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# Integrating Mental Health Care in Disaster Recovery: An Analysis of British Columbia's Government Strategies

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## **Author Note**

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#### **Abstract**

Disasters have profound and lasting impacts on mental health, increasing rates of PTSD, anxiety, depression, and substance use disorders, particularly among vulnerable populations. This study examines how British Columbia integrates mental health care into disaster recovery, evaluating existing policies, programs, and service accessibility. Findings reveal that while initiatives such as Emergency Support Services (ESS), Disaster Psychosocial Support (DPS), and Psychological First Aid (PFA) provide short-term assistance, there is insufficient transition to long-term mental health recovery. The heavy reliance on community-based organizations and volunteers, with limited involvement from specialized mental health professionals, creates service gaps that hinder sustained support. Additionally, the absence of a standardized evaluation framework makes it difficult to assess the effectiveness of post-disaster mental health interventions. This study highlights the need for stronger policy integration, long-term funding, and improved mental health service accessibility. Recommendations include expanding research on long-term mental health outcomes, integrating mental health professionals into disaster response teams, and developing standardized assessment tools. Addressing these challenges requires collaborative efforts between government agencies, health authorities, and local communities to build a more resilient and evidence-based disaster mental health system in British Columbia.

*Keywords*: Disaster recovery, mental health services, emergency management, postdisaster interventions, British Columbia, psychosocial support, psychological impact

## **Table of Contents**

INTRODUCTION ERROR! BOOKMARK NO	OT DEFINED.
LITERATURE REVIEW	6
Mental Health Deterioration and Psychological Distress as an impact of COVID-19	6
Mental Health Disparities Among Vulnerable Populations	7
Substance Use as a Coping Mechanism for Psychological Distress	7
The Need for Support and Policies Regarding Mental Health After Emergencies and Disaste	rs8
Risk and Protective Factors for Mental Health in Emergencies and Disasters	9
Recovery Process	9
Disasters and Mental Health Resources	11
Cultural Safety and Wellness	13
METHODOLOGY	15
RESULTS	17
DISCUSSION	20
RECOMMENDATIONS	
CONCLUSION	
REFERENCES	
APPENDIX A – PROJECT WORK PLAN	
APPENDIX B – RESEARCH STRATEGY CHART	
APPENDIX C = ARSTRACT REVIEW PROCESS CHART	//1

#### Introduction

The impact of disasters on communities depends on various factors, including the type of disaster (natural, health-related, or human-caused), the number of casualties and fatalities, the disaster's magnitude, the number of involved agencies, the duration of impact, human behavior, and the effectiveness of response efforts. Community preparedness, planning, mitigation measures, and past disaster experiences also significantly shape disaster outcomes. Disasters can cause extensive physical, environmental, and economic damage, disrupt infrastructure, and result in physical injuries (Emergency Management BC, 2022c).

Beyond material losses and disruptions to daily life and essential services, individuals may experience emotional trauma, the loss of loved ones, and displacement—factors that contribute to heightened stress, anxiety, and diminished well-being. These events can exacerbate pre-existing health conditions, strain social support systems, and reduce survivors' quality of life and sense of community cohesion (Emergency Management BC, 2022c). The prevalence of mental health disorders such as PTSD, anxiety, depression, substance abuse, and suicide often increase significantly after disasters, affecting both individuals and communities (Weissbecker, 2009; WHO, 2022). Vulnerable groups—including women, children, refugees, and the elderly—are disproportionately impacted (Thomas et al., 2013). Youth, in particular, are at higher risk of experiencing psychological and developmental challenges, as well as chronic trauma responses (Witt et al., 2004). Therefore, it is crucial to consider the potential mental health impacts on individuals affected by disasters and emergencies. One effective approach is to integrate mental health care and support into the recovery process, ensuring comprehensive and sustained assistance for those in need.

Emergency Management and Climate Readiness (2023) recognize that disasters often cause significant emotional and psychological distress, making mental health and social support crucial for long-term recovery. Recovery efforts aim to restore physical, social, and

economic conditions and require collaboration among various stakeholders. These efforts also address psychosocial aspects, meaning the social and psychological impacts caused by a disaster (JIBC, n.d.). Given the complexity of these impacts, this research seeks to answer the question: "How does the government of British Columbia integrate mental health care and support into the disaster recovery process and what improvements are needed to ensure sustained care?".

This study aims to identify and understand the measures and efforts undertaken by responsible authorities and partners in the recovery phase to address post-disaster mental health impacts in British Columbia, as well as discuss how these resources can address the short and long-term effects of disasters on mental health in an effective way. To do so, it is necessary to understand how psychological impacts after disasters are assessed, who is responsible for addressing them, and what measures are in place. Additionally, it is also necessary to determine whether these measures are short-term crisis interventions or long-term, continuous efforts, as many psychological consequences take weeks or months to manifest and require sustained mental health care.

In the mental health field, it is difficult to assume direct cause-and-effect relationships because human responses are subjective and influenced by individual backgrounds. Complex psychological aspects cannot always be reduced to measurable figures. Since this research lies at the intersection of mental health and emergency management, it aligns with the social constructivist worldview. This perspective holds that individuals construct their understanding of the world through subjective meanings, shaped by social interactions, cultural norms, and historical contexts (Creswell, 2008). Additionally, elements of the advocacy/participatory worldview also inform this research, as it seeks to drive change by addressing issues such as the neglect of long-term post-disaster mental health care and the need for improved training to recognize and address psychological impacts. This perspective

also emphasizes raising awareness and influencing policies or actions to improve mental health integration in disaster recovery (Creswell, 2008).

The findings of this research are expected to identify gaps, discuss challenges, and propose improvements and solutions for enhancing collaboration between mental health professionals and emergency management team, as well as raise awareness about the impacts of disasters on mental health and the importance to adress it.

### **Literature Review**

The majority of the reviewed articles highlight the interconnected factors influencing mental health during the COVID-19 pandemic and climate change-related events, focusing on both psychological impacts and sociodemographic disparities. The main themes that emerged include:

## Mental Health Deterioration and Psychological Distress as an impact of COVID-19.

Several studies document a significant decline in mental health during the COVID-19 pandemic, with notable increases in anxiety, depression, PTSD, and suicidal ideation. Weeks et al. (2025) found that PTSD prevalence was higher among vulnerable populations, indicating that certain groups experienced more severe psychological distress. Similarly, Shields et al. (2021) reported that the prevalence of major depressive disorder (MDD) more than doubled during the pandemic, highlighting the widespread impact of the crisis on mental health. Additionally, Rao et al. (2024) demonstrated that pandemic-related stressors, such as financial insecurity, social isolation, and health concerns, were strongly associated with elevated symptoms of anxiety and depression.

These findings emphasize that mental health deterioration is a long-term consequence of crises (Shields et al., 2021; Rao et al., 2024; Weeks et al., 2025). Therefore, British Columbia (BC) must prioritize long-term mental health support rather than treating it as a short-term emergency response issue. Additionally, mental health impacts should be

monitored for months or even years after a disaster to assess delayed psychological effects and ensure sustained support for affected populations.

## **Mental Health Disparities Among Vulnerable Populations**

Several articles emphasize that certain groups face higher mental health risks and impacts, particularly low-income individuals, those with lower education levels, Indigenous communities, and rural populations. Weeks et al. (2025) highlights higher PTSD rates among vulnerable populations, while Kipp et al. (2019) discusses the mental health challenges in rural and Indigenous communities due to climate change. Similarly, Liu et al. (2023) examines suicidal ideation and disparities between vulnerable and non-vulnerable groups, and Goddard et al. (2024) explores the relationship between financial worry and mental health deterioration. Given that vulnerable populations experience disproportionate mental health impacts and face unique barriers to accessing care, these findings underscore the urgent need for equitable mental health services, with a particular focus on improving accessibility for at-risk communities.

## **Substance Use as a Coping Mechanism for Psychological Distress**

Substance abuse is a persistent mental health issue and public health challenge in both Canada and British Columbia. It is important to highlight that events such as disasters and emergencies can further increase alcohol and cannabis use as a coping mechanism for psychological distress, as demonstrated by Varin et al. (2021) in their study on substance consumption trends following the pandemic. Similarly, Liu et al. (2023) addresses this theme by linking substance use as a contributing factor to suicidal ideation. This highlights a critical policy consideration, particularly for British Columbia, which is already grappling with an ongoing opioid crisis that could be exacerbated by climate disasters and population displacement. Therefore, post-disaster mental health programs in BC might integrate harm

reduction strategies, addiction support services, and trauma-informed care to effectively prevent the escalation of substance use following major emergencies.

## The Need for Support and Policies Regarding Mental Health After Emergencies and Disasters

The eight reviewed studies emphasize the critical need for mental health support and policy interventions following emergencies, disasters, and crises such as the COVID-19 pandemic. The findings illustrate how large-scale disruptions significantly impact psychological well-being, particularly among vulnerable populations, and highlight the importance of integrated mental health policies to support recovery. Weeks et al. (2025) stress that mental health support is crucial to preventing long-term deterioration, while Shields et al. (2021) reinforces the need for sustained interventions beyond the initial crisis response. Similarly, Liu et al. (2021, 2023) emphasize the necessity of post-emergency mental health frameworks that integrate financial, social, and psychological support. Additionally, Kipp et al. (2019) not only address the long-term mental health consequences of environmental crises but also highlight the limited access to mental health services faced by rural and Indigenous populations.

These studies consistently underscore the lack of sufficient mental health policies in crisis recovery efforts (Weeks et al., 2025; Liu et al., 2023; Shields et al., 2021) and demonstrate how the absence of integrated economic and psychological support systems worsens mental health outcomes, revealing gaps in crisis planning. In British Columbia (BC), this underscores the urgent need to prioritize mental health services within emergency management frameworks, ensuring they are implemented alongside financial aid and housing support in post-disaster recovery. Furthermore, establishing long-term funding for mental health recovery services and expanding access to care for disaster-affected populations is essential to building a more resilient and responsive mental health system in BC.

## Risk and Protective Factors for Mental Health in Emergencies and Disasters

The reviewed studies identify various risk and protective factors that influence mental health outcomes in the aftermath of large-scale crises. Key risk factors include financial stress, as highlighted by Goddard et al. (2024) and Liu et al. (2023); social isolation and loneliness, as shown in Rao et al. (2024); trauma exposure, as discussed by Weeks et al. (2025); and substance use, examined in Varin et al. (2021). On the other hand, key protective factors include social support (Goddard et al., 2024), a sense of control and resilience (Shields et al., 2021), and community belonging, where cultural and social ties help mitigate mental health risks among affected populations (Kipp et al., 2019).

These findings emphasize the importance of fostering community resilience before and after disasters as a means of reducing psychological distress. This highlights the urgent need to develop community-based mental health interventions that strengthen social support post-disaster, promote financial relief programs to alleviate economic stress, and encourage psychological preparedness training to enhance resilience in disaster situations.

While the articles present complementary perspectives rather than a single, unified view, they offer interconnected explanations for how disasters impact mental health.

However, they all support the common conclusion that mental health care in disaster recovery must be multi-dimensional, integrating psychological, social, and economic support to address the complex effects of crises. Nonetheless, gaps remain in long-term recovery research, intervention evaluation, and culturally specific approaches, highlighting the need for further studies and policy development to improve mental health outcomes in disaster-affected populations.

## **Recovery Process**

According to the Emergency and Disaster Management Act (2023), recovery is the phase following an emergency or disaster when efforts shift from immediate response to

rebuilding and improving affected communities, infrastructure, and services. In British Columbia, recovery efforts focus on restoring the health, safety, and well-being of affected individuals, rebuilding and securing property, heritage sites, and infrastructure, and improving assets, services, and processes to reduce future risks (British Columbia, 2023). Additionally, recovery measures ensure coordination among government agencies, Indigenous communities, and stakeholders, provide financial and social support to impacted communities, and include monitoring and evaluating progress to inform future emergency management policies. By integrating these elements, the recovery phase not only addresses immediate rebuilding needs but also enhances community resilience and preparedness for future disasters (British Columbia, 2023).

The Emergency and Disaster Management Act (2023) also outlines that the recovery process involves multiple authorities, each with defined roles. The Lieutenant Governor in Council has the authority to declare a provincial recovery period when emergency conditions have stabilized and specifies which emergency response powers remain in effect during the transition. The Minister of Emergency Management oversees and coordinates recovery efforts across government agencies, ensuring alignment with the Comprehensive Emergency Management Plan. The Minister also directs government actions, advises local authorities on recovery measures, and may issue orders for specific recovery actions. Supporting these efforts, the Provincial Administrator provides operational coordination and assists local authorities in implementing recovery measures. Local governments, regional districts, and Indigenous governing bodies are responsible for leading recovery efforts within their jurisdictions, ensuring that local actions align with provincial emergency management plans and broader recovery strategies (British Columbia, 2023).

Recovery operations are structured into three stages: short-term, medium-term, and long-term, with efforts scaling based on the disaster's magnitude (Emergency Management

BC, 2022c). Short-term recovery focuses on immediate needs within days and weeks, including emergency shelter, debris clearance, infrastructure restoration, and psychosocial support, typically managed at the local level. Medium-term actions, spanning weeks to months, include temporary lodging, damage assessments, and infrastructure repair, often coordinated regionally. Long-term recovery, extending over months to years, involves permanent housing, land use planning, infrastructure reconstruction, and sustained support programs, guided by community recovery managers and provincial agencies (Emergency Management BC, 2022c). Recovery efforts target four sectors: People & Communities, focusing on health, safety, and psychosocial recovery; Economy, supporting businesses and livelihoods; Environment, addressing contamination and ecosystem restoration; and Infrastructure, rebuilding critical services and enhancing resilience (Emergency Management BC, 2022c).

## **Disasters and Mental Health Resources**

The Public Health Act (2008) mentions psychosocial disorders as part of the public health issues that must be addressed. Specifically, it includes the prevention and mitigation of the adverse effects of psychosocial disorders, injuries, and health hazards as a core public health function. Additionally, public health plans are required to monitor and assess the health status of the population, including factors influencing mental health and well-being. However, the document does not seem to explicitly mention direct psychological support or mental health services for disaster or emergency victims. It does acknowledge the need for public health responses to mitigate mental health risks but does not provide specific guidelines on psychosocial support during disaster recovery. (British Columbia, 2008).

Emergency Support Services (ESS) is a short-term emergency response program in British Columbia that provides immediate assistance to individuals and families affected by disasters (EMCR, 2023). The program helps people meet their basic needs after an

emergency, such as wildfires, floods, or house fires, allowing them to re-establish themselves as quickly as possible. ESS is managed at the local and Indigenous governing body level, with provincial support when needed. The services provide range from food, clothing, lodging, incidentals and transportation to family reunification, information services, and social-emotional and cultural support. However, ESS is typically provided for only 72 hours after an emergency. During this period, evacuees are expected to contact insurance providers, seek support from family, friends, or community resources such as the BC Association of Aboriginal Friendship Centres, First Nations Health Authority (FNHA), Canadian Red Cross, or the Salvation Army for longer-term support (EMCR, 2023).

Although ESS primarily operates in the response phase of an emergency, it also plays a crucial role in transitioning individuals and communities into the recovery phase by bridging Short-Term Assistance to Long-Term Recovery Services, Coordinating with Recovery Programs and Agencies such as Mental health and trauma support services (e.g., Disaster Psychosocial Program), Providing Emotional and Psychosocial Support by linking evacuees with counselling services, community support networks, and Indigenous healing practices (EMCR, 2023).

Health Emergency Management B.C. (HEMBC), a program under the Provincial Health Services Authority (PHSA), provides emergency management leadership and support to the B.C. health system, including regional health authorities, PHSA, and the Ministry of Health (PHSA, n.d.). Its primary goal is to build a more resilient health-care system capable of mitigating, preparing for, responding to, and recovering from emergency events while ensuring the safety of patients and staff and the continuity of health services. HEMBC operates in three key areas: health authority emergency management and fire safety support, provincial psychosocial services, and provincial coordination and operations support, which involves activating provincial response structures, aligning multi-jurisdictional efforts,

and deploying emergency medical equipment, supplies, and temporary facilities (PHSA, n.d.).

Provincial Psychosocial Services provides specialized psychosocial support to communities across British Columbia, offering crisis intervention, psychological first aid, education, and recovery coordination (PHSA, n.d.). The Mobile Response Team supports frontline staff and organizations affected by public health emergencies, such as the toxic drug crisis, by providing short-term psychosocial support, crisis intervention, and consultation in-person, virtually, or by phone. The Disaster Psychosocial Support team is deployed to communities impacted by wildfires, floods, and other emergencies, offering psychological first aid at Emergency Support Services (ESS) reception centres. Additionally, the program provides specialized education and training to enhance individual and organizational resilience, available both in-person and online, along with informational resources. In preparedness and recovery efforts, Provincial Psychosocial Services collaborates with the Ministry of Health, the Ministry of Emergency Management and Climate Readiness, regional health authorities, and non-government organizations to facilitate disaster response, resource access, and best practices through tools such as the Disaster Recovery Toolkit, wich serves as a guide to assist communities in planning, preparing for, and addressing the mental health and wellness impacts of disasters. It provides best practices through a scalable, flexible, and adaptable framework tailored to meet the unique needs of each community (PHSA, n.d.).

## **Cultural Safety and Wellness**

Emergency Policies such as Policy 2.14, issued by Emergency Management BC (EMBC) on June 30, 2022, establishes the First Nations Community Navigator role within the Emergency Support Services (ESS) framework (EMBC, 2022a). Based on a Declaration of Commitment between EMBC and the First Nations Health Authority (FNHA), the policy

aims to integrate cultural safety and humility into all phases of emergency management—mitigation, preparedness, response, and recovery. Recognizing the long-term effects of emergency management on First Nations health and wellness, it seeks to ensure culturally appropriate support for evacuees. The First Nations Community Navigator plays a key role in bridging cultural, social, and practical gaps that are often overlooked in standard ESS programs. Acting as a liaison between evacuees, Emergency Operations Centres (EOC), ESS teams, and support agencies, the Navigator advocates for evacuees, facilitates solutions to complex needs, and provides direct assistance in Reception Centres, lodging facilities, and food service areas. They also help evacuees access cultural activity locations, registration services, and referrals, ensuring they feel welcomed and supported throughout the recovery process (EMBC, 2022a).

Policy 2.15, which addresses Cultural Activity Locations Support, further reinforces the importance of cultural safety in emergency response and recovery (EMBC, 2022b).

EMBC and FNHA's Declaration of Commitment underscores the need for trauma-informed, culturally appropriate services to support evacuees. While these services may be available within or near ESS Reception Centres, some communities may opt for a separate Cultural Activity Location, where evacuees can access cultural care and wellness services. These locations may be supported by FNHA, community health societies, or other agencies, ensuring a holistic, culturally aligned approach to emergency recovery. This framework aligns with provincial and national agreements, such as the Declaration on the Rights of Indigenous Peoples Act (2019) and the BC-Canada Bilateral Agreement (2017), reinforcing Indigenous rights and self-determined approaches to emergency support (EMBC, 2022b).

## Methodology

This research is a secondary research, based on existing data. The initial sources used were books and academic articles on disasters and case studies from around the world, which indicated that disasters could have significant impacts on the mental health of victims (Weissbecker, 2009; WHO, 2022; Witt et al., 2004). Based on this information, the research question was developed, along with sub-questions and research strategies. The population of interest in this study consists in residents of British Columbia who have been affected by disasters and may require mental health support in the aftermath. To achieve this, it was necessary to search for official government documents from British Columbia and local authorities regarding laws, public policies, and resources on emergency management, disaster recovery, and mental health. The information and documents were found on the official webpages of the BC government, such as BC Laws, GOV BC, EmergencyInfoBC, BC Emergency Health Services, and the Provincial Health Services Authority.

To seek data regarding disaster impacts on mental health and practical applications of mental health interventions during the recovery phase of the emergency management cycle in British Columbia, the following keywords were identified: Mental Health, Disaster, Recovery, and British Columbia. Additionally, relevant synonyms were incorporated to refine the search, including Psychological, Mental Health Services, Psychological Effects, Disaster Management, Disaster Relief, Disaster Recovery, Emergency Management, and BC. The JIBC library was the primary database used for sourcing academic materials. The initial search included all keywords and synonyms combined as follows: "Mental Health" OR "Psychological" OR "Mental Health Services" OR "Psychological Effects" AND "Disaster" OR "Disaster Management" OR "Disaster Relief" OR "Disaster Recovery" OR "Emergency Management" AND "British Columbia" OR "BC".

This search returned 7,261,394 results. To refine the results, a second search was conducted with the same keywords but limited to peer-reviewed (scholarly) journals only, which reduced the number of results to 5,494,560. Despite this refinement, many articles were still unrelated to the Canadian context, as they examined global case studies. A third search was conducted with the same keywords and synonyms, further limiting results to articles published in English, French, Portuguese, and Spanish. This resulted in 20,463 articles, but the majority still focused on different countries. Therefore, a fourth search was performed, adding a geographical filter to include only publications from Canada, which refined the results to 214 articles. A research strategy chart is available in Appendix B (p. 40).

The titles of the 214 articles were reviewed, and 15 were selected for an abstract review based on their relevance to the study's central theme. These articles examined the impact of events (e.g., pandemics, climate change) on mental health in Canada, covering both general mental health aspects and specific issues such as depression, PTSD, suicidal ideation, anxiety, trauma, and increased use of alcohol and cannabis. Some articles also discussed mental health care services, treatment approaches, and psychosocial support. An Abstract Review Process Chart is available in Appendix C (p. 42).

Following the abstract review, 8 articles were selected for full review based on their direct relevance to the study. Articles were excluded if they focused on general health rather than mental health; did not examine the mental health impact of specific events; focused on first responders rather than the general population (as the study targets residents of British Columbia); addressed private mental health care rather than public services or lacked relevant data or discussions on mental health services, disasters, or event-related impacts. The final selection included articles that provided quantitative and qualitative data on the impact of specific events (e.g., COVID-19, climate change) on mental health. These studies

also incorporated sociodemographic analyses, offering insights into how different populations in Canada are affected. A qualitative approach was utilized to analyze the findings, as this study focused on documents, available services, and the subjective needs of disaster survivors, as well as findings from relevant literature.

## **Results**

Despite using multiple keywords and synonyms, most identified studies focused on the mental health impacts of COVID-19, while no articles specifically analyzed the mental health effects of disasters in Canada, even though large-scale emergencies and evacuations are frequent. For instance, wildfires in British Columbia led to the evacuation of 65,000 people in 2017 and 3,200 people in 2018 (Government of Canada, n.d.). Additionally, no studies were found addressing specific mental health support initiatives available to disaster-affected populations in Canada, highlighting a critical gap in research and policy documentation.

Emergencies and disasters have significant and long-term psychological effects, leading to increased rates of anxiety, depression, PTSD, and suicidal ideation (Weeks et al., 2025; Shields et al., 2021; Rao et al., 2024). Research indicates that vulnerable populations—including low-income individuals, Indigenous communities, and rural residents—experience more severe mental health impacts, with financial stress, social isolation, and trauma exposure as primary risk factors (Weeks et al., 2025; Shields et al., 2021; Rao et al., 2024). Furthermore, substance use emerges as a common coping mechanism, with disasters exacerbating alcohol and cannabis consumption, heightening the risks of addiction and mental health deterioration (Varin et al., 2021; Liu et al., 2023). Given these challenges, post-disaster recovery efforts must move beyond immediate relief and integrate long-term mental health interventions to prevent prolonged psychological distress.

The literature also identifies significant gaps in mental health policies and services following disasters, emphasizing the need for integrated frameworks that combine financial, social, and psychological support (Weeks et al., 2025; Liu et al., 2023; Shields et al., 2021). In British Columbia, barriers to accessing care—especially among Indigenous and rural populations—underscore the necessity of culturally appropriate and trauma-informed interventions. Protective factors such as strong social support, resilience, and community belonging have been shown to mitigate mental health risks (Goddard et al., 2024; Kipp et al., 2019). This reinforces the need for community-based mental health programs, financial relief initiatives, and psychological preparedness training as key components of disaster recovery. Establishing long-term funding and policy frameworks will be crucial in building a more resilient and responsive mental health system in the face of future emergencies.

The Disaster Recovery Toolkit for Community Mental Health and Wellness (2024) outlines a range of mental health and psychosocial support services available throughout the disaster recovery process, addressing both immediate and long-term needs. Among these, Psychological First Aid (PFA) provides emotional and psychological support in settings such as reception centres, group lodging sites, and community gatherings. Community and Family Support includes resources like wellness workshops, Indigenous healing practices, memorials, and social connection events that foster emotional resilience. Focused, non-specialized services offer bereavement support, harm reduction initiatives, and suicide intervention training, while specialized clinical services provide outpatient and inpatient care for mental health and substance use, including trauma-informed treatment for individuals with PTSD, depression, and anxiety. Crisis support services, such as 24/7 crisis lines and emergency mental health interventions, ensure immediate assistance for individuals in distress. Finally, harm reduction and substance use programs help address post-disaster

substance use risks through overdose prevention and safe supply initiatives for vulnerable individuals (Emergency Management BC, 2024).

Mental health services in disaster recovery are delivered through a multi-agency network. Health Emergency Management BC (HEMBC) coordinates disaster psychosocial support and mental health recovery efforts, while the First Nations Health Authority (FNHA) provides culturally appropriate mental health services for Indigenous communities. Regional Health Authorities oversee local mental health and substance use services, while organizations such as the Canadian Red Cross offer crisis support and emotional wellness programs. The Canadian Mental Health Association (CMHA) provides additional mental health resources, and Emergency Support Services (ESS) integrates psychological support within reception centres. Local governments, non-profits, and peer-led organizations also contribute to community-based mental health initiatives. Additionally, primary care physicians, psychologists, and psychiatrists deliver clinical assessments and specialized care, ensuring individuals receive the appropriate level of support based on their needs (Emergency Management BC, 2024).

Recovery efforts follow a four-phase approach, ensuring a gradual transition from crisis response to long-term recovery (Emergency Management BC, 2024). The immediate phase includes crisis intervention and Psychological First Aid (PFA). The short-term phase, covering one to six months, focuses on access to wellness workshops, community outreach, and harm reduction services to support initial stabilization. The medium-term phase, from seven to twelve months, involves the expansion of counseling services, bereavement support, and case management for individuals experiencing prolonged trauma. Finally, the long-term phase, extending beyond twelve months, provides specialized clinical services for individuals with PTSD, depression, and substance use disorders, ensuring sustained mental health support as communities rebuild (Emergency Management BC, 2024).

The effectiveness of mental health recovery efforts is measured through Key Performance Indicators (KPIs), including tracking crisis line usage, monitoring participation in wellness programs, support groups, and mental health workshops, and assessing community engagement through event attendance and social media interactions. Community health and wellness assessments are conducted to identify service gaps and adjust recovery plans, while annual status reports from the Mental Health and Wellness Recovery Working Group are submitted to local and provincial governments to evaluate ongoing progress and effectiveness (Emergency Management BC, 2024).

British Columbia incorporates cultural safety and wellness into disaster recovery to ensure First Nations evacuees receive culturally appropriate support. Policy 2.14 (EMBC, 2022a) establishes the First Nations Community Navigator role within Emergency Support Services (ESS) to bridge cultural, social, and practical gaps, advocating for evacuees and facilitating access to cultural activity locations, registration services, and referrals. Policy 2.15 (EMBC, 2022b) further reinforces Cultural Activity Locations Support, providing designated spaces for cultural care and wellness services during recovery. These initiatives, supported by the First Nations Health Authority (FNHA) and community organizations, align with national and provincial commitments to Indigenous rights and self-determined approaches to emergency recovery (EMBC, 2022a, 2022b).

### **Discussion**

The limited scientific research on the mental health impacts of disasters in Canada is concerning, particularly given the frequency of emergencies and large-scale evacuations in British Columbia. Additionally, there is a lack of studies on existing mental health initiatives and resources available for disaster-affected populations, despite the presence of various laws and public policies addressing this issue. If these policies exist, they were likely developed in response to an identified need, yet there is little research examining their effectiveness or the

extent to which they meet the mental health demands of affected communities. Beyond the academic gap in understanding mental health impacts and available initiatives, there is also a research deficit in evaluating long-term psychological outcomes, such as anxiety, depression, PTSD, and prosocial behaviors following disasters. Furthermore, the absence of studies in culturally diverse settings underscores the need for more inclusive, community-driven approaches to disaster mental health care (Witt et al., 2004).

Mental health interventions, including public policies and professional approaches, must be evidence-based, relying on scientific research to assess the prevalence of mental health disorders post-disaster, the specific needs of affected populations, and the effectiveness of available resources. However, conducting this research poses challenges, as the post-disaster period is highly sensitive, and both the impacts and perceptions of mental health services are subjective. Despite these challenges, it is essential to establish parameters or methodologies that enable data collection, even if only partially. Additionally, there is limited evidence on how the effectiveness of post-disaster mental health programs is measured in British Columbia. While some Key Performance Indicators (KPIs) exist—such as tracking crisis line usage, monitoring participation in wellness programs, and conducting community health assessments—there is no standardized framework for evaluating whether mental health recovery efforts effectively meet the needs of disaster-affected populations (Emergency Management BC, 2024).

One of the widely used mental health interventions in disaster response is

Psychological First Aid (PFA), a low-barrier tool implemented by response services such as

Emergency Support Services (ESS) and the Red Cross (Emergency Management BC, 2024;

Red Cross, 2024). This method, endorsed by the World Health Organization (WHO), aims to

promote psychosocial well-being by providing practical assistance, emotional comfort, and

referrals to support services. Because it does not require specialized mental health training,

PFA can be delivered by a wide range of support workers and volunteers. However, while accessible and valuable in immediate crisis situations, PFA remains a short-term intervention and does not encompass complex mental health techniques or long-term therapeutic strategies. This raises concerns about its limitations in addressing severe psychological distress and its effectiveness in promoting long-term mental health recovery (JIBC, 2013).

The Red Cross also provides emotional recovery services, offering resources and guidance on coping with stress, anxiety, and grief (Red Cross, 2024). The organization promotes self-help strategies, provides practical tips, and encourages individuals to seek professional assistance when needed. While these services offer critical support, they often fail to address the deeper, more complex psychological effects of disasters. Many individuals suffering from severe mental distress lack the ability to proactively seek help, highlighting the need for proactive outreach and long-term monitoring. Identifying and mapping the most severely affected populations would allow mental health professionals to collect data and implement targeted, sustained interventions. Helplines and general coping tips, while beneficial, are insufficient to address the full spectrum of mental health challenges that arise post-disaster (Red Cross, 2024).

In post-disaster settings, economic recovery often takes precedence over social and emotional well-being, leading to the neglect of psychological support services (Cox & Perry, 2011). Rural communities, in particular, face unique challenges due to interwoven social, economic, and environmental stressors, exacerbated by pre-existing inequalities and gender dynamics (Cox & Perry, 2011). Mental health concerns such as PTSD may emerge weeks or months after a disaster, often going untreated and leading to further challenges such as substance use disorders or suicide. Vulnerable groups, particularly women, children, and marginalized communities, face heightened risks, including increased domestic violence in disaster aftermaths (Tobin-Gurley & Enarson, 2013). Given the profound mental health

consequences of disasters, Weissbecker (2009) argues that mental health should be treated as a human right, as recognized in international conventions such as the International Covenant on Economic, Social, and Cultural Rights (ICESCR), the Convention on the Rights of the Child (CRC), and the Convention on the Rights of Persons with Disabilities (CRPD), all of which advocate for accessible, high-quality mental health services for disaster survivors.

The Disaster Psychosocial Support (DPS) team, composed of trained staff and volunteers, provides short-term psychological first aid in large-scale emergencies such as wildfires, floods, and mass evacuations, as well as in smaller crises like apartment fires.

While DPS is not a crisis line or a counseling service, it plays a crucial role in offering practical assistance, emotional support, and information on stress reactions, and in connecting evacuees to local social services. Additionally, DPS supports frontline workers in Emergency Operations Centres, ESS, local governments, and non-profit organizations, conducting wellness check-ins to help responders manage stress and maintain emotional well-being (PHSA, n.d).

Despite the variety of available mental health and psychosocial support services, most resources are provided by community-based organizations, non-governmental organizations (NGOs), faith-based organizations, volunteers, and peer support groups. Mental health care delivered by licensed professionals such as psychologists and psychiatrists is reserved for extreme cases, such as severe PTSD, substance use disorders, and pre-existing mental health conditions. This reality distances professional mental health services from the immediate post-disaster context, leaving long-term mental health needs unaddressed. While peer-led initiatives and community support play a fundamental role in psychosocial recovery, there is an ongoing question as to whether mental health impacts are being adequately considered and treated as a public health priority.

These findings highlight the urgent need for a more structured and evidence-based approach to integrating mental health care into disaster recovery. There is a lack of research on long-term mental health outcomes, limited access to specialized mental health care, and inadequate measurement of intervention effectiveness. Additionally, current recovery efforts often prioritize economic and physical rebuilding over mental health support, neglecting the human and emotional dimensions of disaster resilience (Cox & Perry, 2011). To bridge these gaps, long-term mental health strategies must be incorporated into disaster management frameworks, ensuring that mental health is treated as an integral component of emergency preparedness, response, and recovery.

### Recommendations

Given the significant gaps in research, policy implementation, and mental health service delivery identified in this study, a multi-level approach is necessary to integrate long-term mental health strategies into British Columbia's disaster recovery framework.

Supporting psychosocial recovery is essential for effective community rebuilding, as mental health and emotional well-being are fundamental to resilience. Emergency management plans must address psychological and emotional needs from the initial response phase through long-term recovery. Collaboration among governments, mental health agencies, NGOs, faith-based organizations, and international bodies is critical to ensuring continuity of care, effective mental health promotion, and integration of mental health services into primary health care and community-level interventions (Emergency Management BC, 2022c; Weissbecker, 2009; WHO, 2022). These partnerships help reduce mental health stigma and reinforce the interconnectedness of psychological well-being with social and economic recovery.

One of the most pressing concerns is the limited research on the long-term mental health impacts of disasters, particularly PTSD, depression, anxiety, and substance use

disorders. Future studies should focus on understanding these effects beyond the immediate crisis response and investigating barriers to mental health care in disaster-affected communities, particularly among Indigenous populations, rural residents, and low-income groups. Additionally, there is a need to evaluate the effectiveness of current post-disaster mental health programs, including Psychological First Aid (PFA), Red Cross emotional recovery services, and Disaster Psychosocial Support (DPS) teams. The role of peer support groups, community-based interventions, and culturally specific healing practices must also be examined to determine best practices for long-term mental health recovery. To achieve these goals, Emergency Management BC, the Ministry of Health, and academic institutions should collaborate to fund and conduct research, ensuring that policy decisions are guided by data-driven evidence.

Despite various mental health policies and resources in place, mental health remains underprioritized in British Columbia's disaster recovery frameworks. Existing policies, such as the Emergency and Disaster Management Act (2023), primarily focus on infrastructure, housing, and economic recovery, while mental health support is often treated as a secondary concern rather than a core component of recovery. To address this gap, provincial and municipal emergency management frameworks should establish mandatory mental health recovery plans that extend beyond the initial response phase. Legislative mandates requiring long-term mental health monitoring of disaster survivors should be implemented, similar to public health reporting systems. Additionally, creating a Provincial Disaster Mental Health Task Force could improve mental health response coordination among local, Indigenous, and federal agencies. Ensuring stable, long-term funding for mental health recovery programs is also critical, as reliance on short-term emergency funding often leads to services being discontinued before survivors have fully recovered.

A multi-layered system of complementary supports is essential for addressing psychosocial needs. Immediate priorities should ensure access to basic human needs, such as safety, food, water, and healthcare, while integrating social and emotional considerations into these services. Community and family support should then be strengthened by leveraging social networks, communal supports, and creating safe spaces for different age groups. Non-specialized interventions, delivered by trained community workers and primary healthcare providers, should be available alongside specialized services from mental health professionals. These measures, combined with trauma-focused therapies for individuals with persistent symptoms, are vital for fostering long-term recovery and resilience (Witt et al., 2004).

One of the key challenges in disaster recovery is the limited access to professional mental health services. Most post-disaster mental health support is provided by community-based organizations, NGOs, and volunteers, while access to specialized professionals such as psychologists and psychiatrists is restricted to severe cases of PTSD, suicide risk, and substance use disorders. Expanding mobile mental health teams and telehealth services would improve access to care in disaster-affected communities, particularly in rural and Indigenous areas. Integrating mental health professionals into Emergency Support Services (ESS) teams would ensure that trained psychologists and counselors are present at evacuation and reception centers, providing immediate and structured mental health support. Establishing regional mental health hubs for post-disaster counseling, trauma therapy, and addiction support would also extend ongoing care beyond the immediate crisis phase. Reducing barriers to mental health services—such as financial constraints, cultural stigma, and lack of transportation—would further improve accessibility and ensure that all disaster survivors receive the support they need.

Social engagement is a critical tool in disaster recovery. Community activities such as gatherings, sports, remembrance ceremonies, and clean-up initiatives help bring survivors together, foster mutual support, and strengthen social bonds. These events, along with rituals and commemorations, provide opportunities for healing and reinforce community identity and resilience (JIBC, 2013). Policymakers must account for cultural and contextual factors in recovery planning, ensuring that efforts are tailored to the specific needs of diverse communities (Cox & Perry, 2011). Social capital and shared experiences of loss are fundamental to resilience. While disasters disrupt social networks, they also create opportunities for new connections and reinforce community identity through collective recovery efforts. Trauma education and community-based social support enhance resilience, particularly for vulnerable populations such as youth, who benefit from targeted interventions and structured strategies to navigate psychological, social, and material changes (Cox & Perry, 2011; Witt et al., 2004).

Sustained psychosocial support is essential for addressing long-term impacts, such as grief and trauma, which often emerge well after the initial disaster. Integrating loss and grief training into social work education and fostering ongoing collaboration between recovery personnel and survivors could significantly improve disaster response and promote lasting community unity and well-being (Fulton & Drolet, 2018). A standardized framework for evaluating the effectiveness of mental health recovery programs is necessary. While some Key Performance Indicators (KPIs) exist—such as tracking crisis line usage, monitoring participation in wellness programs, and conducting community health assessments—there is no unified methodology for measuring long-term mental health recovery outcomes. A standardized mental health impact assessment tool should be developed to track psychological recovery among disaster survivors. Annual mental health reports from regional health authorities would provide insights into the effectiveness of post-disaster interventions

and highlight areas for improvement. A provincial mental health research and evaluation committee could analyze data, identify trends, and recommend policy improvements, ensuring that mental health recovery efforts evolve based on empirical evidence.

#### Conclusion

This study examined how the government of British Columbia integrates mental health care and support into the disaster recovery process. As disasters and emergencies continue to affect communities, understanding the psychological impacts of these events, the resources available for survivors, and the policies guiding mental health recovery is essential. The findings indicate that while British Columbia has various policies and programs—such as Emergency Support Services (ESS), Disaster Psychosocial Support (DPS), and culturally specific initiatives—there are significant gaps in research, policy implementation, and service accessibility that hinder effective long-term mental health recovery.

The research highlighted the severe and long-lasting mental health effects of disasters, including increased rates of PTSD, depression, anxiety, and substance use disorders.

Vulnerable populations—particularly Indigenous communities, rural residents, and low-income individuals—experience disproportionate mental health impacts due to pre-existing health disparities, social isolation, and economic insecurity. While emergency response programs offer short-term psychosocial support, the transition from crisis response to long-term recovery remains inconsistent and insufficient, leaving many disaster survivors without sustained mental health care. Additionally, mental health interventions in British Columbia rely heavily on community-based organizations, NGOs, and volunteers, with limited involvement from specialized mental health professionals. Psychological First Aid (PFA), although widely used, is a short-term intervention that does not fully address the complex and long-term psychological needs of survivors.

One of the key findings is the lack of systematic evaluation frameworks for mental health recovery programs. While some Key Performance Indicators (KPIs) exist—such as tracking crisis line usage, monitoring participation in wellness programs, and assessing community engagement—there is no standardized methodology for measuring the effectiveness of interventions. Without comprehensive data collection and long-term monitoring, it is difficult to determine whether existing mental health services adequately meet the needs of disaster-affected populations.

Despite these findings, this study has several limitations. As mental health recovery efforts are largely managed at the local level rather than provincially, it was not possible to analyze all resources and procedures offered by each local authority. Additionally, this study focuses exclusively on the recovery phase of the emergency management cycle in British Columbia, excluding mental health interventions during the planning, preparedness, and response phases due to the extensive amount of data and analysis required for a broader study. While social impacts and basic needs fulfillment are closely linked to psychosocial well-being, they are typically managed by social workers rather than mental health professionals, and therefore, they were not the focus of this research. Furthermore, limiting the scope to British Columbia allowed for a more manageable analysis within the proposed timeframe, but the involvement of multiple agencies in emergency management posed challenges in managing the complexity and volume of data. Future research should expand beyond the recovery phase, explore the role of social and economic factors in mental health recovery, and investigate how mental health services integrate into other phases of emergency management to create a more comprehensive understanding of disaster mental health care.

The significance of this study lies in identifying critical gaps in research, service accessibility, and policy implementation that impact the effectiveness of mental health

recovery efforts in British Columbia. While the province has established various mental health initiatives, sustained funding, improved integration of specialized mental health professionals, and stronger evaluation frameworks are needed to prioritize mental health alongside physical and economic recovery. Addressing these challenges requires collaboration between government agencies, health authorities, academic institutions, and local communities to build a resilient and evidence-based disaster mental health system. By implementing these changes, British Columbia can ensure that mental health is recognized as a core pillar of disaster recovery, leading to more effective support systems and long-term community resilience.

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## Appendix A – Project Work Plan

#	Task and Description	Start Date	End Date	Deliverables	Status
1	A. Refine a clear, focused, and	01/08/25	01/12/25	Research Question	Complete
	researchable question that			Development	
	addresses a relevant problem in				
	mental health and emergency				
	management field.				
2	A. Apply feedback on research	01/16/25	01/28/25	Research Project	Complete
	question			Proposal Draft	
	B. Select research design and				
	develop methodology				
3	A. Draft a formal proposal outlining	01/28/25	01/29/25	Research Project	Complete
	the research topic, objectives,			Proposal	
	methodology, and expected				
	outcomes.				

4	A. Use academic databases to gather	01/29/25	02/6/25	Literature Search and	Complete
	and analyze peer-reviewed			Review	
	articles, government documents,				
	and NGO reports.				
	B. Summarize key findings, identify				
	gaps, and establish a theoretical				
	foundation for the study.				
5	A. Write a preliminary version of the	02/6/25	03/12/25	Draft Paper	Complete
	capstone paper.				
	B. Incorporate feedback to improve				
	final version				
6	A. Create a visually engaging and	03/12/25	03/23/25	Presentation & Poster	Complete
	informative poster.				
	B. Prepare a concise oral				
	presentation.				
7	A. Review text and add feedback	03/23/25	04/2/25	Final Capstone Paper	Complete

	and proper formatting and citation.  B. Submit the completed capstone paper.				
8	<ul> <li>A. Prepare a 3-minute presentation and 1-slide summarizing the research.</li> <li>B. Anticipate and prepare to address questions regarding the study's approach, significance, and limitations.</li> <li>C. Rehearse</li> </ul>	04/2/25	04/16/25	Final Oral Defense	
9	A. Present research insights and answer questions.	04/2/25	04/10/25	Applied Research  Day	
10	A. Highlight personal growth, skills gained, and lessons learned.	04/10/25	04/17/25	Self-Reflection and Skills Inventory	

## Appendix B – Research Strategy Chart

DATABASE	SEARCH TERM(S)	SEARCH RESULT						
	Initial Seach							
JIBC Library	"Mental Health" OR "Psychological" OR "mental health services" OR	7,261,394						
Search	"psychological effects" AND "disaster" OR "disaster management" OR							
	"disaster relief" OR "disaster recovery" OR "emergency management"							
	AND "British Columbia" OR "BC".							
	Revised Searches		Reason for Revision					
JIBC	"Mental Health" OR "Psychological" OR "mental health services" OR	5,494,560	Limit to Scholarly (Peer					
	"psychological effects" AND "disaster" OR "disaster management" OR		Reviewed) Journals.					
	"disaster relief" OR "disaster recovery" OR "emergency management"							
	AND "British Columbia" OR "BC".							
JIBC	"Mental Health" OR "Psychological" OR "mental health services" OR	20,463	Limit to publications in					
	"psychological effects" AND "disaster" OR "disaster management" OR		English, French, Spanish					
	"disaster relief" OR "disaster recovery" OR "emergency management"		and Portuguese.					
	AND "British Columbia" OR "BC".							

JIBC	"Mental Health" OR "Psychological" OR "mental health services" OR	214	Limit to publications
	"psychological effects" AND "disaster" OR "disaster management" OR		made in Canada
	"disaster relief" OR "disaster recovery" OR "emergency management"		
	AND "British Columbia" OR "BC".		

## Appendix C – Abstract Review Process Chart

TITLE	YEAR	AUTHORS	REASONS TO BE	FINAL	REASON
			SELECTED FOR	REVIEW	
			ABSTRACT		
			REVIEW		
1. Prevalence of posttraumatic stress	2025	Weeks M; Marion	It adresses mental	YES	Brings quantitative
disorder (PTSD) in Canada during the COVID-		D; Robert AM;	health consequences of		data about PTSD
19 pandemic: results from the Survey on		Carleton RN	an event in Canada		through different
COVID-19 and Mental Health.			(PTSD, pandemic,		methods and
			Canada)		adresses
					sociodemographic
					aspects.
2. A prospective study of financial worry,	2024	Jessica A.	Canada	YES	Brings data about
mental health changes and the moderating effect		Goddard	Mental health changes		how mental health
of social support among Canadian adolescents		Valerie F.	due to event (pandemic)		is affected after
during the COVID-19 pandemic.		Pagnotta			pandemic

		Markus J. Duncan			
		Matthew			
		Sudiyono			
		William Pickett			
		Scott T.			
		Leatherdale			
		Karen A. Patte			
3. Health care barriers and perceived mental	2024	Mehrunnisa	Mental health; health	NO	It focuses on
health among adults in Canada during the		Shiraz	care services; canada;		Access to Health
COVID-19 pandemic: a population-based cross-		Colin A. Capaldi	pandemic.		Care and it's
sectional study.		Laura L. Ooi			barriers.The
		Karen C. Roberts			worsening in
					mental health is
					related to
					scheduling

					problems. And the
					health care
					adressed is not
					mental health
					services.
4. Associations between negative COVID-	2024	Sandy Rao	Symptons of Anxiety	YES	Evidence of
19 experiences and symptoms of anxiety and		Gina	and depresson as na		anxiety and depress
depression: a study based on a representative		Dimitropoulos	effect of pandemic in		ion symptoms.
Canadian national sample.		Jeanne V. A.	Canada		Discuss
		Williams			demographics X
		Vandad Sharifi			increased anxiety a
		Mina Fahim			nd depression.
		Amlish Munir			
		Andrew G. M.			
		Bulloch			
		Scott B. Patten			

5. Social isolation, loneliness and positive	2023	Laura L. Ooi	Mental health, covid,	NO	Focus on feeling
mental health among older adults in Canada		Li Liu	canada		of Loneliness and
during the COVID-19 pandemic.		Karen C. Roberts			associated with
		Geneviève			living alone data.
		Gariépy			Does not provide
		Colin A. Capaldi			significant data or
					discussion for the
					purpose of this
					study.
6. Pandemic-related impacts and suicidal	2023	Li Liu	Psychological impacts	YES	Provides evidence
ideation among adults in Canada: a population-		Nathaniel J.	of pandemic in		about relation
based cross-sectional study.		Pollock	canadians		between suicidal
		Gisèle Contreras			ideation and
		Lil Tonmyr			pandemic impacts.

		Wendy			
		Thompson			
7. The mental health experience of	2022	Bethany	Mental health treatment	NO	It focuses on
treatment-seeking military members and public		Easterbrook	to trauma aspects		responders and
safety personnel: a qualitative investigation of		Andrea Brown			gather data from
trauma and non-trauma-related concerns.		Heather Millman			CAF members in
		Sherry Van			treatment at a
		Blyderveen			private mental healt
		Ruth Lanius			h and addictions
		Alex Heber			inpatient hospital in
		Margaret			Canada
		McKinnon			
		Charlene			
		O'Connor			

8. Self-rated mental health, community	2022	Colin A. Capaldi	Mental health changes	NO	The focus was to
belonging, life satisfaction and perceived change		Li Liu	during COVID-19		compare mental
in mental health among adults during the second		Laura L. Ooi	pandemic in Canada		health state
and third waves of the COVID-19 pandemic in		Karen C. Roberts			between second
Canada.					and thrid wave of
					covid. It doesn't
					bring new or
					relevant
					information for this
					study
9. Positive mental health and perceived	2021	Colin A. Capaldi	Mental health changes	NO	Focus on second
change in mental health among adults in Canada		Li Liu	during COVID-19		wave and doesnt
during the second wave of the COVID-19		Raelyne L. Dopko	pandemic in Canada.		bring any new
pandemic.					information

10. Comprehensive psychosocial care: an	2010	Mehta A	Adresses psychosocial	NO	It focuses on
innovative approach: new program development.		Saucier A	care.		oncology and not
		Bazile A			disasters.
11. At-a-glance - Climate change impacts on	2019	Amy Kipp	Adress climate change,	YES	Brings impacts on
health and wellbeing in rural and remote regions		Ashlee Cunsolo	health impacts and rural		mental health due
across Canada: a synthesis of the literature.		Kelly Vodden	population		to climate change
		Nia King			events.
		Sean Manners			
		Sherilee L.			
		Harper			
12. Suicidal ideation among young adults in	2023	Li Liu	Increase on mental	NO	Similar to other
Canada during the COVID-19 pandemic:		Gisèle Contreras	health issues due to		article but focuses
evidence from a population-based cross-		Nathaniel J.	covid.		on young adults
sectional study.		Pollock			population.

		Lil Tonmyr			
		Wendy			
		Thompson			
13. Symptoms of major depressive disorder	2021	Margot Shields	Mental health issues	YES	Evidence of
during the COVID-19 pandemic: results from a		Lil Tonmyr	due to covid-19.		prevalence of
representative sample of the Canadian		Andrea Gonzalez			depression
population.		Murray Weeks			among Canadians
		Su-Bin Park			with COVID-19.
		Anne-Marie			
		Robert			
		Dawn-Li Blair			
		Harriet L.			
		MacMillan.			

2021	Mélanie Varin;	Increase in alcohol and	YES	Adressess alcohol
	Kate Hill	cannabis as an impact		and canabis
	MacEachern;	of pandemic in Canada.		consumption as a
	Nousin Hussain;			consequence of
	Melissa M.			covid. Includes
	Baker.			Sociodemographic
				disparities
2021	Li Liu	Increase on mental	YES	Data about suicide
	Colin A. Capaldi	health issues due to		ideation x COVID-
	Raelyne L. Dopko	covid.		19.
		Kate Hill MacEachern; Nousin Hussain; Melissa M. Baker.  2021 Li Liu Colin A. Capaldi	Kate Hill cannabis as an impact  MacEachern; of pandemic in Canada.  Nousin Hussain;  Melissa M.  Baker.  2021 Li Liu Increase on mental  Colin A. Capaldi health issues due to	Kate Hill  MacEachern;  Nousin Hussain;  Melissa M.  Baker.  2021  Li Liu  Colin A. Capaldi  Cannabis as an impact  of pandemic in Canada.  YES