Drugs*, 20(2), 99–106. <https://doi.org/10.2165/00023210-200620020-00002>
- Su, Z., McDonnell, D., Wen, J., Kozak, M., Abbas, J., Šegalo, S., Li, X., Ahmad, J., Cheshmehzangi, A., Cai, Y., Yang, L., & Xiang, Y.-T. (2021). Mental health consequences of COVID-19 media coverage: the need for effective crisis communication practices. *Globalization and Health*, 17(1), 4–4. <https://doi.org/10.1186/s12992-020-00654-4>
- Tesher, E. (2021, January 25). Look beyond your family for the support you need. *Toronto Star*. Retrieved from ProQuest database: <https://search.proquest.com/newspapers/look-beyond-your-family-support-youneed/docview/2480184873/se-2?accountid=14701>
- The Ottawa Citizen (2020, March 18). Five ways to emotional resilience. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2378530341?accountid=14701>



Toronto Star (2021, January 11). Group aims to boost mental-health services. *Toronto Star*.

Retrieved from ProQuest database: <https://search.proquest.com/newspapers/group-aims-boost-mental-healthservices/docview/2476520669/se-2?accountid=14701>

Toronto Star (2021, January 22). Pandemic prompts rise in youth eating disorders. *Toronto Star*.

Retrieved from ProQuest database: <https://search.proquest.com/newspapers/pandemic-prompts-rise-youth-eatingdisorders/docview/2479651255/se-2?accountid=14701>

Toronto Star (2020, November 1). Pandemic play speaks to students. *Toronto Star*. Retrieved

from ProQuest database: <https://search.proquest.com/newspapers/pandemic-play-speaksstudents/docview/2456225967/se-2?accountid=14701>

Toronto Star (2020, September 12). COVID-19 sends the ideals of public education to the back of the class. *Toronto Star*. Retrieved from ProQuest database:

<https://search.proquest.com/docview/2441838968?accountid=14701>

Toronto Star (2020, June 19). Province pledges funding for student mental health. *Toronto Star*.

Retrieved from ProQuest database:

<https://search.proquest.com/docview/2414678755?accountid=14701>

Tufford, L., & Newman, P. (2012). Bracketing in Qualitative Research. *Qualitative Social Work*, 11(1), 80–96. <https://doi.org/10.1177/1473325010368316>

Turcotte, M. (2015, October) Political participation and civic engagement of youth. *Insights on Canadian Society*. Statistics Canada Catalogue no. 75-006-X.

UNICEF Canada, (2020, April 17). The Impact of COVID-19 on Children in Canada: Short, Medium And Long-Term Mitigation Strategies. *UNICEF Canada*. Retrieved June 15, 2020 from <https://www.unicef.ca/en/press-release/impact-covid-19-children-canada-short-medium-and-long-term-mitigation-strategies>

- UN News (2018, January 30). Millions of children in crisis zones face 'bleak future,' UNICEF warns, launching emergency appeal. *United Nations*. Retrieved May 8, 2020, from <https://news.un.org/en/story/2018/01/1001531>
- Vaillancourt, T., Szatmari, P., Georgiades, K., & Krygsman, A. (2021). The impact of COVID-19 on the mental health of Canadian children and youth. *Facets (Ottawa)*, 6(1), 1628–1648. <https://doi.org/10.1139/facets-2021-0078>
- Wahl, O. F. (2003). News Media Portrayal of Mental Illness: Implications for Public Policy. *American Behavioral Scientist*, 46(12), 1594–1600. <https://doi.org/10.1177/0002764203254615>
- Wang, Y., Mckee, M., Torbica, A., & Stuckler, D. (2019). Systematic Literature Review on the Spread of Health-related Misinformation on Social Media. *Social Science & Medicine*, 240, 112552. <https://doi.org/10.1016/j.socscimed.2019.112552>
- Warnica, R. (2020, March 27). Why don't young men get the message on coronavirus?; Simple, blunt messaging may be only way to get past youths' false sense of security. *The Ottawa Citizen*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2383737698?accountid=14701>
- Warren, M. (2020, August 24). No more gold stars for attendance as schools reopen. *Toronto Star*. Retrieved from ProQuest database: <https://search.proquest.com/docview/2436345550?accountid=14701>
- Wasserman, C., Postuvan, V., Herta, D., Iosue, M., Värnik, P., & Carli, V. (2018). Interactions between youth and mental health professionals: The Youth Aware of Mental health (YAM) program experience. *PloS One*, 13(2), e0191843–e0191843. <https://doi.org/10.1371/journal.pone.0191843>

- Watson, M. F., Bacigalupe, G., Daneshpour, M., Han, W., & Parra-Cardona, R. (2020). COVID-19 Interconnectedness: Health Inequity, the Climate Crisis, and Collective Trauma. *Family Process*, 59(3), 832–846. <https://doi.org/10.1111/famp.12572>
- Weikle, B. (2020, November 26). Protect your family’s mental health. *Toronto Star*. Retrieved from ProQuest database: <https://search.proquest.com/newspapers/protect-your-familys-mentalhealth/docview/2464323664/se-2?accountid=14701>
- White, R. (2004). Discourse analysis and social constructionism. (discourse analysis). *Nurse Researcher*, 12(2), 7–16. <https://doi.org/10.7748/nr.12.2.7.s3>
- World Health Organization (2022, January 10). WHO Coronavirus (COVID-19) Dashboard. *World Health Organization*. Retrieved January 11, 2022, from <https://covid19.who.int>
- World Health Organization (2020, February). Naming the coronavirus disease (COVID-19) and the virus that causes it. *World Health Organization*. Retrieved April 2, 2020 from [https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)
- Yong, A., & Lemyre, L. (2019). Getting Canadians prepared for natural disasters: a multi-method analysis of risk perception, behaviors, and the social environment. *Natural Hazards*, 98(1), 319–341. <https://doi.org/10.1007/s11069-019-03669-2>
- Yousif, N. (2020, December 13). Kids Help Phone says calls soaring amid pandemic. *Toronto Star*. Retrieved from ProQuest database: <https://search.proquest.com/newspapers/kids-help-phone-says-calls-soaring-amidpandemic/docview/2469578148/se-2?accountid=14701>

## Appendix A: Support for Media Outlet Selection

| Ontario City | Population (Year)             | Confirmed COVID-19 Cases | Newspaper (Owner)                                             | Available on ProQuest? <sup>1</sup> |
|--------------|-------------------------------|--------------------------|---------------------------------------------------------------|-------------------------------------|
| Ottawa       | 1,393,000 (2020) <sup>2</sup> | 2,496 <sup>3</sup>       | The Ottawa Citizen (Postmedia Network) <sup>1</sup>           | Yes                                 |
| Toronto      | 6,197,000 (2020) <sup>4</sup> | 15,334 <sup>5</sup>      | Toronto Star (Torstar/NordStar) <sup>1</sup>                  | Yes                                 |
| Windsor      | 336,000 (2020) <sup>6</sup>   | 2,285 <sup>7</sup>       | Windsor Star (Postmedia Network) <sup>1</sup>                 | Yes                                 |
| North Bay    | 51,553 (2016) <sup>8</sup>    | 37 <sup>9</sup>          | The North Bay Nugget (Postmedia Network) <sup>10</sup>        | No                                  |
| London       | 545,441 (2019) <sup>11</sup>  | 669 <sup>12</sup>        | London Free Press (Postmedia Network) <sup>10</sup>           | No                                  |
| Sudbury      | 161,531 (2016) <sup>13</sup>  | 89 <sup>14</sup>         | Sudbury Star (Postmedia Network) <sup>10</sup>                | No                                  |
| Kenora       | 18,911 (2018) <sup>15</sup>   | 8 <sup>16</sup>          | Kenora Daily Miner and News (Postmedia Network) <sup>10</sup> | No                                  |
| Kingston     | 175,708 (2019) <sup>6</sup>   | 109 <sup>17</sup>        | Kingston Whig-Standard (Postmedia Network) <sup>1</sup>       | Yes                                 |
| Hamilton     | 794,716 (2019) <sup>6</sup>   | 890 <sup>18</sup>        | The Hamilton Spectator (Torstar/NordStar) <sup>10</sup>       | No                                  |

<sup>1</sup> Information retrieved from ProQuest database's Title List (accurate as of July 25, 2020)

<sup>2</sup> Retrieved from: <https://www.macrotrends.net/cities/20387/ottawa-gatineau/population>

<sup>3</sup> Retrieved from: <https://www.ottawapublichealth.ca/en/reports-research-and-statistics/daily-covid19-dashboard.aspx>

<sup>4</sup> Retrieved from: <https://www.macrotrends.net/cities/20402/toronto/population>

<sup>5</sup> Retrieved from: <https://www.toronto.ca/home/covid-19/covid-19-latest-city-of-toronto-news/covid-19-status-of-cases-in-toronto/>

<sup>6</sup> Retrieved from: <https://www.macrotrends.net/cities/20406/windsor/population>

<sup>7</sup> Retrieved from: <https://www.wechu.org/cv/local-updates>

<sup>8</sup> Retrieved from: <https://www.investinnorthbay.ca/data-resources/demographics-population/>

<sup>9</sup> Retrieved from: <https://www.myhealthunit.ca/en/health-topics/coronavirus.asp>

<sup>10</sup> Information retrieved from Wikipedia

<sup>11</sup> Retrieved from: <https://www150.statcan.gc.ca/n1/en/daily-quotidien/200213/dq200213a-eng.pdf?st=HmQ5-gAk>

<sup>12</sup> Retrieved from: <https://www.healthunit.com/covid-19-cases-middlesex-london>

<sup>13</sup> Retrieved from: <https://www.greatersudbury.ca/do-business/community-profile/demographics/>

<sup>14</sup> Retrieved from: <https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/current-status-covid-19>

<sup>15</sup> Retrieved from: <https://kenoraonline.com/local/kenora-ranked-12th-most-dangerous-city-in-canada>

<sup>16</sup> Retrieved from: <https://www.nwhu.on.ca/covid19/Pages/regional-COVID-19-results.aspx>

<sup>17</sup> Retrieved from: <https://www.kflaph.ca/en/healthy-living/status-of-cases-in-kfla.aspx>

<sup>18</sup> Retrieved from: <https://www.hamilton.ca/coronavirus/status-cases-in-hamilton>

|              |                                 |                                       |                                                            |    |
|--------------|---------------------------------|---------------------------------------|------------------------------------------------------------|----|
| Brampton     | 613,570<br>(2016) <sup>19</sup> | 3,036 <sup>20</sup>                   | The Brampton Guardian<br>(Torstar/NordStar) <sup>10</sup>  | No |
| Peterborough | 131,283<br>(2018) <sup>21</sup> | 97 <sup>22</sup>                      | Peterborough Examiner<br>(Torstar/NordStar) <sup>10</sup>  | No |
| Sarnia       | 72,125 (2016) <sup>23</sup>     | 299 (Lambton<br>County) <sup>24</sup> | Sarnia Observer (Postmedia Network) <sup>10</sup>          | No |
| Guelph       | 131,794<br>(2016) <sup>22</sup> | 239 <sup>25</sup>                     | Guelph Mercury (Torstar/NordStar) <sup>10</sup>            | No |
| Waterloo     | 104,986<br>(2016) <sup>22</sup> | 1,385 <sup>26</sup>                   | Waterloo Region Record<br>(Torstar/NordStar) <sup>10</sup> | No |
| Barrie       | 141,434<br>(2016) <sup>22</sup> | 200 <sup>27</sup>                     | Barrie Advance (Torstar/NordStar) <sup>10</sup>            | No |
| Simcoe       | 13,922 (2016) <sup>22</sup>     | 627 (Simcoe<br>County) <sup>26</sup>  | Simcoe Reformer (Sun Media) <sup>10</sup>                  | No |

Note: The city populations and confirmed COVID-19 cases numbers were searched on July 30, 2020

<sup>19</sup> Retrieved from: <https://www.bramptonguardian.com/news-story/9773457-report-compares-projected-population-growth-in-brampton-s-10-wards/>

<sup>20</sup> Retrieved from: <https://www.peelregion.ca/coronavirus/case-status/>

<sup>21</sup> Retrieved from: <https://www.thepeterboroughexaminer.com/news/peterborough-region/2019/03/29/peterborough-now-fastest-growing-community-in-canada.html>

<sup>22</sup> Retrieved from: <https://www.peterboroughpublichealth.ca/your-health/diseases-infections-immunization/diseases-and-infections/novel-coronavirus-2019-ncov/local-covid-19-status/>

<sup>23</sup> Retrieved from: <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm>

<sup>24</sup> Retrieved from: <https://lambtonpublichealth.ca/2019-novel-coronavirus/summary-of-covid-19-cases-in-lambton-county/>

<sup>25</sup> Retrieved from: <https://www.wdgpublishhealth.ca/your-health/covid-19-information-public/status-cases-wdg>

<sup>26</sup> Retrieved from: <https://www.regionofwaterloo.ca/en/health-and-wellness/positive-cases-in-waterloo-region.aspx>

<sup>27</sup> Retrieved from: [http://www.simcoemuskokahealth.org/MicroSites/Media/Health%20Stats/Instant%20Atlas/HealthMAPS\\_COVID\\_Dashboard20200730/index.html](http://www.simcoemuskokahealth.org/MicroSites/Media/Health%20Stats/Instant%20Atlas/HealthMAPS_COVID_Dashboard20200730/index.html)

## Appendix B: ProQuest Summary of Articles for Determining Data Collection Feasibility

| Time Period (2020)                 | <i>The Ottawa Citizen</i>                                        |                                                                                                        | <i>Toronto Star</i>                                              |                                                                                                        | <i>Total #</i> |          |
|------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------|----------|
|                                    | Search 1: # articles searched using: “coronavirus” or “COVID-19” | Search 2: # articles from Search 1 filtered in ProQuest using terms related to youth and mental health | Search 1: # articles searched using: “coronavirus” or “COVID-19” | Search 2: # articles from Search 1 filtered in ProQuest using terms related to youth and mental health | Search 1       | Search 2 |
| March 11-March 31                  | 867                                                              | 174                                                                                                    | 823                                                              | 286                                                                                                    | 1,690          | 460      |
| April 14-April 30                  | 560                                                              | 115                                                                                                    | 865                                                              | 275                                                                                                    | 1,425          | 390      |
| May 19-June 2                      | 439                                                              | 95                                                                                                     | 679                                                              | 202                                                                                                    | 1,118          | 297      |
| June 12-July 8                     | 567                                                              | 145                                                                                                    | 1,012                                                            | 340                                                                                                    | 1,579          | 485      |
| July 17-September 30 <sup>28</sup> | 619                                                              | 176                                                                                                    | 1,288                                                            | 514                                                                                                    | 1,907          | 690      |
| <b>Total</b>                       | 3,052                                                            | 705                                                                                                    | 4,667                                                            | 1,617                                                                                                  | 7,719          | 2,322    |

<sup>28</sup> Note: Based on when the research was conducted, the numbers reflect a search of newspaper articles published in specified time periods between March 11-August 20, 2020, thereby displaying inaccurate numbers for the timeframe “July 17-September 30”. ProQuest filters were used for determining feasibility only. No duplicates were removed. The time period of July 17-September 30 will encompass data from two events that overlapped in time period based on the description in Table 2.

## Appendix C: Refinement of Articles Throughout the Data Collection Process

All tables in Appendix C display the breakdown of the number of articles in each timeframe, as well as by media source. The steps taken to develop the table are described in the tables' titles.

**Table 8:** *Number of Articles From the Initial ProQuest Search With the Terms "Coronavirus" OR "COVID-19"*

| <b>Timeframe Period</b>         | <b><i>The Ottawa Citizen</i><br/>(# articles)</b> | <b><i>Toronto Star</i><br/>(# articles)</b> |
|---------------------------------|---------------------------------------------------|---------------------------------------------|
| March 11 – March 31, 2020       | 759                                               | 591                                         |
| April 14 – April 30, 2020       | 485                                               | 665                                         |
| May 19 – June 2, 2020           | 374                                               | 527                                         |
| June 12 – July 8, 2020          | 501                                               | 814                                         |
| July 17 – August 14, 2020       | 467                                               | 867                                         |
| August 15 – September 30, 2020  | 649                                               | 1,354                                       |
| October 9 – October 16, 2020    | 113                                               | 237                                         |
| October 21 – October 27, 2020   | 98                                                | 183                                         |
| October 28 – November 3, 2020   | 105                                               | 195                                         |
| November 16 – November 20, 2020 | 80                                                | 124                                         |
| November 23 – December 7, 2020  | 212                                               | 462                                         |
| December 8 – December 31, 2020  | 338                                               | 676                                         |
| January 1 – January 15, 2021    | 174                                               | 448                                         |
| January 16 – January 31, 2021   | 189                                               | 478                                         |
| <b><i>Total</i></b>             | <b><i>4544</i></b>                                | <b><i>7621</i></b>                          |

**Table 9: Article Counts Following Screening for Duplicates**

| <b>Timeframe<br/>Period</b>          | <b><i>The Ottawa Citizen</i></b> |                                   |                                      | <b><i>Toronto Star</i></b>     |                                   |                                      |
|--------------------------------------|----------------------------------|-----------------------------------|--------------------------------------|--------------------------------|-----------------------------------|--------------------------------------|
|                                      | <b>Initial<br/>(#articles)</b>   | <b>Duplicates<br/>(#articles)</b> | <b>New<br/>Total<br/>(#articles)</b> | <b>Initial<br/>(#articles)</b> | <b>Duplicates<br/>(#articles)</b> | <b>New<br/>Total<br/>(#articles)</b> |
| March 11–<br>March 31, 2020          | 759                              | 0                                 | 759                                  | 591                            | 6                                 | 585                                  |
| April 14–April<br>30, 2020           | 485                              | 0                                 | 485                                  | 665                            | 9                                 | 656                                  |
| May 19–June 2,<br>2020               | 374                              | 0                                 | 374                                  | 527                            | 21                                | 506                                  |
| June 12–July 8,<br>2020              | 501                              | 0                                 | 501                                  | 814                            | 31                                | 783                                  |
| July 17–August<br>14, 2020           | 467                              | 0                                 | 467                                  | 867                            | 48                                | 819                                  |
| August 15–<br>September 30,<br>2020  | 649                              | 0                                 | 649                                  | 1,356                          | 83                                | 1273                                 |
| October 9–<br>October 16,<br>2020    | 113                              | 0                                 | 113                                  | 237                            | 17                                | 220                                  |
| October 21–<br>October 27,<br>2020   | 98                               | 0                                 | 98                                   | 183                            | 7                                 | 176                                  |
| October 28–<br>November 3,<br>2020   | 105                              | 0                                 | 105                                  | 195                            | 14                                | 181                                  |
| November 16–<br>November 20,<br>2020 | 80                               | 0                                 | 80                                   | 124                            | 6                                 | 118                                  |
| November 23 –<br>December 7,<br>2020 | 212                              | 0                                 | 212                                  | 462                            | 27                                | 435                                  |
| December 8–<br>December 31,<br>2020  | 338                              | 0                                 | 338                                  | 676                            | 74                                | 602                                  |
| January 1–<br>January 15,<br>2021    | 174                              | 0                                 | 174                                  | 448                            | 38                                | 410                                  |
| January 16–<br>January 31,<br>2021   | 189                              | 0                                 | 189                                  | 478                            | 40                                | 438                                  |
| <b>Total</b>                         | 4544                             | 0                                 | <b>4544</b>                          | 7621                           | 421                               | <b>7202</b>                          |



**Table 10:** *Number of Articles Resulting from the Text Search Query That Included Youth-Related Terms*

| Timeframe Period              | <i>The Ottawa Citizen</i>        |                                  | <i>Toronto Star</i>              |                                  |
|-------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|                               | # Articles for Text Search Query | Youth Query Results (# articles) | # Articles for Text Search Query | Youth Query Results (# articles) |
| March 11–March 31, 2020       | 759                              | 119                              | 585                              | 123                              |
| April 14–April 30, 2020       | 485                              | 83                               | 656                              | 161                              |
| May 19–June 2, 2020           | 374                              | 71                               | 506                              | 137                              |
| June 12–July 8, 2020          | 501                              | 107                              | 783                              | 196                              |
| July 17–August 14, 2020       | 467                              | 119                              | 819                              | 272                              |
| August 15–September 30, 2020  | 649                              | 179                              | 1273                             | 493                              |
| October 9–October 16, 2020    | 113                              | 20                               | 220                              | 56                               |
| October 21–October 27, 2020   | 98                               | 19                               | 176                              | 42                               |
| October 28–November 3, 2020   | 105                              | 30                               | 181                              | 61                               |
| November 16–November 20, 2020 | 80                               | 20                               | 118                              | 34                               |
| November 23–December 7, 2020  | 212                              | 47                               | 435                              | 143                              |
| December 8–December 31, 2020  | 338                              | 68                               | 602                              | 181                              |
| January 1–January 15, 2021    | 174                              | 44                               | 410                              | 92                               |
| January 16–January 31, 2021   | 189                              | 46                               | 438                              | 125                              |
| <b>Total</b>                  | <b>4544</b>                      | <b>972</b>                       | <b>7202</b>                      | <b>2116</b>                      |

**Table 11:** *Number of Articles Resulting from the Text Search Query That Included Mental Health-Related Terms*

| Timeframe Period              | <i>The Ottawa Citizen</i>             |                                               | <i>Toronto Star</i>                   |                                               |
|-------------------------------|---------------------------------------|-----------------------------------------------|---------------------------------------|-----------------------------------------------|
|                               | Articles from Youth Query Results (#) | Articles from Mental Health Query Results (#) | Articles from Youth Query Results (#) | Articles from Mental Health Query Results (#) |
| March 11–March 31, 2020       | 119                                   | 86                                            | 123                                   | 103                                           |
| April 14–April 30, 2020       | 83                                    | 60                                            | 161                                   | 110                                           |
| May 19–June 2, 2020           | 71                                    | 42                                            | 137                                   | 98                                            |
| June 12–July 8, 2020          | 107                                   | 73                                            | 196                                   | 140                                           |
| July 17–August 14, 2020       | 119                                   | 73                                            | 272                                   | 181                                           |
| August 15–September 30, 2020  | 179                                   | 124                                           | 493                                   | 336                                           |
| October 9–October 16, 2020    | 20                                    | 14                                            | 56                                    | 43                                            |
| October 21–October 27, 2020   | 19                                    | 8                                             | 42                                    | 25                                            |
| October 28 – November 3, 2020 | 30                                    | 19                                            | 61                                    | 34                                            |
| November 16–November 20, 2020 | 20                                    | 14                                            | 34                                    | 22                                            |
| November 23–December 7, 2020  | 47                                    | 30                                            | 143                                   | 83                                            |
| December 8–December 31, 2020  | 68                                    | 35                                            | 181                                   | 111                                           |
| January 1–January 15, 2021    | 44                                    | 26                                            | 92                                    | 58                                            |
| January 16–January 31, 2021   | 46                                    | 28                                            | 125                                   | 79                                            |
| <b>Total</b>                  | <b>972</b>                            | <b>632</b>                                    | <b>2116</b>                           | <b>1423</b>                                   |

**Table 12:** *Number of Articles Analyzed in the Final Corpus Following Manual Review*

| Timeframe Period              | <i>The Ottawa Citizen</i>             |                                   |                                          | <i>Toronto Star</i>                   |                                   |                                          |
|-------------------------------|---------------------------------------|-----------------------------------|------------------------------------------|---------------------------------------|-----------------------------------|------------------------------------------|
|                               | Articles from Mental Health Query (#) | Articles Removed from the Set (#) | Articles Remaining in Final Data Set (#) | Articles from Mental Health Query (#) | Articles Removed from the Set (#) | Articles Remaining in Final Data Set (#) |
| March 11–March 31, 2020       | 86                                    | 46                                | 40                                       | 103                                   | 88                                | 15                                       |
| April 14–April 30, 2020       | 60                                    | 42                                | 18                                       | 110                                   | 86                                | 24                                       |
| May 19–June 2, 2020           | 42                                    | 26                                | 16                                       | 98                                    | 78                                | 20                                       |
| June 12–July 8, 2020          | 73                                    | 61                                | 12                                       | 140                                   | 111                               | 29                                       |
| July 17–August 14, 2020       | 73                                    | 58                                | 15                                       | 181                                   | 148                               | 33                                       |
| August 15–September 30, 2020  | 124                                   | 107                               | 17                                       | 336                                   | 284                               | 52                                       |
| October 9–October 16, 2020    | 14                                    | 12                                | 2                                        | 43                                    | 37                                | 6                                        |
| October 21–October 27, 2020   | 8                                     | 5                                 | 3                                        | 25                                    | 22                                | 3                                        |
| October 28–November 3, 2020   | 19                                    | 17                                | 2                                        | 34                                    | 29                                | 5                                        |
| November 16–November 20, 2020 | 14                                    | 10                                | 4                                        | 22                                    | 21                                | 1                                        |
| November 23–December 7, 2020  | 30                                    | 27                                | 3                                        | 83                                    | 68                                | 15                                       |
| December 8–December 31, 2020  | 35                                    | 28                                | 7                                        | 111                                   | 97                                | 14                                       |
| January 1–January 15, 2021    | 26                                    | 21                                | 5                                        | 58                                    | 54                                | 4                                        |
| January 16–January 31, 2021   | 28                                    | 16                                | 12                                       | 79                                    | 65                                | 14                                       |
| <b>Total</b>                  | 632                                   | 476                               | <b>156</b>                               | 1423                                  | 1188                              | <b>235</b>                               |

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