



STANDARDS RESEARCH

Psychological Health and Safety in the Workplace

Employer Practices in Response to COVID-19

March 2022

Author

Dayna Lee-Baggley, Ph.D., Chief of Research, Howatt HR Applied Workplace Institute, Adjunct Professor, Saint Mary's University

Bill Howatt, Ph.D., Ed.D., Founder and CEO, Howatt HR Consulting

Project Advisory Panel

Anne Tennier, President and CEO, Canadian Centre for Occupational Health and Safety, Hamilton, ON.

Mary Ann Baynton, Director of Collaboration and Strategy, Workplace Strategies for Mental Health, Toronto, ON

Sapna Mahajan, Past Director, Programs and Priorities, Mental Health Commission of Canada, Ottawa, ON

William Roy, Director, Prevention Office, Ontario Ministry of Labour, Training and Skills Development, Toronto, ON

Candace Sellar, CSA Group, Toronto, ON

Jennifer Teague, CSA Group, Toronto, ON

Karyn Ferguson, CSA Group, Toronto, ON (Project Lead)

Acknowledgements

The authors wish to thank the following individuals for their contributions to the research project, including web design, data collection, data analyses, generating data tables and results, review of literature, writing and reviewing, and providing feedback on draft versions.

Alexandra Dagher

Ehsan Etezzad

Al Kingsbury

Audrey Kruisselbrink

Holly Truglia

This study was approved through Saint Mary's University Research Ethics Board (SMU REB #21-053) and met academic and ethical standards.

Disclaimer

This work has been produced by the authors and is owned by Canadian Standards Association. It is designed to provide general information in regards to the subject matter covered. The views expressed in this publication are those of the authors and interviewees. The authors and Canadian Standards Association are not responsible for any loss or damage which might occur as a result of your reliance or use of the content in this publication.

Table of Contents

Executive Summary	5
1 Introduction	7
2 CAN/CSA-Z1003	8
2.1 Psychosocial Risk Factors	9
2.2 Psychosocial Hazards	9
2.3 Systematic Approach to Psychological Health and Safety	9
3 Existing Literature on Psychological Health and Safety During COVID-19	9
3.1 Health Care Providers	9
3.2 Non-health Care Employees	11
3.3 Vulnerable and Marginalized Populations	12
3.4 Summary	12
3.5 The Current Research Study	13
4 Methods	13
5 Results and Discussion	13
5.1 Characteristics of the Sample	13
5.2 Use of CAN/CSA-Z1003	15
5.3 Psychosocial Factors	15
5.4 Psychosocial Hazards	17
5.5 Practices, Policies, and Programs Offered by Organizations During the Pandemic	19
5.6 Qualitative Results	22
5.6.1 Most Significant Change	22
5.6.2 Greatest Lesson Learned	23
5.6.3 Greatest Challenge	24
5.6.4 Supports Needed	25

6 Discussion and Recommendations	26
6.1 Psychological Health and Safety in the Workplace Is for All Employees	26
6.2 Investing in Psychological Health and Safety Also Benefits Employers	27
6.3 The Importance of Employee Engagement	27
6.4 The Importance of Recognizing Diversity	28
6.5 Dramatic Gaps in Utilization of Plan - Do - Check - Act (PDCA) When Supporting Workplace Mental Health	29
6.6 Recommendations for Changes and Improvements for CAN/CSA-Z1003	30
6.6.1 Increase Awareness of the Value of CAN/CSA-Z1003	30
6.6.2 Early Detection of Psychosocial Factors and Hazards	30
6.6.3 Assessment Education and Competencies	31
6.6.4 Program Evaluation	31
6.7 Limitations and Future Directions	32
6.8 Conclusion	32
References	34
Appendix	42

Executive Summary

Introduction

With the onset of COVID-19 and its impact on the workplace and mental health, employee psychological health and safety became a topic of concern for leaders across all sectors and types of employers. Psychological health and safety in the workplace requires employers to intentionally take action to mitigate employee risk for mental harm and to promote and support employee mental health. CAN/CSA-Z1003-13/BNQ 9700-803/2013 (R2018), *Psychological health and safety in the workplace – Prevention, promotion, and guidance to staged implementation* (CAN/CSA-Z1003) was created to guide employers in designing and implementing policies, programs, and management systems to facilitate psychologically safe and healthy workplaces.

The purpose of this research project was to better understand the factors and hazards associated with psychological health and safety in the workplace as it pertains to the COVID-19 pandemic and to identify leading practices, innovative approaches, and lessons learned during the pandemic. This information may help employers better respond to employee needs as the pandemic progresses as well as to other potential future events that dramatically impact the workplace.

Method and Results

The study involved a literature review and environmental scan as well as an online survey for people who play an active role in their organization's mental health strategy or psychological health and safety management systems. Ethical approval for this research study was obtained from the Institutional Research Ethics Board at Saint Mary's University.

The study provided insight into the psychosocial factors and hazards associated with psychological health and safety in the workplace that were top of mind for employers in the pandemic. It also highlighted employers' practices, innovative approaches, and lessons learned in supporting workplace mental health during the pandemic. Respondents highlighted the importance of employee engagement, listening to employees, inclusion, and respecting the diversity of experiences and needs in the pandemic. Respondents also recognized that investing in psychological health and safety not only benefits employees but also employers.

The results also revealed apparent gaps in employer focus on continuous improvement and program evaluation. Many employers focus mainly on the Plan (P) and Do (D) of the *Plan—Do—Check—Act* (PDCA) framework when facilitating workplace mental health initiatives without checking/evaluating (C) and adjusting (A) their efforts. Continuous improvement is imperative for effective psychological health and safety in the workplace, yet many employers do not know the impact of their policies and programs because of gaps in measurement, auditing, program evaluation, and observation.

Recommendations and Conclusion

The study provides insights into gaps and needs in employers' efforts to address psychological health and safety in the pandemic and beyond. For example, many changes brought by the pandemic, such as remote work, are likely to be common in the future. Furthermore, many employers have some gaps or perhaps a lack of focus on continuous improvement regarding initiatives for psychological health and safety. Additional support and guidance on continuous improvement, corrective action, and program evaluation is clearly needed.

Past studies consistently indicated negative impacts of the pandemic on mental health and well-being. However, some found that addressing psychosocial factors can mitigate the pandemic's impact on these hazards. This study revealed that the pandemic appears to have shone a light on the role employers play in facilitating workplace mental health. The COVID-19 pandemic has increased the recognition that psychological health and safety can benefit all employees and employers. During the pandemic, "mental health" became everyone's domain, not just of those with pre-existing mental health problems or illnesses or individuals identified as being "at risk" of a mental health problem or illness. CAN/CSA-Z1003 is one resource to assist employers in guiding a systematic effort toward psychological health and safety. Investing in psychological health and safety can proactively prepare organizations to deal with workplace mental health to reduce mental harm and promote employee mental health, in response to the pandemic or for potential future workplace events.



"Psychological harms, including mental health problems, mental health disorders, and mental health illnesses, are prevalent and costly in the Canadian workforce."

1 Introduction

With the onset of COVID-19, employees' psychological health and safety became a topic of concern for leaders across all sectors and types of employers. The primary purpose of psychological health and safety in the workplace is to prevent mental harm and to promote and support employees' mental health. CAN/CSA-Z1003-13/BNQ 9700-803/2013 (R2018), *Psychological health and safety in the workplace – Prevention, promotion, and guidance to staged implementation* (CAN/CSA-Z1003) [1] describes mental harm as "an injury or damage to health" and health as "a state of complete physical, social, and mental well-being, and not merely the absence of disease or infirmity." Psychological health and safety's focus is for all workers, not just those who might be living with mental health problems or illnesses.

Psychological harms, including mental health problems, mental health disorders, and mental health illnesses, are prevalent and costly in the Canadian workforce. For example, 21.4% of the Canadian workforce reports living with a mental health problem or illness [2]. An estimated one in five Canadians experiences a mental health problem or illness in any given year [2]. Further, mental health disorders are a leading cause of disability in Canada [3]–[5]. It is estimated that mental health problems and illnesses account for approximately 30% of short- and long-term disability claims [2]. Current predictions indicate that by 2030, depression will be the leading cause of disease burden globally [6]. In 2010, mental

health problems and illnesses were estimated to cost Canadian employers \$6 billion per year in lost productivity (both presenteeism and absenteeism) [2].

Mental health problems and illnesses also significantly impact employees. Employees experiencing mental health problems and illnesses are more likely to experience discrimination, stigma, lowered job progression and income, negative social interactions, isolation, conflict, and loneliness [7]–[10] as well as reduced quality of life [11] and reduced life expectancy [2]. Preventing mental harm and promoting mental health is thus in the best interests of both employees and employers [2].

Numerous studies have examined the presence of psychological harms in the workplace. However, psychological health is not just the absence of illness, it is also the presence of wellbeing. Far fewer studies have examined well-being in employees and the accompanying factors that contribute to positive mental health by measuring rates of flourishing and languishing. Flourishing refers to high levels of subjective well-being, indicated by infrequent negative experiences, frequent positive experiences, and high levels of psychosocial well-being [12]. Prior to the COVID-19 pandemic, results from a sample of 5549 employees found that 25% of respondents were flourishing [13]. Other researchers found that 44% of employees were flourishing [14]. Factors positively associated with employee flourishing include financial security, job satisfaction, meaningful work, and purpose [13]. In summary, psychological health and safety

encompasses not only mental harms, but positive mental health as well. Additional research is therefore required to examine positive factors associated with employee well-being.

CAN/CSA-Z1003-13/BNQ 9700-803/2013 (R2018), *Psychological health and safety in the workplace – Prevention, promotion, and guidance to staged implementation* (CAN/CSA-Z1003) was released in 2013 and reaffirmed in 2018 to help guide employers in designing and implementing policies and programs that facilitate psychological health in the workplace. CAN/CSA-Z1003 provides recommendations and guidance on what employers can do to assist in protecting employee mental health. According to the Mental Health Commission of Canada (MHCC), it is the first of its kind and has been used as a template across the world [15]. CSA Group reports it is one of the most downloaded resources from its website, with over 50,000 downloads [16]. The standard comprehensively reviews key issues organizations are recommended to consider and management practices to evaluate and improve these efforts continuously. CAN/CSA-Z1003 emphasizes that "checking the box" cannot effectively accomplish psychological health and safety. Instead, it involves ongoing and continuous measurement and improvement of all psychological health and safety initiatives (i.e., programs, practices, and policies).

The COVID-19 pandemic brought an unprecedented recognition to the importance of supporting employees' psychological well-being. It dramatically impacted workplaces, including the need to transition rapidly to remote work, provide new safety protocols and equipment to protect against COVID-19, and modify work demands and practices resulting in reductions in work, layoffs, and increases in workload [17]. Mental health distress rose significantly across the population as a global threat impacted virtually every aspect of life and work. A study in July 2020 by the Conference Board of Canada and the Mental Health Commission of Canada found that 84% of respondents' mental health concerns have worsened since the onset of the COVID-19 pandemic [18]. During 2020, disability insurance claims for mental health supports increased by 24%, according to data from CLHIA's members. Insurance companies paid \$420 million to support mental health claims, \$150 million more than projected [19], [20].

During the COVID-19 pandemic, two studies examined employee well-being by measuring rates of flourishing and languishing. Researchers measured well-being profiles in 652 employees and found that only 8% of employees were flourishing [21]. Moreover, one study of 653 Italian health care workers revealed that only 33% of employees were flourishing [22]. While rates of flourishing pre-pandemic vary considerably, these rates suggest low levels of flourishing during the pandemic.

The above data provides strong evidence that COVID-19 has negatively impacted employee mental health. The epidemic also highlighted the need to better understand how employers can positively impact their employees' mental health in pandemic and non-pandemic times.

This research was initiated in response to the pandemic to understand how employers were responding and what they were doing to support employee mental health during an unprecedented, modern-day pandemic.

The main objectives of this research were to:

- i. Define and better understand the hazard(s) associated with psychological health and safety in the workplace as it pertains to a pandemic scenario such as COVID-19;
- ii. Identify leading practices, innovative approaches, and lessons learned for safeguarding the psychological health and safety of workers during the response and recovery phases of the COVID-19 pandemic; and,
- iii. Make recommendations for changes and/or improvements to the overall framework and standard requirements of CAN/CSA-Z1003-13/BNQ 9700-803.

2 CAN/CSA-Z1003

CAN/CSA-Z1003 helps guide employers on developing and sustaining a psychologically healthy and safe workplace. It highlights issues to be considered and ways to document a systematic approach to psychological health and safety. One way CAN/CSA-Z1003 does this is by outlining well-established psychosocial risk factors and hazards. These psychosocial risk factors and hazards were based on a "convergence of evidence from legal and scientific

sources” brought together in the CAN/CSA-Z1003 development process. The purpose was to identify, define, and clarify what employers can do to support workplace psychological health and safety.

2.1 Psychosocial Risk Factors

CAN/CSA-Z1003-13 defines psychosocial risk factors as “elements of the work environment, management practices, and/or organizational dimensions that increase the risk to health” [1]. Examples of psychosocial risk factors include organizational culture and work demands. Psychosocial risk factors can positively and negatively impact employees’ physical and psychological health [23]. They are present in all types of organizations and revolve around the way work is done and the context in which it is organized, such as deadlines, schedules, work methods, and co-worker interactions.

Studies show that when these psychosocial factors are not properly managed, they can contribute to employee psychological harm and mental illness [24], [25]. For example, studies have found that the psychosocial risk factor of low reward is associated with depression [26], and psychosocial risk factors of low recognition and high psychological demand are associated with increased absences among employees [25]. However, when addressed correctly by an organization, psychosocial factors can positively impact employee mental health (e.g., emotional well-being, resiliency, belonging), productivity, engagement, and overall psychological health and safety [1], [23]. Addressing psychosocial factors in the workplace can thus mitigate harm for employees and maximize their mental health.

2.2 Psychosocial Hazards

CAN/CSA-Z1003-13 defines psychosocial hazards as “a potential source of psychological harm to a worker” [1]. They are the negative consequences that employees experience when exposed to psychological risk factors. These hazards can be seen as “signs” or “symptoms” of psychological distress and can be predictors of an employee’s vulnerability for mental health concerns and mental harm [1]. Examples of psychosocial hazards include distraction, stress, loneliness, exclusion, anxiousness, job insecurity, and fatigue. Employees

who experience higher levels of psychosocial hazards at work tend to report poorer mental health and higher levels of burnout [27]. For instance, an employee exposed to continuous acts of incivility in the workplace (a psychosocial risk factor) may experience high levels of anxiety and stress (psychosocial hazards). In turn, this employee may be more vulnerable to poor mental health and increased risk of mental injuries and illness. Although organizations cannot control all aspects of psychosocial hazards, psychosocial risk factors often can be positively influenced by an employer’s decisions, supports, and expectations [28]. Psychosocial risk factors such as rewards or appropriate workload demands are examples of levers employers can pull to positively impact employees’ workplace experience, sense of control, and perceived stress load. Proactive prevention programs and policies designed to mitigate psychosocial factors, with early detection and intervention for employees experiencing psychosocial hazards, are prudent protective factors to promote employees’ mental health and reduce their risk of mental harm.

2.3 Systematic Approach to Psychological Health and Safety

A key aspect of effective psychological health and safety is the importance of addressing it systematically and tracking results. For example, CAN/CSA-Z1003-13 highlights the importance of creating a psychological health and safety management system (PHSMS) including how to incorporate aspects such as commitment, leadership, and participation (Section 4.2) and planning (section 4.3), implementation (section 4.4), collection of data (section 4.3.5), evaluation, and continuous improvement (section 4.5) for effective systematic tracking of impact over time.

3 Existing Literature on Psychological Health and Safety During COVID-19

We reviewed existing literature on psychological health and safety during the pandemic as part of this study. Because of the specific demands that the pandemic placed on health care systems and health care providers [29], [30], the review was divided into studies on health care providers and non-health care workers.

3.1 Health Care Providers

The COVID-19 pandemic has become the world's most significant public health crisis of the present era [30]. This virus's severity and high mortality rate have resulted in patients receiving special care at hospitals that consequently placed significant pressure on health care workers [29]. Therefore, while the general public was advised to socially distance and stay at home when the pandemic first hit, health care workers were asked to go to work and provide care to patients, where they were continually exposed to the virus [31]. The pressure on health care workers during the early days of COVID-19 was exacerbated by the high level of uncertainty about the virus, constant changes in policies and regulations, the scarcity of personal protective equipment (PPE) [32], making difficult ethical and moral decisions [33], and the fear of death and spreading the virus to their families [34].

Redeployment was a unique psychosocial risk factor among health care workers during the COVID-19 pandemic. Many were asked to work in a different department where they faced new work demands in an unfamiliar environment with new colleagues [35]. This exacerbated the sense of uncertainty and lack of control already being experienced.

Protection of physical safety was another critical psychosocial risk factor among health care workers during the COVID-19 pandemic [36]. A study on the well-being of employees in health care facilities in France found that the lack of appropriate and sufficient equipment and supplies increased employees' perception of safety risks regarding their personal safety and that of their families [37]. This finding was supported by a focus group study in the United States, asking health care workers to rank their concerns and sources of anxiety. Based on the findings of that study, access to proper PPE was the primary concern of health care workers [35].

The findings of a study of 2,707 health care workers from 60 countries showed that burnout was significantly associated with health care workers' concern regarding the health and safety of their families, feeling pushed beyond training, constant exposure to the virus, and facing ethical dilemmas at

work [38]. During the COVID-19 pandemic, health care workers had to make challenging decisions for which they were mostly unprepared. Making ethical decisions such as prioritizing patients due to a lack of resources can be categorized as highly stressful events in which health care workers were exposed to a significant level of pain and suffering from their patients [39]. The cumulative exposure to these critical and stressful events (as a psychosocial risk factor) could increase the chance of experiencing psychosocial hazards among health care workers.

Additionally, during the COVID-19 pandemic, it was more difficult for health care workers to receive support from their friends and families as many of them were advised to limit their time with loved ones and socially isolate themselves after work hours to decrease the risk of bringing the virus home to their families [40]. This change reduced employees' perceived psychological support and work/life balance in terms of psychosocial risk factors.

A systematic review study conducted pre-pandemic showed that the level of burnout (a common psychosocial hazard among health care workers) is higher when they work in high-stress jobs with low perceived organizational support [41]. As the COVID-19 pandemic has increased the pressure on health care workers, employers' efforts to prevent burnout among them becomes more critical.

The above-mentioned psychosocial risk factors burden health care workers, taxing their energy and making them more prone to experiencing psychosocial hazards. Regarding the consequences and outcomes of psychosocial hazards among health care workers, many studies highlight the relationship between burnout and withdrawal behaviours such as absenteeism and turnover. Within the pandemic context, researchers investigated the level of burnout and its outcomes among 1,148 primary health care workers in China. The results of their analysis showed a significant association between burnout and intention to leave [42]. A similar result was found in a pre-pandemic study conducted on 677 nurses practicing in Atlantic Canada, supporting the relationship between burnout and turnover intention [43].

However, studies also suggested that actions by employers could mitigate the impact of the pandemic on health care providers. For example, to address psychosocial hazards, some researchers suggested a “battle buddies” program that would pair each health care worker with a colleague so they could check in on one another and provide peer support [44]. This recommendation is supported by previous studies that showed working in a supportive environment reduces the odds of health care workers experiencing burnout [45], [46]. Researchers found that assuring physician leave time (e.g., self-care or family time) was associated with reductions in distress and anxiety [47]. Another study found that practical training reduced stress levels among medical residents in Romania [48].

3.2 Non-health Care Employees

Numerous studies have examined mental health outcomes in the general public (e.g., [49]–[57]). Those studies consistently identified elevated mental health symptoms such as distress, depression, anxiety, drug and alcohol use, stress, burnout, and fatigue. Such results have also been found in Canadian samples. One study found that anxiety rates quadrupled (from 5% to 20%) and depression more than doubled (from 4% to 10%) since the onset of COVID-19 [58].

Regarding the impact of the pandemic on employees, studies have examined several psychosocial risk factors and psychosocial hazards. Like health care provider studies, physical protection was commonly examined in studies of workers during the pandemic. Several studies looked at the impact of infection control policies at work and during frontline exposure. One study found that infection control policies were related to higher reports of fear and worry about COVID-19 (perhaps due to drawing attention to the risks of COVID) but to lower psychological distress and better work performance [59]. Another study demonstrated that infection control policies at work were associated with fewer psychiatric symptoms in a sample of Chinese workers [53]. Similarly, researchers found that comprehensive, timely, and transparent infection control policies at work were significantly related to lower anxiety and depression and better health-related quality of life measures in workers in Hong Kong early in the pandemic [60].

Being an essential worker or a public-facing employee in a non-health care industry was also consistently found to be associated with more mental health problems [61]. Researchers found that employees in the restaurant industry who continued to work during the COVID-19 pandemic experienced higher levels of psychological distress, drug use, alcohol use, and intentions to leave [62] compared to employees who had been furloughed. This study found that greater COVID exposure risk in the restaurant industry had a more significant impact on psychological distress and drug and alcohol use than unemployment (a well-established stressor). However, like infection control policies, adequate PPE affected essential workers. In a Canadian sample of non-health care workers, researchers found that employees working remotely had lower rates of anxiety and depression than those working on-site or who had lost their jobs [63]. However, this effect was dependent on whether on-site workers had adequate PPE. For example, on-site workers with *adequate* PPE and infection control protocols had the *lowest* rates of anxiety and depression (compared to all respondents, which included remote workers and those who had lost their jobs). By comparison, on-site workers who reported *inadequate* PPE and infection control protocols had the *highest* rates of anxiety and depression among all respondents.

One issue that was consistently examined in non-health care studies and largely absent from health care studies was job security due to the pandemic. Job security is a foundational issue that is a well-established risk factor. This was a frequent issue examined during the pandemic where employment in some industries (e.g., travel, hospitality, restaurants) were dramatically impacted [17]. Researchers examined mental health differences among employed and unemployed individuals during COVID-19 social distancing mandates [64]. Results indicated that unemployed individuals experienced higher psychological distress and loneliness and lower overall quality of life. By remaining connected with their colleagues, employed respondents experienced less feelings of social isolation than unemployed respondents. Researchers found that younger workers and workers with more job insecurity had higher rates of mental health problems during the pandemic [61].



"Positive employee relations and trust were mediating factors that helped create a supportive remote work environment and positively impacted employee well-being."

Remote work was also a prevalent issue facing workplaces during the pandemic. Several studies examined the impact of quarantine, social distancing policies, and remote work on employees. Researchers found that quarantine and delays in returning to work were associated with poor mental health symptoms in the general Chinese population [65]. Researchers studied behavioural changes early in the pandemic in an American sample and found that changing to remote working was associated with increases in stress and negative mood. However, the most significant changes occurred in participants who reported job losses during the study [66]. In a sample of 1,055 university staff and 925 university students, researchers found remote work significantly increased presenteeism and absenteeism when remote work was also associated with higher levels of social isolation [67]. Other risk factors such as being female and having children in the home also increased adverse outcomes of remote work. Researchers reviewed 69 deaths from suicide in India during the pandemic and identified fear of infection, financial distress, loneliness, social exclusion, pressure to quarantine, and work-related stress as reasons underlying the suicides [68].

However, studies also suggested that factors in the workplace could mitigate the pandemic's impact on employees. Researchers examined factors that impacted job satisfaction of remote work during the COVID-19 pandemic [69]. Results showed that positive employee relations and trust were mediating factors that helped create a supportive remote work environment and positively impacted employee well-

being. In a Canadian sample, researchers found that job insecurity was a strong predictor of lower well-being [70]. However, workplace disaster preparedness, workplace programs for mental health support, and positive social relationships at work mitigated some of the effects of job insecurity on well-being.

3.3 Vulnerable and Marginalized Populations

Studies suggest that the pandemic has not had a uniform impact across populations. For example, women and people of colour experienced more detrimental health risks and economic consequences [71]–[73]. A few studies examined the impact on vulnerable or marginalized workers. Researchers identified adverse psychological outcomes, including discrimination and job insecurity, for migrant workers in India [74], [75]. A Canadian study examined the mental health impact of COVID-19 among people with disabilities and chronic conditions [76]. The findings concluded that factors including fear of contracting the virus, financial hardship, and isolation contributed to poor mental health (e.g., increased anxiety, stress, loneliness, and despair) in this vulnerable population. Researchers found that minority and marginalized groups (e.g., women, migrants) had the lowest job security and that job insecurity was significantly related to lower scores on measures of well-being (i.e., symptoms at work, impaired productivity at work, thriving at work, and distress) [70]. Thus, studies confirm that vulnerable and marginalized workers may experience even more detrimental effects from the pandemic.

3.4 Summary

This review suggests that during the COVID-19 pandemic, one of the most common psychological factors examined was the protection of physical safety related to employee access to adequate personal protective equipment (PPE) or infection control protocols. Both topics were most likely to be examined by researchers as well as the factors most likely to emerge from surveys of employees. Although less frequent, some studies reviewed other issues such as job insecurity and other psychosocial factors such as social isolation due to remote work. Most of the studies in the existing literature identify psychological hazards or harms, most commonly in terms of mental health symptoms of anxiety, depression, PTSD, or burnout.

In summary, the review does not suggest that the pandemic creates novel or previously unknown risks for employees. The factors that impact employees are already well-established. One study reviewed the impact of COVID-19 on the workplace and concluded that it exacerbates current workplace issues, including workers' mental health, social relations, discrimination, and unemployment on a global level [17]. This suggests that psychosocial risk factors and hazards identified by CAN/CSA-Z1003-13 may be further exacerbated under pandemic conditions.

Although the studies we reviewed consistently found negative impacts of the pandemic on mental health and well-being, some found that addressing psychosocial factors can mitigate the pandemic's impact on these psychosocial hazards. Thus, addressing psychological health and safety has become even more critical during the pandemic.

3.5 The Current Research Study

The purpose of the current research study was to i) define and better understand the hazard(s) associated with psychological health and safety in the workplace as it pertains to COVID-19; ii) identify leading practices, innovative approaches, and lessons learned for safeguarding the psychological health and safety of workers during the response and recovery phases of the COVID-19 pandemic; and, iii) make recommendations for changes and/or improvements based on the research findings to the overall framework

and standard requirements of CAN/CSA-Z1003. The motivation was to better understand what employers were most concerned about, what employers were doing to support workplace mental health during a pandemic, and to identify key observations from employers based on their experience. The hope was that this study would uncover some key lessons, gaps, and needs that could assist in informing employers on how to best respond to the current crisis and support psychological health and safety of workers moving forward both during the pandemic and beyond.

4 Methods

This study involved a mixed method design including interviews with five key informants to understand their experience regarding workplace mental health during a pandemic, followed by a larger mixed method survey targeting participants who were "persons who play an active role in the organization's mental health strategy or psychological health and safety management system." Five key informants from medium to large organizations with expertise and knowledge were consulted. These interviews were conducted during survey development for feedback that was considered in development of the final survey along with feedback from the advisory panel. The final survey, which was available online, included quantitative questions about awareness and the use of the CAN/CSA-Z1003, psychosocial factors and psychosocial hazards of concern, and policies and programs offered by organizations during the pandemic and qualitative questions and open responses on biggest changes, greatest challenge, lessons learned, and supports needed.

Survey respondents typically consisted of "Human Resources or Occupational Health and Safety professionals, JOHS Committee, and/or Workplace Mental Health Committee." Participants were recruited through the Canadian Standards Association's (CSA) members mailing list and via social media, targeted contacts, convenience, and snowball sampling. Ethics approval for this research study was obtained from the Institutional Research Ethics Board at Saint Mary's University. The survey was available from April 14 to September 16, 2021. The final survey can be found in Appendix A.

5 Results and Discussion

5.1 Characteristics of the Sample

Tables 1-4 show the respondent demographic characteristics. There were 295 responses that contributed to the following frequency distributions. Most respondents were from Ontario (32.7%), followed by Alberta (30.3%), and British Columbia (12.2%), and most reported operating primarily in an urban area (69.3%). The most common business sector reported was health care (25.8%), followed by education (10.2%), government (9.5%), and construction (8.1%). Most organizations that participated were private corporations (38%), followed by non-profit organizations (23.6%), public organizations (15.8%), and provincial governments (14.4%). A large percentage of organizations that responded had fewer than 500 employees (59.9%), and 46.9% reported having unionized employees.

Table 1: Summary of Demographic Characteristics of the Sample: Province

Province	Number of Respondents	Percent (%)
Ontario	96	32.7
Alberta	89	30.3
British Columbia	36	12.2
Saskatchewan	17	5.8
Manitoba	15	5.1
Nova Scotia	9	3.1
Quebec	9	3.1
New Brunswick	7	2.4
Outside of Canada	7	2.4
Newfoundland and Labrador	3	1.0
Prince Edward Island	3	1.0
Northwest Territories	1	0.3
Nunavut	1	0.3
Yukon	1	0.3
Total	294	

No response = 1

Table 2: Summary of Demographic Characteristics of the Sample: Business Sector

Business Sector	Number of Respondents	Percent (%)
Health care and social assistance	76	25.8
Education	30	10.2
Government / Judicial / Policing	28	9.5
Construction / Trades	24	8.1
Mining / Oil & Gas	19	6.4
Manufacturing	16	5.4
Transportation / Logistics	12	4.1
Retail Trade	11	3.7
Engineering / Scientific / Technical Services	9	3.1
Finance & Insurance	8	2.7
Associations, Labour & Member Organizations	7	2.4
Management consulting services	6	2.0
Agriculture, forestry, fishing, and hunting	3	1.0
I.T., Telecommunications, Information	2	0.7
Real Estate / Property Management	2	0.7
Utilities, power generations, and transmission	2	0.7
Environmental	1	0.3
Media and cultural	1	0.3
Wholesale Trade / Reseller	1	0.3
Total	295	

Table 3: Summary of Demographic Characteristics of the Sample: Business Type

Business Type	Number of Respondents	Percent (%)
Private corporation	111	38.0
Non-profit	69	23.6
Public corporation	46	15.8
Provincial Government	42	14.4
Municipality	12	4.1
Federal Government	9	3.1
NGO	3	1.0
Total	292	

No response = 3

Table 4: Summary of Demographic Characteristics of the Sample: Organizational Size

Organization Size	Number of Respondents	Percent (%)
Fewer than 150 employees	115	39.4
150 to 499 employees	60	20.5
500 to 999 employees	20	6.8
1,000 to 4,999 employees	39	13.4
5,000 to 9,999 employees	22	7.5
10,000 employees or more	36	12.3
Total	292	

No response = 3

5.2 Use of CAN/CSA-Z1003

Approximately half of respondents (49.1%) noted using CAN/CSA-Z1003 in some way, as shown in Table 5 regarding the use of CAN/CSA-Z1003 to assist in addressing psychological health and safety. Only 7.5% claimed to be adopting all aspects of the Standard, and 13.5% were adopting parts of it. Out of those who reported using CAN/CSA-Z1003, most (28.1%) indicated they were using it as a reference but not necessarily adopting it.

Table 5: Use of The National Standard

Variable	Number of Respondents	Percent (%)
Not aware of the National Standard	85	30.2
Not using the National Standard	58	20.6
Using the National Standard as reference	79	28.1
Adapting parts of the National Standard	38	13.5
Adopting all aspects of the National Standard	21	7.5
Total	281	

No response = 14

However, 50.8% of respondents indicated they were either unaware of CAN/CSA-Z1003 or not making use of it. Respondents also indicated that different departments or staff had varying awareness of CAN/CSA-Z1003. Some mentioned that HR departments and wellness committees had much greater knowledge, but there was less knowledge at the managerial or leadership levels. The data shows that increased awareness of CAN/CSA-Z1003 is needed. In particular, raising awareness of CAN/CSA-Z1003 for employees assigned to facilitate workplace mental health initiatives could increase its utilization.

5.3 Psychosocial Factors

The survey asked about the top two psychosocial factors that organizations were most concerned about during the COVID-19 pandemic. Table 6 shows that protection of physical safety (14.7%) and psychological supports (11.6%) were the top priorities. Taking the cumulative rankings of the first and second priorities, workload management (12.1%), protection of physical safety (10.7%), organizational culture (9.8%), psychological support (9.8%), and work/life balance (8.9%) were the top five psychosocial factors employers are most concerned about during the pandemic. Responses from the qualitative data also illustrated their responses, which are quoted in the results.

Respondents highlighted that workload had increased (e.g., *“high workload during an extremely stressful time, with no end in sight”*). For some respondents, additional workloads were the result of reduced staffing due to absences caused by the pandemic (e.g., *“staff are leaving at alarming rates”; “We have faced increasing difficulty retaining staff as they have struggled to juggle childcare needs and work demands”*). Respondents also mentioned that the pandemic had added pressure onto existing stressors (e.g., *“the stress of juggling so many lifestyle factors simultaneously along with work added a lot of pressure to the workplace”*). Work/life balance became a greater challenge during remote work, which was also related to increased workloads (e.g., *“unrealistic timelines and the break between work and life – ending the day at the end of 7 hours – not working 10-12 hours per day”*).

Table 6: Psychosocial Factors Organizations Were Concerned About During COVID-19 Pandemic

Psychosocial Factors	First Priority	Second Priority	Cumulative Percent
Workload management	19 (8.5%)	35 (15.7%)	54 (12.1%)
Protection of physical safety	33 (14.7%)	15 (6.7%)	48 (10.7%)
Organizational culture	17 (7.6%)	27 (12.1%)	44 (9.8%)
Psychological support	26 (11.6%)	18 (8.1%)	44 (9.8%)
Work/life balance	16 (7.1%)	24 (10.8%)	40 (8.9%)
Clear leadership and expectations	20 (8.9%)	15 (6.7%)	35 (7.8%)
Psychological job demands	16 (7.1%)	15 (6.7%)	31 (6.9%)
Cumulative exposure to critical or stressful events	21 (9.4%)	9 (4%)	30 (6.7%)
Isolation (working remotely)	10 (4.5%)	16 (7.2%)	26 (5.8%)
Civility and respect	11 (4.9%)	14 (6.3%)	25 (5.6%)
Engagement	11 (4.9%)	9 (4%)	20 (4.5%)
Psychological protection from violence, bullying, and harassment	11 (4.9%)	8 (3.6%)	19 (4.3%)
Growth and development	6 (2.7%)	10 (4.5%)	16 (3.6%)
Involvement and influence	4 (1.8%)	4 (4.5%)	8 (1.8%)
Recognition and reward	3 (1.3%)	4 (1.8%)	7 (1.6%)

n (first priority) = 224, no response = 71; n (second priority) = 223, no response = 72.

For many respondents, protection of physical safety involved PPE and infection control policies for on-site employees. However, some respondents also appeared to consider transitioning to remote work as a way of addressing physical safety. They also commented on the stress of managing return-to-work and the rapid change of protocols and government recommendations for the pandemic. *"Return to Work (RTW) initiatives have been initiated and then deferred multiple times due to resurgence in COVID rates. These RTW initiatives have been very stressful for staff, given their uncertainty around safety of the workplace, their personal circumstances, and the on/off nature of the efforts to RTW."* Physical safety during the pandemic was seen as having a significant impact on mental health and well-being, thereby demonstrating the link between psychosocial factors and hazards (e.g., *"Importance of promoting COVID-19 safe workplace practices to reduce the stress of employees going to work"*).

Psychological support was woven into many answers in the pandemic, such that often "mental health" resources were seen as not separate or only for "certain people." They were necessary for everyone (e.g., *"Extended EFAP [Employee and Family Assistance Program] to all employees regardless of previous eligibility, promoted a variety of psychological resources and supports throughout the pandemic;" "... awareness of the importance of employee well-being to the core functions of the organization"*).

The organizational culture became more apparent during the pandemic as the additional stress weighed on organizations. For some respondents, the culture already had invested in psychological health and safety (e.g., *"most support we can afford to provide was already in place"*). But for others, the lack of psychological health and safety focus in the workplace was exacerbated by the pandemic and the lack of investment in this became even more glaring (e.g., *"Not much changed as we are for profit and the money was more important than the employees, sadly"*).

There was considerable variability in the extent that organizations had taken action to mitigate or address their top two concerns regarding psychosocial factors. Table 7 shows that 23.2% were not sure or had taken no action; 37.8% were in the planning stages or just starting to implement a plan; 31.5% had fully implemented a plan; and 7.5% had implemented a plan and were collecting data to evaluate its impact.

Progress on implementing psychological health and safety measures was also impacted by how much an organization was engaged in psychological health and safety before the pandemic. Some were already engaged in psychological health and safety processes that could be redirected, or minimally adjusted to deal with the pandemic's stressors. *"Our organization was already equipped with these strategies prior to the pandemic; so it isn't actually a change; just a demonstration of relevance to preventing and mitigating distress and keeping focused on priorities that include employee well-being and engagement."* For other organizations, the pandemic became an opportunity to finally achieve investment into psychological health and safety. *"After almost a year of COVID-19 and many years trying to influence decision makers to implement structured prevention program for mental health, saw a real desire to act and put something in place (shift in priorities)."* Finally, some organizations chose not to invest in psychological health and safety, and there was no change from pre-pandemic action. *"They have treated their staff with little or no compassion, resources or respect throughout the pandemic. The work culture is*

TOXIC."; *"my employer refused to implement any of the suggestions [for psychological health and safety]"; "This place has done abysmal at supporting mental health..."*

5.4 Psychosocial Hazards

The survey asked about the top two psychosocial hazards that organizations were concerned about during the COVID-19 pandemic. Table 8 shows that burnout and stress/distress were the top two concerns that captured a 40% of the cumulative concerns (*"Most people are in a constant state of stress – this is beginning to take its toll physically and emotionally"; "Ongoing elevated stress."*) Respondents were aware that psychosocial risk factors impact psychosocial hazards. *"That more people than we realized have/are working with a significant degree of stress & anxiety – home, work, balanced work-life situations."; "the stress of juggling so many lifestyle factors simultaneously along with work added a lot of pressure to the workplace."; "Prolonged periods of stress/fatigue and the resultant mental/physical health issues."*

Compared to plans to address psychosocial factors, organizations reported less progress on plans to mitigate or address their top concerns regarding psychosocial hazards. Table 9 shows that 31.9% were not sure or had taken no action, 43.3% were in the planning stages or just starting to implement a plan, and 22.1% had fully implemented a plan with only 2.8% who had implemented a plan and were collecting data to evaluate its impact.

Table 7: Level of Action Taken by Organizations to Address Psychosocial Factors During COVID-19

Level of Action Addressing Psychosocial Factors	First Priority	Second Priority	Cumulative Percent
Not sure	5 (2.1%)	7 (3%)	12 (2.6%)
Little to no action	46 (19.7%)	50 (21.5%)	96 (20.6%)
Planning stages only, nothing has been implemented yet	34 (14.6%)	38 (16.3%)	72 (15.5%)
We have a plan but are just getting started implementing it	50 (21.5%)	54 (23.2%)	104 (22.3%)
We have a fully implemented plan	73 (31.3%)	74 (31.8%)	147 (31.5%)
We have fully implemented a plan and have collected data showing it is having an impact	25 (10.7%)	10 (4.3%)	35 (7.5%)

n = 233, no response = 62.

Table 8: Psychosocial Hazards Organizations Were Concerned About During COVID-19 Pandemic

Initiative	First Priority	Second Priority	Cumulative Percent
Burnout	60 (28.2%)	29 (13.7%)	89 (20.9%)
Stress (i.e., distress)	41 (19.2%)	41 (19.3%)	82 (19.3%)
Anxiety	29 (13.6%)	26 (12.3%)	55 (12.9%)
Overwhelmed	12 (2.3%)	26 (12.3%)	38 (8.9%)
Fatigue	11 (5.2%)	24 (11.3%)	35 (8.2%)
Fear of the unknown	16 (7.5%)	17 (8%)	33 (7.8%)
Compassion fatigue	8 (3.8%)	11 (5.2%)	19 (4.5%)
Cognitive errors	7 (3.3%)	5 (2.4%)	12 (2.8%)
Incivility (i.e., rudeness)	3 (7.5%)	9 (4.2%)	12 (2.8%)
Loneliness	5 (0.5%)	7 (3.3%)	12 (2.8%)
Confusion	7 (3.3%)	3 (1.4%)	10 (2.4%)
Distraction	3 (1.4%)	5 (2.4%)	8 (1.9%)
Substance use	5 (2.3%)	3 (1.4%)	8 (1.9%)
Irritability	1 (1.4%)	4 (1.9%)	5 (1.2%)
Anger	4 (1.9%)	0 (0%)	4 (0.9%)
Suicidal ideation	1 (0.5%)	2 (0.9%)	3 (0.7%)

n (first priority) = 213, no response = 82; n (second priority) = 212, no response = 83.

Table 9: Level of Action Taken by Organizations to Address Psychosocial Hazards During COVID-19

Level of Action Addressing Psychosocial Hazards	First Priority	Second Priority	Cumulative Percent
Not sure	7 (3.3%)	11 (5.1%)	18 (4.2%)
Little to no action	59 (27.4%)	60 (27.9%)	119 (27.7%)
Planning stages only, nothing has been implemented yet	44 (20.5%)	41 (19.1%)	85 (19.8%)
We have a plan but are just getting started implementing it	49 (22.8%)	52 (24.2%)	101 (23.5%)
We have a fully implemented plan	48 (22.3%)	47 (21.9%)	95 (22.1%)
We have fully implemented a plan and have collected data showing it is having an impact	8 (3.7%)	4 (1.9%)	12 (2.8%)

n = 215, no response = 80.

5.5 Practices, Policies, and Programs Offered by Organizations During the Pandemic

Table 10 highlights the practices, policies, and programs offered by organizations during the pandemic to support employees' psychological health and safety and/or to mitigate the negative impact of COVID-19 on employees' psychological health and safety. These included practices, policies, or programs that the organization put in place or that already existed. The most common initiatives were daily communications (86.5%), adjusting work-from-home policies (84.8%), upgrading technology (77.8%), and Employee and Family Assistance Program (EFAP; 75.6%). When queried about the primary intention of the initiatives, most reported the intention was both prevention and intervention. The least commonly offered initiatives included using CAN/CSA-Z1003 (23.1%), Cognitive Behavioural Therapy (CBT) (22.5%), peer support program (22%), paramedical psychological services

(21%), caregiver support (19.4%), surveys to benchmark employee experience (18.5%), suicide prevention training for managers (16.3%), and buddy systems (5.9%).

Table 11 reviews the primary evaluation method for practices, policies, or programs. The least commonly offered programs tended to have the highest rates of using data to evaluate the program, such as using CAN/CSA-Z1003 (66.8%), CBT (70.3%), peer support program (66.7%), paramedical psychological services (62.9%), and surveys to benchmark employee experience (83.8%). EFAP also had a high rate of evaluation (66.2%) but tends to rely on usage data provided by third party providers. Another program with a high rate of evaluation was pulse checks to monitor employee experience (78.7%), which involve collecting data. For the remaining programs, data collection to evaluate their impact or effectiveness was low or mixed. These results suggest that overall, most organizations were not consistently collecting data to assess their programs' impact (beyond usage statistics).

Table 10: Practices, Policies, or Programs Offered by Organizations During COVID-19

Initiative	Offered	Primary Intention			
	Yes	Prevention	Intervention	Both	Unsure
Daily communications	147 (86.5%)	23 (16%)	5 (3.5%)	109 (75.7%)	7 (4.9%)
Adjusted work-from-home policy	145 (84.8%)	48 (33.6%)	6 (4.2%)	83 (58%)	6 (4.2%)
Upgraded technology	130 (77.8%)	21 (16.5%)	8 (6.3%)	71 (55.9%)	27 (21.3%)
Employee and family assistance program	127 (75.6%)	11 (8.7%)	9 (7.1%)	103 (81.7%)	3 (2.4%)
Adjusted flexible worktime policy	110 (64.3%)	41 (37.6%)	4 (3.7%)	57 (52.3%)	7 (6.4%)
Facilitate social connections	105 (62.1%)	21 (20.2%)	4 (3.8%)	74 (71.2%)	5 (4.8%)
Adjusted sick time policy	93 (55%)	25 (27.2%)	12 (13%)	50 (54.3%)	5 (5.4%)
Promote local community resources	92 (54.8%)	13 (14.3%)	2 (2.2%)	76 (83.5%)	0 (0%)
Educational webinars on various topics	88 (52.4%)	14 (16.1%)	4 (4.6%)	65 (74.7%)	4 (4.6%)
Leaders trained in how to support employee at risk for mental health	85 (50.9%)	17 (20%)	7 (8.2%)	58 (68.2%)	3 (3.5%)
Digital mental health AP	66 (39.3%)	15 (22.7%)	6 (9.1%)	44 (66.7%)	1 (1.5%)

Initiative	Offered	Primary Intention			
	Yes	Prevention	Intervention	Both	Unsure
Pulse checks to monitor employees' experience	57 (33.7%)	10 (17.9%)	4 (7.1%)	40 (71.4%)	2 (3.6%)
On-demand resources	56 (33.1%)	6 (11.1%)	0 (0%)	46 (85.2%)	2 (3.7%)
Leaders trained in how to be a psychological safe leader	54 (32%)	6 (11.1%)	0 (0%)	46 (85.2%)	2 (3.7%)
Resiliency training	46 (27.4%)	11 (23.9%)	2 (4.3%)	33 (71.7%)	0 (0%)
Adopt or adapt the CSA psychological health and safety "Standard"	39 (23.1%)	11 (28.2%)	2 (5.1%)	26 (66.7%)	0 (0%)
Cognitive behavioural therapy (CBT)	38 (22.5%)	2 (5.4%)	5 (13.5%)	29 (78.4%)	1 (2.7%)
Peer support program	37 (22%)	6 (16.2%)	3 (8.1%)	28 (75.7%)	0 (0%)
Paramedical psychological services	35 (21%)	1 (2.9%)	3 (8.6%)	31 (88.6%)	0 (0%)
Caregiver support (CSA B701)	32 (19.4%)	3 (9.7%)	6 (19.4%)	20 (64.5%)	2 (6.5%)
Workplace survey designed to obtain employees' perceptions and mental health benchmark (e.g., Mental Fitness Index)	31 (18.5%)	6 (19.4%)	1 (3.2%)	23 (74.2%)	1 (3.2%)
Suicide prevention training for managers	27 (16.3%)	5 (18.5%)	2 (7.4%)	20 (74.1%)	0 (0%)
Buddy system	10 (5.9%)	3 (30%)	0 (0%)	7 (70%)	0 (0%)

Table 11: Evaluation of Practices, Policies, or Programs Offered by Organizations During COVID-19

Initiative	Program Primary Evaluation Method									
	Survey	Audit	Interview	Program Evaluation	Focus Groups	Health Risk Assessment	Disability Data	Complaints	Any Data	No Data
Daily communications	16 (11.5%)	4 (2.9%)	12 (8.6%)	11 (7.9%)	8 (5.8%)	4 (2.9%)	0 (0%)	5 (3.6%)	60 (43.2%)	79 (56.8%)
Adjusted work-from-home policy	25 (17.7%)	6 (4.3%)	17 (12.1%)	10 (7.1%)	4 (2.8%)	6 (4.3%)	0 (0%)	4 (2.8%)	72 (51.1%)	69 (48.9%)
Upgraded technology	8 (6.5%)	6 (4.8%)	5 (4%)	23 (18.5%)	2 (1.6%)	0 (0%)	0 (0%)	10 (8.1%)	54 (43.5%)	70 (56.5%)
Employee and family assistance program	14 (11.6%)	10 (8.3%)	6 (5%)	35 (28.9%)	1 (0.8%)	3 (2.5%)	11 (9.1%)	0 (0%)	80 (66.2%)	41 (33.9%)
Adjusted flexible worktime policy	29 (26.9%)	1 (0.9%)	6 (5.6%)	9 (8.3%)	0 (0%)	3 (2.8%)	5 (4.6%)	1 (0.9%)	54 (50%)	54 (50%)
Facilitate social connections	9 (8.7%)	0 (0%)	23 (22.3%)	5 (4.9%)	3 (2.9%)	1 (1%)	1 (1%)	3 (2.9%)	45 (43.7%)	58 (56.3%)
Adjusted sick time policy	4 (4.5%)	9 (10%)	5 (5.6%)	8 (9%)	1 (1.1%)	3 (3.4%)	16 (18%)	3 (3.4%)	49 (55%)	40 (44.9%)

Initiative	Program Primary Evaluation Method									
	Survey	Audit	Interview	Program Evaluation	Focus Groups	Health Risk Assessment	Disability Data	Complaints	Any Data	No Data
Promote local community resources	4 (4.5%)	3 (3.4%)	2 (2.2%)	10 (11.2%)	2 (2.2%)	1 (1.1%)	1 (1.1%)	0 (0%)	23 (25.7%)	66 (74.2%)
Educational webinars on various topics	17 (20.2%)	0 (0%)	5 (6%)	19 (22.6%)	3 (3.6%)	1 (1.2%)	1 (1.2%)	0 (0%)	46 (54.8%)	38 (45.2%)
Leaders trained in how to support employee at risk for mental health	11 (13.1%)	1 (1.2%)	8 (9.5%)	13 (15.5%)	1 (1.2%)	2 (2.4%)	6 (7.1%)	4 (4.8%)	46 (54.8%)	38 (45.2%)
Digital mental health AP	13 (20.6%)	2 (3.2%)	2 (3.2%)	18 (28.6%)	0 (0%)	0 (0%)	1 (1.6%)	1 (1.6%)	37 (58.8%)	26 (41.3%)
Pulse checks to monitor employees' experience	28 (50%)	1 (1.8%)	9 (16.1%)	2 (3.6%)	1 (1.8%)	2 (3.6%)	0 (0%)	1 (1.8%)	44 (78.7%)	12 (21.4%)
On-demand resources	7 (13.2%)	5 (9.4%)	1 (1.9%)	11 (20.8%)	1 (1.9%)	2 (3.8%)	1 (1.9%)	0 (0%)	28 (52.9%)	25 (47.2%)
Leaders trained in how to be a psychological safe leader	5 (9.3%)	2 (3.7%)	5 (9.3%)	13 (24.1%)	0 (0%)	2 (3.7%)	0 (0%)	2 (3.7%)	29 (53.8%)	25 (46.3%)
Resiliency training	9 (20%)	1 (2.2%)	1 (2.2%)	7 (15.6%)	3 (6.7%)	0 (0%)	1 (2.2%)	0 (0%)	22 (48.9%)	23 (51.1%)
The CSA psychological health and safety "Standard"	10 (25.6%)	1 (2.6%)	0 (0%)	6 (15.4%)	1 (2.6%)	4 (10.3%)	1 (2.6%)	3 (7.7%)	26 (66.8%)	13 (33.3%)
Cognitive behavioural therapy (CBT)	1 (2.8%)	3 (8.3%)	3 (8.3%)	14 (38.9%)	0 (0%)	0 (0%)	0 (0%)	4 (11.1%)	25 (70.3%)	11 (30.6%)
Peer support program	7 (19.4%)	3 (8.3%)	2 (5.6%)	9 (25%)	0 (0%)	1 (2.8%)	1 (2.8%)	1 (2.8%)	24 (66.7%)	12 (33.3%)
Paramedical psychological services	0 (0%)	5 (14.3%)	0 (0%)	10 (28.6%)	0 (0%)	2 (5.7%)	5 (14.3%)	0 (0%)	22 (62.9%)	13 (37.1%)
Caregiver support (CSA B701)	4 (13.3%)	0 (0%)	2 (6.7%)	3 (10%)	0 (0%)	1 (3.3%)	3 (10%)	1 (3.3%)	14 (46.6%)	16 (53.3%)
Workplace survey designed to obtain mental health benchmark (e.g., Mental Fitness Index)	16 (51.6%)	1 (3.2%)	3 (9.7%)	5 (16.1%)	0 (0%)	1 (3.2%)	0 (0%)	0 (0%)	26 (83.8%)	5 (16.1%)
Suicide prevention training for managers	1 (3.8%)	1 (3.8%)	2 (7.7%)	7 (26.9%)	0 (0%)	1 (3.8%)	0 (0%)	0 (0%)	12 (46%)	14 (53.8%)
Buddy system	1 (11.1%)	0 (0%)	1 (11.1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (11.1%)	3 (33.3%)	6 (66.7%)

5.6 Qualitative Results

Respondents were asked to describe in open-field text boxes the most significant change, greatest lesson learned, greatest challenge, and supports needed moving forward regarding employee psychological health and safety during COVID-19. The first author reviewed and coded these qualitative results to assess the significant themes of the responses.

5.6.1 Most Significant Change

Responses were very similar for the most significant change (e.g., shift in priorities, new practices, policies,

programs, innovations) for supporting employees' psychological health and safety during COVID-19. Most respondents (over 70% of the 140 responses) described the most significant change as relating to three main topics: remote work, greater focus on mental health, and/or greater effort on communication in the organization. Notably, these often overlapped, and many respondents reported having multiple demands and changes (e.g., *"Can I pick all the above?"*; *"New priorities, new best practices, new pandemic policy/program, purchasing PPE for all employees in all locations"*; *"Sorry it is very hard to pick one that stands out"*).

Remote Work:

- "Flexible work from home options throughout the pandemic."
- "Allowing Work from Home (WFH). Reduced stress and increased productivity, despite some adjustment issues."
- "Most significant change was to allow most employees to work at home. Note, this did happen fast as we are not considered essential, but this change was done reluctantly implying distrust and without proper planning once the decision was made to work from home."
- "People, if they were scared, could continue to work from home. If someone was feeling ill, it was strongly supported that they remain home instead of coming into the work place. Items needed to maintain COVID operating protocols were provided to all staff."
- "Shifting to remote work and using virtual platforms for project management and meetings to keep team members engaged and keeping lines of communication open."

Communication:

- "Retaining employee engagement meant frequent check-ins and meetings."

- "Ensure information is ready, available and easy to access. communication about changes to daily work life is key to ensuring stress remains low."
- "Constant and meaningful communication."
- "Communicate early and often."
- "Failures to communicate about COVID infections in the office resulted in loss of trust and greater fear / stress when initiating RTW programs."
- "Connection. Making sure you're communicating and having real contact with people."
- "Connect with employees on an ongoing basis – team huddles and one-to-one meetings."
- "Communicate, talk openly and often, be transparent and authentic."

Mental Health:

- "Significantly increased communication around mental health to normalize challenges and expanded and expedited services (increase speed of delivery)."
- "...increasing access to EFAP, clinical counselling supports through various programs, peer support, online resources, in-house counsellor, staff support centre, weekly wellness messages."

5.6.2 Greatest Lesson Learned

There was more variety in responses regarding the greatest lesson learned about protecting employees' psychological health and safety during COVID-19. The most frequently reported themes included recognizing

the importance of communication and specifically the importance of listening to employees, the importance of social connections such as regular check-ins, and the need for flexibility in responding to employee needs.

Communication

- "I learned communication in a crisis is essential."
- "Over communicate and listen to staff, recognize and validate staff"
- "Need to communicate, communicate, communicate!"
- "Open and honest communication from our leadership"
- "Constant and meaningful communication"
- "Communicate early and often."
- "Communicate often and various platforms, remember that communication is a two-way street - listen. Be kind, approach others in kindness."

Check-ins

- "A phone call to check in can go a long way."
- "Stay connected by other means when most were working remotely"
- "Require ongoing check-ins, particularly those living alone"
- "Working from home was extremely difficult for the mental health of our employees. It would have been more prudent to check in more often and schedule more virtual team building activities."

Listening

- "To listen to all concerns, respond in a timely manner, give clear direction and reassure staff."
- "Keeping an open-door policy for employees to speak to managers about their concerns, and feeling like they're actually being heard."
- "Listen to their needs and offer flexibility to meet these where possible and reasonable."
- "Be available to listen"

Need for Flexibility

- "Everyone is different and you one blanket solution doesn't work. You need to get to know your team and find out what they need, and the supports required. People want to know they are important no matter the position they hold."
- "Productivity was improved with a more flexible work environment"
- "Continue to be understanding as not all employees are experiencing the impact the same; need to be adaptable."
- "Everyone needs support, but in different ways."

5.6.3 Greatest Challenge

There was also variety in the responses regarding the greatest challenge organizations faced regarding employees' psychological health and safety during COVID-19. Themes included burnout, dealing with change and uncertainty, issues related to remote work including staying connected, balancing life/work

responsibilities, and keeping employees motivated.

Themes also dealt with misinformation about COVID-19; issues related to lack of training in psychological health and safety (e.g., managers not aware of or not having skills to deal with mental health concerns or topics); and employees having a variety of needs that made a one-size-fits-all approach inadequate.

Remote Work

- "Keeping staff motivated during COVID."
- "Employee engagement in a remote work environment."
- "Supporting workers remotely in the challenges of being isolated at home, loss of social interactions, dealing with 'cabin fever'"
- "The disconnect of remote working was not positive for our team. Even though we implemented several digital/virtual tools, it did not replace the need for in-person, social connections and caused issues with the feeling of psychological safety and engagement."

Varied Needs

- "Everyone manages stress and anxiety differently, there is no one answer or solution"
- "Ensuring each individual gets the support they need – at work and at home."
- "Diversity in the demographic profiles of employees across the organization makes it challenging to address all needs quickly. trying to stay nimble and responsive"

Misinformation

- "Misinformation or the misuse of information. People find information and bend it to meet their personal belief, or they believe something handed around, spoken between friends or groups etc. It's been quite concerning dealing with it in the workplace. "
- "Providing any information, they didn't believe in was met with bullying, anger, outrage and the belief we were trying to control them."

Uncertainty and Anxiety

- "Facing uncertainty and anxiety about the future and what may happen"
- "Not protecting staff it creates insecurity and fear"
- "Change fatigue"

5.6.4 Supports Needed

Regarding what supports organizations needed to better handle the challenges regarding employees' psychological health and safety during COVID-19, organizations reported a variety of issues. The most common themes included the need for more mental health resources such as resiliency, anxiety, coping, and EFAP, especially having these resources available

for the long term. Other themes included the need for leaders' training and skills in psychological health and safety; more resources such as funding and staff to implement and support psychological health and safety initiatives; more communication, including from leadership and government concerning misinformation about COVID-19; and more care, compassion, and flexibility by organizations.

Care and Compassion

- "A brain and a heart, absolutely out of touch with the rigours and psychologically damaging situations workers face daily"
- "Caring for the staff and the environment they work in."
- "We need each other! compassion and caring - flexibility and MRI most respectful interpretation of the situation for each person reacting"

Funding and Resources

- "Funding for additional resources and supports and to expand health care staffing."
- "More staffing resources to address psychological health and safety."

Training

- "Strong, authentic and connected leadership"
- "Leadership training around psychological health and safety."
- "Managers need appropriate comprehensive training and a shift in their perspective to prioritize the organizations' employees."
- "Having competent staff / supervisors / leaders, peer support teams and support for the implementation of Psych Health Safety Management System to the CSA Standard."



"During the pandemic, "mental health" became everyone's domain, not just of those with pre-existing mental health problems or illnesses or individuals identified as being "at risk" of a mental health problem or illness."

6 Discussion and Recommendations

The COVID-19 pandemic caused great upheaval and change in numerous ways. One of the impacts was a greater awareness of the importance of mental health [77]–[79]. During the pandemic, "mental health" became everyone's domain, not just of those with pre-existing mental health problems or illnesses or individuals identified as being "at risk" of a mental health problem or illness. This closely matches a key message in CAN/CSA-Z1003, that psychological health and safety is for the benefit of all employees. It is also consistent with the focus of psychological health and safety as not just the absence of illness but also the presence of well-being or flourishing. CAN/CSA-Z1003 can play a crucial role in guiding organizations in making smart decisions and wise investments to foster psychological health and safety in the workplace during the pandemic and beyond.

Consistent with the objectives, the study results provide a better understanding of the factors and hazards associated with psychological health and safety in the workplace as it pertains to a pandemic scenario such as COVID-19 and leading practices, innovative approaches, and lessons learned during the pandemic.

6.1 Psychological Health and Safety in the Workplace Is for All Employees

Respondents repeatedly included psychological aspects in their responses such that "mental health" issues were about *all* employees, and resources were needed for everyone.

Mental Health for All

- My management team sees Mental Health as illness and not as Mental Health. Mental Health, everybody has one!").

This emerged also in common responses about the need to continue to invest in psychological health and safety even after the "crisis" of the pandemic has receded.

Continued Investment Needed

- Many lessons will carry forward, post COVID."
- "Ongoing support is needed. It can't be a onetime thing."
- "Acknowledge and address this issue on an ongoing basis"

Some respondents indicated that they felt their organization had done well managing the crisis of the pandemic.

Job Well Done

- "We did well."
- "We have 100% backing from upper management"
- "I think we did amazingly well overall."
- "Organization 100% supported employees during the pandemic."

In contrast, many reported that their organizations struggled more because they had not invested in psychological health and safety

More Work Needed

- "Should have started much earlier than we did. We are in the reactive stage at this point and should have been more proactive in setting up resources/programs"
- "Wish our planning and interventions had started much sooner"
- "Staff required more support than we anticipated."
- "Protection of psychological health and safety should be a part of business as usual. If we had these practices in place it would have been easier to support people during these times and more sophisticated methods would have been in place to improve recovery and support each other in an appropriate way. It could have reduced stress and burnout significantly and actually strengthened workplace relationships."

6.2 Investing in Psychological Health and Safety Also Benefits Employers

Studies have shown that aspects of psychological health and safety in the workplace significantly impact organizational priorities [23]. For example, studies have found that perceptions of psychological safety are linked to organizational commitment and turnover [80], [81]. This was also highlighted in responses that investing in psychological health and safety benefitted not only employees but also employers (e.g., *"Over the span of the pandemic, we have noticed increasing numbers of staff who are re-evaluating life goals and who have changed their careers"*). Responses showed the impact psychological health and safety had on ratings of the leader (e.g., *"We need new leadership."*; *"I don't think they're learning anything."*; *"I think we are handling things fine - we have a good leader, and he has steered the ship well during the crisis"*). Thus, respondents highlighted that investing in psychological health and safety is in the best interests of organizations (e.g., *"Employees always have to be priority 1"*; *"Employers who create a supportive and safe working environment in return, get happier, more productive, engaged employees. Able to cope better with the added stress of COVID"*).

6.3 The Importance of Employee Engagement

Joint responsibility of employees and employers is a key factor in promoting psychological health and safety in the workplace. This includes the explicit need for "active, meaningful, and effective participation of stakeholders" [82]. This was clear for many respondents, and that engagement often meant active listening and authentic leadership.

Employee Engagement

- "The greatest challenge is trying to convince the corporation of the importance of worker involvement within corporate decisions. There have been several costly, hasty decisions made within the hospitals that could have been avoided if they had only talked and consulted with workers, plus this would have alleviated a great deal of psychological stress for workers since many felt there was much too little autonomy throughout this crisis."
- "We need to understand more about our employees and what really matters to them at home."
- [The greatest lesson was] "To show my own vulnerabilities during this time and spend more time listening to them has gained more respect from those I supervise directly."
- "Be responsive to employee needs by discovering what employees actually need. Ask and listen, reflect back and implement programs and policies that demonstrate commitment to psych health and safety."
- "Keeping an open-door policy for employees to speak to managers about their concerns, and feeling like they're actually being heard."
- "Listen to their needs and offer flexibility to meet these where possible and reasonable."
- "The greatest lesson has been the value of consulting our employees on their opinions on their health and safety in the workplace (and other issues) to ensure that we are meeting their needs and taking all perspectives into account."
- "Be available to listen."
- "Connecting is important for everyone to feel valued and engaged."
- "Stay connected by other means when most were working remotely."
- "Greatest lesson is that people need to feel valued. Especially during times of layoffs and so much uncertainty. A phone call to check in can go a long way."

6.4 The Importance of Recognizing Diversity

Recognizing diversity is important as diverse populations have unique needs [83]. This was evident in the responses. This also highlights the importance of engagement with different groups to ensure diverse needs are being met.

Recognizing Diversity

- "Continue to be understanding as not all employees are experiencing the impact the same; need to be adaptable."
- "Everyone is different and you one blanket solution doesn't work. You need to get to know your team and find out what they need and the supports required. People want to know they are important no matter the position they hold."
- "Recognition, acknowledgement, and support that continually evolves and is sensitive to the changing work environment and employee needs."
- "Encouraging and facilitating flexibility (both on the manager's and employee's part) is a great way to help employees feel heard and supported even when workloads are unusually high."
- "Every employee is different, while some struggle with being home all the time (for various reasons: isolation, trying to balance work with home life – kids, pets, etc., general anxiety and stress about the pandemic situation, etc.), other employees have thrived under the circumstances and work better from home (fewer distractions, more flexible breaks, cut out commute time, better work/life balance, etc.)"
- "Never underestimate people's ability to adapt to change."

6.5 Dramatic Gaps in Utilization of Plan – Do – Check – Act (PDCA) When Supporting Workplace Mental Health

The results suggest a high probability that many Canadian organizations attempting to support workplace mental health are not aware of or are not implementing a PDCA approach to their programs and policies to support workplace mental health. Continuous improvement is a core imperative for implementing a successful psychological health and safety management system (PHSMS), including alignment with specific requirements of ISO 45001:2018 for an occupational health and safety (OH&S) management system [84].

Engaging in continuous improvement, including collecting data is also an important component of a strong management system. Few respondents reported that their organization is collecting workplace mental health data (e.g., measuring what programs are positively impacting what psychosocial factors and hazards) in a way that might be useful for continuous improvement. The top two most used interventions, as seen in Table 10, show less than 8% did any form of program evaluation (i.e., Is what we are doing working?) and close to 50% of organizations had no data. When looking at EFAP, it is important to be mindful that most of the data collected appears to have come from the EFAP provider. Data often reported as “usage” is not to be confused with impact (e.g., how the EFAP experience improved employees’ coping ability).

One useful observation is that most programs have gaps in collecting data to measure program impact, which is also imperative for continuous improvement. Qualitative comments indicated that data collection was most often in the form of usage statistics (e.g., how many people attended the webinar) or employee satisfaction (e.g., participant ratings following training). Thus, there appears to be a data gap around behaviour changes or impacts on mental health. Because of this, most organizations lack any understanding of whether an initiative they are investing time and resources in is having a meaningful impact on employees’ workplace mental health or whether they have the data necessary to facilitate the Check and Act of the PDCA continuous improvement framework.

Organizations that do not begin projects with a PDCA approach may be more at risk of engaging in short-term, one-off initiatives (e.g., random acts of wellness such as offering leaders three hours’ training in mental health). Without adopting a PDCA approach, it will be challenging to determine if current initiatives foster and sustain a psychologically healthy and safe workplace. This concern was raised repeatedly in the comments about the need for resources to be long-term and worry about whether psychological health and safety initiatives would continue past the pandemic.

Boxes 1.0 and 2.0 provide an overview of how a PDCA can facilitate a systematic way to implement psychological health and safety in the workplace.

PDCA Model

The PDCA is a model for continuous improvement that offers a systematic way to deliver initiatives and evaluate their effectiveness [85]. A PDCA model highlights the need for continual improvement in Plan, Do, Check, and Act. That is, organizations should be (P) planning the implementation of an initiative, (D) initiating the initiative, (C) checking or evaluating the impact of the initiative, and then (A) making intentional adjustments with new information collected with the end goal of improving the initiative’s impact. For example, a PDCA model addresses the importance of evaluation and corrective action and may provide a helpful framework for monitoring psychological health and safety initiatives and evaluating and continually improving them.

Levels of Evaluation

Data collection can be qualitative, quantitative, or mixed methods and is used to meet the goals of the PHSMS and decision-making. To effectively evaluate initiatives, employers need to specify the purpose of their evaluation (e.g., consider what the organization expects

to change with the program) and consider evaluating the program at multiple levels (e.g., have numerous methods for assessing potential impacts of the program) [86]. There are different levels and degrees of evaluation. For example, Kirkpatrick's hierarchical levels of evaluation (1994) are well known for evaluating a program's usefulness and impacts [86]. These four levels are: Level 1: Participant reactions (e.g., subjective impressions of the value of the initiative); Level 2: Learning (e.g., the learners' perceptions of the value of the program and usefulness); Level 3: Factors or skills behaviours (e.g., the degree of evidence the initiative has changed or improved workplace behaviour); and Level 4: Results (e.g., degree of evidence the initiative has had a direct impact on a targeted outcome, such as reducing the number of sick days or mental health claims). Without effective program/initiative evaluation, employers are at greater risk of spending enormous amounts of time, effort, resources, and money without knowing if the initiative is doing what it is supposed to be doing. This is one reason why employers are advised to build program evaluation into their program implementation design. It allows for a framework for continually and systematically evaluating impact and desired ROI.

6.6 Recommendations for Changes and Improvements for CAN/CSA-Z1003

6.6.1 Increase Awareness of the Value of CAN/CSA-Z1003

A significant percentage of respondents indicated using the CAN/CSA-Z1003 to guide psychological health and safety in the workplace in some way. Many others (30%) were unaware of the Standard, and 20% indicated they were aware of but not using it. This suggests a need for more education on how the CAN/CSA-Z1003 can help reduce mental harm and promote employee mental health.

6.6.2 Early Detection of Psychosocial Factors and Hazards

The CAN/CSA-Z1003 provides guidance on the importance of mitigating risk and early detection of many of the psychosocial factors and hazards raised by respondents. However, employers may benefit from additional advice on early detection and evidence-based protective factors. It also appears that organizations reported more progress on identifying psychosocial factors than on the early detection of psychosocial hazards. Because of this, some organizations focused more on assessing what employees were perceiving (e.g., high work demand) than understanding what impact work demand was having on their mental health and what programs or policies were working to mitigate it.

This data set indicates that users of a future CAN/CSA-Z1003 version (i.e., 2023) may benefit from new guidance on supporting employee workplace mental health in the face of a rapid, global workplace upset such as the COVID-19 pandemic. Issues that might have been more sporadic may be present in a higher percentage of the working population because of the pandemic (e.g., COVID burnout, remote work, isolation/loneliness, and trauma "*Trauma from the effect of working with clients that are in crisis due to COVID-19*"). Organizations may benefit from revisions to CAN/CSA-Z1003 that provide explicit examples and understanding of the psychosocial factors that an organization can address to mitigate common pandemic-related hazards. These examples may also provide guidance for organizations when faced with workplace events that cause rapid and significant change to how people work and increase uncertainty (e.g., layoffs or mergers) beyond the pandemic.

Many changes such as remote work brought about by the pandemic are likely to be common aspects of the workplace. Organizations may benefit from revisions to the CAN/CSA-Z1003 that provide explicit examples and understanding of the factors and hazards in a hybrid workforce while considering inclusion as a critical factor for psychological health and safety in the workplace. For example, biases in the perception of effort may emerge between those working on-site vs. those working remotely [87]–[89]. Because data



"Many changes such as remote work brought about by the pandemic are likely to be common aspects of the workplace."

suggests that minorities, women, and people of colour are more likely to choose to work remotely [90], [91], these biases may further undermine equity in the workplace [92] and increase psychosocial factors such as bullying and harassment [93]. CAN/CSA-Z1003 can help serve an essential function in the future workplace by addressing these challenges that have become more prevalent because of the pandemic. Employers may also be wise to closely monitor the psychosocial factor of isolation that has gained attention because of COVID-19 because it can increase the risk of loneliness and mental harms in employees working remotely [79].

6.6.3 Assessment Education and Competencies

Organizations may benefit from additional education on data collection or assessments designed to facilitate continuous improvement and program evaluation. These assessments tools should collect relevant data such as employees' perceptions of psychosocial factors and hazards as well as workplace mental health program/policy participation and perceived value of these programs/policies. These tools should also collect data on perceptions of direct leaders' ability to be psychologically safe and measures of employees' resiliency (e.g., mental fitness behaviours practiced). An updated CAN/CSA-Z1003 could provide an opportunity to promote workplace assessment tools beyond Mind Garden [94], such as the Copenhagen Psychosocial Questionnaire [95], and the Mental Fitness Index (MFI) [96]. The MFI has been recently recognized and supported by the Mental Health Commission of Canada

through participation in the Psychologically Safe Workplace Awards as an accessible, validated workplace mental health assessment that provides meaningful insights into employers and employees [97].

An updated version could also provide guidance on the core competencies required for the end-user to understand and leverage the CAN/CSA-Z1003. Some current initiatives in the marketplace are designed to assist employees assigned to supporting workplace mental health. One example is being led by the Alberta Municipality Health and Safety Association that is developing a Psychological Safe Workplace Specialist Certification [98]. Other programs are the CMHA Certified Psychological Health and Safety Advisor Training [99] and Howatt HR Psychological Health and Safety Champion Training [100].

6.6.4 Program Evaluation

This study indicates that employers need additional support around data collection, continuous improvement, and program evaluation. One takeaway is the need to educate more organizations on the benefits of and procedure to implement a PDCA framework. It appears that many organizations are selecting programs/policies (P) and implementing (D) programs/policies without program evaluation (C) or a plan for continuous improvement and corrective action (A). This practice often leaves a gap in understanding how effective any policy or program is and if it is doing what it was implemented for.

Organizations may benefit more from their investment dollars by engaging in evidence-based practices that require collecting the correct data and completing Level 4 program evaluations (see Box: Levels of Evaluation). These initiatives would enable them to understand better how or if their workplace mental health programs and policies are lowering mental health disability management costs, increasing workplace civility, increasing retention and attraction, decreasing sick time and turnover, and increasing organizational productivity. Moving beyond usage statistics and satisfaction statistics is critical. Examples include program evaluations published by leaders like Jack Phillips ROI Institute that leverage evidence-based program evaluation methods [101]. Thus, there appears to be value in exploring making the PDCA model of continuous improvement be more accessible to reduce perceived knowledge gaps around implementing or leveraging the CAN/CSA-Z1003.

6.7 Limitations and Future Directions

Approximately 30% of the respondents in this study reported not being aware of CAN/CSA Z1003. However, this is not likely to be representative of the complete Canadian employer base. Due to the snowball sampling used, the respondents are more likely to be familiar with CAN/CSA-Z1003. Selection bias likely also played a role in which potential respondents who were not aware of CAN/CSA-Z1003 may have been less likely to complete the survey. Thus, the rate of awareness of CAN/CSA-Z1003 is likely to be lower than found in this survey.

The current study was initiated during the early stages of the pandemic, therefore psychosocial risk factors such as physical protection (e.g., access to adequate PPE) were significant themes. As the pandemic progressed, newer issues emerged, particularly concerning vaccine mandates for employees and for access to non-essential community activities, such as indoor dining. Frustration with these rules was sometimes directed to health care workers through anti-vaccine mandate protests at hospital settings [102]–[104]. Although there is little formal research on the topic, this undoubtedly added to the stress

on health care workers [105]. This survey was closed before these issues became dominant in the pandemic and therefore may have missed other significant stressors for health care workers that emerged at later stages of the pandemic.

This study focused on employer perspectives. Respondents were individuals “who play an active role in the organization’s mental health strategy or psychological health and safety management system” such as Human Resources or Occupational Health and Safety professional, JOHS Committee, and/or Workplace Mental Health Committee. As such, this study did not provide the employees’ perspective. It is essential to understand the employees’ perspectives on the major psychosocial factors and hazards, and their awareness of available programs and their impact. Comments from respondents in this survey highlight that some initiatives lacked employee consultation and therefore comparing employee perspectives to the employer perspectives obtained in this study would provide additional insights. Identifying discrepancies between employee and employer perceptions may provide critical information for creating more psychological health and safety in the workplace.

This study did not allow for a closer examination of how employers managed inclusion, or for specific populations hit harder by the pandemic, such as women, people of colour, and other vulnerable or marginalized communities (e.g., immigrants). Additional studies would benefit from examining workers’ experience through an inclusion lens to understand better how psychosocial factors and hazards have impacted employee experiences during COVID-19.

6.8 Conclusion

The pandemic has increased recognition that psychological health and safety is for everyone and benefits all employees and employers. It is critical for organizations to be intentional about investing and fostering psychological health and safety in the workplace. This includes addressing psychological health and safety in a systematic way using a standardized approach such as provided in

CAN/CSA-Z1003, and using an OHS management system to track impact. Investing in psychological health and safety includes both reducing mental harm and promoting employee mental health, which involves offering programs after mental health problems have emerged but also includes creating workplace environments that promote mental health well-being for all employees. Engaging employees and respecting diversity are necessary ingredients toward psychological health and safety in the workplace. When implementing workplace mental

health programs, employers are advised to not only invest dollars, resources, and time in (P) and (D) but to also engage in the (C) and (A) to help ensure programs and policies are having the intended impact. Finally, although recognition of the importance of psychological health and safety in the workplace has increased in the pandemic, there must be long-term investment even once the crisis of the pandemic recedes to bolster psychological health and safety of employees in the workplace, as well as to mitigate against adverse effects in the face of future crises.

References

- [1] *Psychological Health and Safety in the Workplace*, CAN/CSA-Z1003-13/BNQ 9700-803/2013, Canadian Standards Association, Toronto, ON, Canada, 2013.
- [2] Mental Health Commission Canada, "Making the case for investing in mental health in Canada," 2016. [Online]. Available: https://www.mentalhealthcommission.ca/wp-content/uploads/drupal/2016-06/Investing_in_Mental_Health_FINAL_Version_ENG.pdf
- [3] K.-L. Lim, P. Jacobs, A. Ohinmaa, D. Schopflocher, and C. S. Dewa, "A new population-based measure of the economic burden of mental illness in Canada," *Chronic Dis Can*, vol. 28, no. 3, pp. 92-98, 2008.
- [4] Institute for Health Metrics and Evaluation. "GBD Compare." Institute for Health Metrics and Evaluation. <https://www.healthdata.org/data-visualization/gbd-compare> (accessed Dec. 7, 2021).
- [5] C. J. L. Murray et al., "Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990-2010: A systematic analysis for the Global Burden of Disease Study 2010," *The Lancet*, vol. 380, no. 9859, pp. 2197-2223, Dec. 2012, [https://doi.org/10.1016/S0140-6736\(12\)61689-4](https://doi.org/10.1016/S0140-6736(12)61689-4).
- [6] WHO, "Global burden of mental disorders and the need for a comprehensive, coordinated response from health and social sectors at the country level," World Health Organization, Geneva, Switzerland, EB 130/9, Dec. 1, 2011. [Online]. Available: https://apps.who.int/gb/ebwha/pdf_files/EB130/B130_9-en.pdf
- [7] R. G. Palpant, R. Steimnitz, T. H. Bornemann, and K. Hawkins, "The Carter Center Mental Health Program: Addressing the public health crisis in the field of mental health through policy change and stigma reduction," *Prev Chronic Dis*, vol. 3, no. 2, p. A62, Mar. 2006.
- [8] F. Mawani and H. Gilmour, "Validation of self-rated mental health," *Health reports / Statistics Canada, Canadian Centre for Health Information = Rapports sur la santé / Statistique Canada, Centre canadien d'information sur la santé*, vol. 21, pp. 61-75, Sep. 2010.
- [9] C. Waddell, K. McEwan, C. A. Shepherd, D. R. Offord, and J. M. Hua, "A public health strategy to improve the mental health of Canadian children," *Can J Psychiatry*, vol. 50, no. 4, pp. 226-233, Mar. 2005, <https://doi.org/10.1177/070674370505000406>.
- [10] The Lancet, "The health crisis of mental health stigma," *Lancet*, vol. 387, no. 10023, p. 1027, Mar. 2016, [https://doi.org/10.1016/S0140-6736\(16\)00687-5](https://doi.org/10.1016/S0140-6736(16)00687-5).
- [11] S. B. Patten, C. A. Beck, A. Kassam, J. V. A. Williams, C. Barbui, and L. M. Metz, "Long-term medical conditions and major depression: strength of association for specific conditions in the general population," *Can J Psychiatry*, vol. 50, no. 4, pp. 195-202, Mar. 2005, <https://journals.sagepub.com/doi/10.1177/070674370505000402>.
- [12] E. Diener et al., "New well-being measures: short scales to assess flourishing and positive and negative feelings," *Soc Indic Res*, vol. 97, no. 2, pp. 143-156, Jun. 2010, <https://doi.org/10.1007/s11205-009-9493-y>.
- [13] L. C. Hone, A. Jarden, S. Duncan, and G. M. Schofield, "Flourishing in New Zealand workers: associations with lifestyle behaviors, physical health, psychosocial, and work-related indicators," *Journal of Occupational and Environmental Medicine*, vol. 57, no. 9, pp. 973-983, Sep. 2015, https://journals.lww.com/joem/Abstract/2015/09000/Flourishing_in_New_Zealand_Workers_Associations.7.aspx.

- [14] K. Redelinghuys, S. Rothmann, and E. Botha, "Flourishing-at-work: The role of positive organizational practices," *Psychol Rep*, vol. 122, no. 2, pp. 609-631, Apr. 2019, <https://journals.sagepub.com/doi/10.1177/0033294118757935>.
- [15] Mental Health Commission Canada. "National Standard." Mental Health Commission of Canada. <https://mentalhealthcommission.ca/national-standard/> (accessed Dec. 7, 2021).
- [16] CSA, "Personal communication between research team and CSA Group," 2021.
- [17] A. M. O. Agba, S. I. Ocheni, and M. S. Agba, "COVID-19 and the world of work dynamics: A critical review," *JESR*, vol. 10, no. 5, p. 119, Sep. 2020, <https://doi.org/10.36941/jesr-2020-0093>.
- [18] The Conference Board of Canada, "How has COVID-19 impacted Canadians' mental health?," *The Conference Board of Canada*, 2020. <https://www.conferenceboard.ca/focus-areas/health/how-has-covid-19-impacted-canadians-mental-health> (accessed Dec. 07, 2021).
- [19] CLHIA, "Canadian Life & Health Insurance Facts," CLHIA, 2021. [Online]. Available: [https://www.clhia.ca/web/CLHIA_LP4W_LND_Webstation.nsf/resources/Factbook_2/\\$file/2021+FACT+BOOK+EN.pdf](https://www.clhia.ca/web/CLHIA_LP4W_LND_Webstation.nsf/resources/Factbook_2/$file/2021+FACT+BOOK+EN.pdf)
- [20] K. Rolfe, "'A pandemic after the pandemic': Insurers brace for disability claims 'deluge' from mental, physical strain of crisis," *Financial Post*, 2021. [Online]. Available: <https://financialpost.com/fp-work/a-pandemic-after-the-pandemic-insurers-brace-for-disability-claims-deluge-from-mental-physical-strain-of-crisis>
- [21] L. K. Harju, J. Rokka, M. M. Lopes, M. Airolidi, and K. Raies, "Employee well-being profiles during COVID-19 lockdown: A latent profile analysis of French and UK employees," *Frontiers in Psychology*, vol. 12, p. 2181, 2021, <https://doi.org/10.3389/fpsyg.2021.645300>.
- [22] M. Bassi, L. Negri, A. Delle Fave, and R. Accardi, "The relationship between post-traumatic stress and positive mental health symptoms among health workers during COVID-19 pandemic in Lombardy, Italy," *J Affect Disord*, vol. 280, no. Pt B, pp. 1-6, Feb. 2021, <https://doi.org/10.1016/j.jad.2020.11.065>.
- [23] A. Newman, R. Donohue, and N. Eva, "Psychological safety: A systematic review of the literature," *Human Resource Management Review*, vol. 27, no. 3, pp. 521-535, Sep. 2017, <https://www.sciencedirect.com/science/article/abs/pii/S1053482217300013?via%3Dihub>.
- [24] N. S. Schutte and N. Loi, "Connections between emotional intelligence and workplace flourishing," *Personality and Individual Differences*, vol. 66, pp. 134-139, Aug. 2014, <https://www.sciencedirect.com/science/article/abs/pii/S0191886914001998?via%3Dihub>.
- [25] T. Lesuffleur, J. Chastang, N. Sandret, and I. Niedhammer, "Psychosocial factors at work and sickness absence: Results from the French National SUMER Survey," *American Journal of Industrial Medicine*, vol. 57, Jun. 2014, <https://doi.org/10.1002/ajim.22317>.
- [26] M. Murcia, J.-F. Chastang, and I. Niedhammer, "Psychosocial work factors, major depressive and generalised anxiety disorders: Results from the French national SIP study," *Journal of affective disorders*, vol. 146, Oct. 2012, <https://doi.org/10.1016/j.jad.2012.09.014>.
- [27] H.-C. Liu and Y. Cheng, "Psychosocial work hazards, self-rated health and burnout: A comparison study of public and private sector employees," *J Occup Environ Med*, vol. 60, no. 4, pp. e193-e198, Apr. 2018, <https://doi.org/10.1097/JOM.0000000000001233>.

- [28] J. Foster and B. Barnettson, *Health and Safety in Canadian Workplaces*. 2016. <https://www.aupress.ca/books/120259-health-and-safety-in-canadian-workplaces/>.
- [29] D. Baud, X. Qi, K. Nielsen-Saines, D. Musso, L. Pomar, and G. Favre, "Real estimates of mortality following COVID-19 infection," *Lancet Infect Dis*, vol. 20, no. 7, p. 773, Jul. 2020, [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30195-X/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30195-X/fulltext).
- [30] C. Bulut and Y. Kato, "Epidemiology of COVID-19," *Turkish Journal of Medical Sciences*, vol. 50, pp. 563-570, 2020, <https://doi.org/https://doi.org/10.3906/sag-2004-172>.
- [31] The Lancet, "COVID-19: protecting health-care workers," *The Lancet*, vol. 395, no. 10228, p. 922, Mar. 2020, [https://doi.org/10.1016/S0140-6736\(20\)30644-9](https://doi.org/10.1016/S0140-6736(20)30644-9).
- [32] D. Hu et al., "Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study," *EClinicalMedicine*, vol. 24, p. 100424, Jul. 2020, <https://doi.org/10.1016/j.eclinm.2020.100424>.
- [33] Y.-T. Xiang et al., "Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed," *Lancet Psychiatry*, vol. 7, no. 3, pp. 228-229, Mar. 2020, [https://doi.org/10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8).
- [34] Q. Chen et al., "Mental health care for medical staff in China during the COVID-19 outbreak," *The Lancet Psychiatry*, vol. 7, no. 4, pp. e15-e16, Apr. 2020, [https://doi.org/10.1016/S2215-0366\(20\)30078-X](https://doi.org/10.1016/S2215-0366(20)30078-X).
- [35] T. Shanafelt, J. Ripp, and M. Trockel, "Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic," *JAMA*, vol. 323, no. 21, p. 2133, Jun. 2020, <https://doi.org/10.1001/jama.2020.5893>.
- [36] M. Denning et al., "Determinants of burnout and other aspects of psychological well-being in health care workers during the Covid-19 pandemic: A multinational cross-sectional Study," *medRxiv*, p. 2020.07.16.20155622, Jul. 2020, doi: 10.1101/2020.07.16.20155622.
- [37] M. El Haj et al., "Burnout of health care workers in acute care geriatric facilities during the COVID-19 crisis: An online-based study," *Journal of Alzheimer's Disease*, vol. 78, no. 2, pp. 847-852, Jan. 2020, <https://doi.org/10.3233/JAD-201029>.
- [38] L. A. Morgantini et al., "Factors contributing to health care professional burnout during the COVID-19 pandemic: A rapid turnaround global survey," *medRxiv*, May 2020, <https://doi.org/10.1101/2020.05.17.20101915>.
- [39] S. K. Brooks et al., "The psychological impact of quarantine and how to reduce it: rapid review of the evidence," *The Lancet*, vol. 395, no. 10227, pp. 912-920, Mar. 2020, [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8).
- [40] N. Galbraith, D. Boyda, D. McFeeters, and T. Hassan, "The mental health of doctors during the COVID-19 pandemic," *BJPsych Bulletin*, pp. 1-4, 2020, <https://doi.org/10.1192/bjb.2020.44>.
- [41] S. Dugani et al., "Prevalence and factors associated with burnout among frontline primary health care providers in low- and middle-income countries: A systematic review," *Gates Open Res*, vol. 2, p. 4, 2018, <https://doi.org/10.12688/gatesopenres.12779.3>.
- [42] H. Wang, Y. Jin, D. Wang, S. Zhao, X. Sang, and B. Yuan, "Job satisfaction, burnout, and turnover intention among primary care providers in rural China: results from structural equation modeling," *BMC Fam Pract*, vol. 21, no. 1, p. 12, Dec. 2020, <https://doi.org/10.1186/s12875-020-1083-8>.

- [43] M. P. Leiter and C. Maslach, "Nurse turnover: the mediating role of burnout," *Journal of Nursing Management*, vol. 17, no. 3, pp. 331-339, Apr. 2009, <https://doi.org/10.1111/j.1365-2834.2009.01004.x>.
- [44] C. S. Albott, J. R. Wozniak, B. P. McGlinch, M. H. Wall, B. S. Gold, and S. Vinogradov, "Battle buddies: rapid deployment of a psychological resilience intervention for health care workers during the COVID-19 pandemic," *Anesth Analg*, vol. 131, no. 1, pp. 43-54, Jul. 2020, https://journals.lww.com/anesthesia-analgesia/Fulltext/2020/07000/Battle_Buddies_Rapid_Deployment_of_a.9.aspx.
- [45] A. V. Ferry, R. Wereski, F. E. Strachan, and N. L. Mills, "Predictors of health care worker burnout during the COVID-19 pandemic," *medRxiv*, p. 2020.08.26.20182378, Sep. 2020, <http://medrxiv.org/lookup/doi/10.1101/2020.08.26.20182378>.
- [46] R. J. Jarden, M. Sandham, R. J. Siegert, and J. Koziol-McLain, "Strengthening workplace well-being: perceptions of intensive care nurses," *Nurs Crit Care*, vol. 24, no. 1, pp. 15-23, Jan. 2019, <https://doi.org/10.1111/nicc.12386>.
- [47] R. M. Rodriguez et al., "Academic emergency medicine physicians' anxiety levels, stressors, and potential stress mitigation measures during the acceleration phase of the COVID-19 pandemic," *Academic Emergency Medicine*, vol. 27, no. 8, pp. 700-707, 2020, <https://doi.org/10.1111/acem.14065>.
- [48] M. C. T. Dimitriu et al., "Burnout syndrome in Romanian medical residents in time of the COVID-19 pandemic," *Med Hypotheses*, vol. 144, p. 109972, Nov. 2020, <https://doi.org/10.1016/j.mehy.2020.109972>.
- [49] C. Mazza et al., "A nationwide survey of psychological distress among Italian people during the COVID-19 pandemic: Immediate psychological responses and associated factors," *International Journal of Environmental Research and Public Health*, vol. 17, no. 9, Art. no. 9, Jan. 2020, <https://www.mdpi.com/1660-4601/17/9/3165>.
- [50] N. Liu et al., "Prevalence and predictors of PTSS during COVID-19 outbreak in China hardest-hit areas: Gender differences matter," *Psychiatry Research*, vol. 287, p. 112921, May 2020, <https://www.sciencedirect.com/science/article/pii/S016517812030545X?via%3Dihub>.
- [51] S. Özdin and Ş. Bayrak Özdin, "Levels and predictors of anxiety, depression and health anxiety during COVID-19 pandemic in Turkish society: The importance of gender," *Int J Soc Psychiatry*, vol. 66, no. 5, pp. 504-511, Aug. 2020, <https://doi.org/10.1177/0020764020927051>.
- [52] K. M. Sønderskov, P. T. Dinesen, Z. I. Santini, and S. D. Østergaard, "The depressive state of Denmark during the COVID-19 pandemic," *Acta Neuropsychiatrica*, vol. 32, no. 4, pp. 226-228, Aug. 2020, <https://doi.org/10.1017/neu.2020.15>.
- [53] W. Tan et al., "Is returning to work during the COVID-19 pandemic stressful? A study on immediate mental health status and psychoneuroimmunity prevention measures of Chinese workforce," *Brain, Behavior, and Immunity*, vol. 87, pp. 84-92, Jul. 2020, <https://doi.org/10.1016/j.bbi.2020.04.055>.
- [54] C. Wang et al., "A longitudinal study on the mental health of general population during the COVID-19 epidemic in China," *Brain Behav Immun*, vol. 87, pp. 40-48, Jul. 2020, <https://doi.org/10.1016/j.bbi.2020.04.028>.
- [55] S. Zhu et al., "The immediate mental health impacts of the COVID-19 pandemic among people with or without quarantine managements," *Brain Behav Immun*, vol. 87, pp. 56-58, Jul. 2020, <https://www.sciencedirect.com/science/article/pii/S0889159120306012?via%3Dihub>.
- [56] W. Cao et al., "The psychological impact of the COVID-19 epidemic on college students in China," *Psychiatry Research*, vol. 287, p. 112934, May 2020, <https://doi.org/10.1016/j.psychres.2020.112934>.

- [57] J. Gao et al., "Mental health problems and social media exposure during COVID-19 outbreak," *PLOS ONE*, vol. 15, no. 4, p. e0231924, Apr. 2020, <https://doi.org/10.1371/journal.pone.0231924>.
- [58] D. Dozois, "Anxiety and depression in Canada during the COVID-19 pandemic: A national survey," *Canadian Psychology/Psychologie canadienne*, Aug. 2020, <https://doi.apa.org/fulltext/2020-63541-001.html>.
- [59] N. Sasaki, R. Kuroda, K. Tsuno, and N. Kawakami, "Workplace responses to COVID-19 associated with mental health and work performance of employees in Japan," *Jrnl of Occup Health*, vol. 62, no. 1, Jan. 2020, <https://onlinelibrary.wiley.com/doi/10.1002/1348-9585.12134>.
- [60] S. Y. S. Wong, K. O. Kwok, and F. K. L. Chan, "What can countries learn from Hong Kong's response to the COVID-19 pandemic?," *CMAJ*, vol. 192, no. 19, pp. E511-E515, May 2020, <http://www.cmaj.ca/lookup/doi/10.1503/cmaj.200563>.
- [61] G. Giorgi et al., "COVID-19-related mental health effects in the workplace: A narrative review," *IJERPH*, vol. 17, no. 21, p. 7857, Oct. 2020, <https://doi.org/10.3390/ijerph17217857>.
- [62] D. Bufquin, J.-Y. Park, R. M. Back, J. V. de Souza Meira, and S. K. Hight, "Employee work status, mental health, substance use, and career turnover intentions: An examination of restaurant employees during COVID-19," *International Journal of Hospitality Management*, vol. 93, p. 102764, Feb. 2021, <https://doi.org/10.1016/j.ijhm.2020.102764>.
- [63] P. M. Smith, J. Oudyk, G. Potter, and C. Mustard, "Labour market attachment, workplace infection control procedures and mental health: A cross-sectional survey of Canadian non-health care workers during the COVID-19 pandemic," *Annals of Work Exposures and Health*, vol. 65, no. 3, pp. 266-276, Apr. 2021, <https://doi.org/10.1093/annweh/wxaa119>.
- [64] M. Ruffolo et al., "Employment uncertainty and mental health during the COVID-19 pandemic initial social distancing implementation: A cross-national study," *Glob Soc Welf*, vol. 8, no. 2, pp. 141-150, Jun. 2021, <https://doi.org/10.1007/s40609-020-00201-4>.
- [65] L. Shi et al., "Prevalence of and risk factors associated with mental health symptoms among the general population in China during the coronavirus disease 2019 pandemic," *JAMA Network Open*, vol. 3, no. 7, p. e2014053, Jul. 2020, <https://doi.org/10.1001/jamanetworkopen.2020.14053>.
- [66] T. Liu, J. Meyerhoff, D. C. Mohr, L. H. Ungar, and K. P. Kording, "COVID-19 pandemic: every day feels like a weekday to most," *medRxiv*, p. 2020.05.11.20098228, May 2020, <http://medrxiv.org/lookup/doi/10.1101/2020.05.11.20098228>.
- [67] C. M. Van Der Feltz-Cornelis, D. Varley, V. L. Allgar, and E. de Beurs, "Workplace stress, presenteeism, absenteeism, and resilience amongst university staff and students in the COVID-19 lockdown," *Front. Psychiatry*, vol. 11, p. 588803, Nov. 2020, <https://doi.org/10.3389/fpsy.2020.588803>.
- [68] D. D. Dsouza, S. Quadros, Z. J. Hyderabadwala, and M. A. Mamun, "Aggregated COVID-19 suicide incidences in India: Fear of COVID-19 infection is the prominent causative factor," *Psychiatry Res*, vol. 290, p. 113145, Aug. 2020, <https://doi.org/10.1016/j.psychres.2020.113145>.
- [69] H. Bulińska-Stangrecka and A. Bagieńska, "The role of employee relations in shaping job satisfaction as an element promoting positive mental health at work in the era of COVID-19," *IJERPH*, vol. 18, no. 4, p. 1903, Feb. 2021, <https://doi.org/10.3390/ijerph18041903>.

- [70] T. Pacheco et al., "Job security and the promotion of workers' wellbeing in the midst of the COVID-19 pandemic: A study with Canadian workers one to two weeks after the initiation of social distancing measures," *Intnl. J. Wellbeing*, vol. 10, no. 3, pp. 58-76, Aug. 2020, <https://internationaljournalofwellbeing.org/index.php/ijow/article/view/1321/933>.
- [71] CBC News. "Pandemic threatens to wipe out decades of progress for working mothers | CBC News." CBC. <https://www.cbc.ca/news/business/women-employment-covid-economy-1.5685463> (accessed Dec. 7, 2021).
- [72] RBC Economics. "Pandemic threatens decades of women's labour force gains - RBC economics." RBC Thought Leadership. <https://thoughtleadership.rbc.com/pandemic-threatens-decades-of-womens-labour-force-gains/> (accessed Dec. 7, 2021).
- [73] D. B. G. Tai, I. G. Sia, C. A. Doubeni, and M. L. Wieland, "Disproportionate impact of COVID-19 on racial and ethnic minority groups in the United States: A 2021 update," *J Racial Ethn Health Disparities*, Oct. 2021, <https://doi.org/10.1007/s40615-021-01170-w>.
- [74] R. Chander et al., "Addressing the mental health concerns of migrant workers during the COVID-19 pandemic: An experiential account," *Int J Soc Psychiatry*, vol. 67, no. 7, pp. 826-829, Nov. 2021, <https://doi.org/10.1177/0020764020937736>.
- [75] R. Choudhari, "COVID 19 pandemic: Mental health challenges of internal migrant workers of India," *Asian J Psychiatr*, vol. 54, p. 102254, Dec. 2020, <https://doi.org/10.1016/j.ajp.2020.102254>.
- [76] D. Pettinicchio, M. Maroto, L. Chai, and M. Lukk, "Findings from an online survey on the mental health effects of COVID-19 on Canadians with disabilities and chronic health conditions," *Disability and Health Journal*, vol. 14, no. 3, p. 101085, Jul. 2021, <https://doi.org/10.1016/j.dhjo.2021.101085>.
- [77] World Economic Forum. "The pandemic has made mental wellness a public health must." World Economic Forum. <https://www.weforum.org/agenda/2021/07/pandemic-mental-health-wellness-self-care/> (accessed Dec. 07, 2021).
- [78] W. Cullen, G. Gulati, and B. D. Kelly, "Mental health in the COVID-19 pandemic," *QJM*, vol. 113, no. 5, pp. 311-312, May 2020, <https://doi.org/10.1093/qjmed/hcaa110>.
- [79] N. Beheshti. "Mental health awareness month continues: A silver lining of the pandemic," *Forbes*. <https://www.forbes.com/sites/nazbeheshti/2021/05/27/mental-health-awareness-month-continues-a-silver-lining-of-the-pandemic/> (accessed Dec. 7, 2021).
- [80] D. De Clercq and I. Belausteguigoitia, "Organizational commitment in Mexican small and medium-sized firms: The role of work status, organizational climate, and entrepreneurial orientation," *Journal of Small Business Management*, vol. 45, Aug. 2007, <https://doi.org/10.1111/j.1540-627X.2007.00223.x>.
- [81] C. Rathert, G. Ishqaidef, and D. May, "Improving work environments in health care: Test of a theoretical framework," *Health care management review*, vol. 34, pp. 334-43, Oct. 2009, <https://journals.lww.com/00004010-200910000-00006>.
- [82] VicHealth, "Creating healthy workplaces: early insights from VicHealth pilot projects," Victorian Health Promotion Foundation, P-115-W, June 2013. [Online]. Available: https://www.vichealth.vic.gov.au/-/media/ResourceCentre/PublicationsandResources/Economic-participation/CHWP-Early-Insight/CHW_Early_Insights_FULL.pdf?la=en&hash=9C81992C1AD93CE1A74869C4254983631C3BD71E

- [83] K. E. Gravley-Stack, "Achieving inclusive excellence: the role of change agents and institutional artifacts in diversifying institutions," Ph.D., North Dakota State University, United States — North Dakota. Accessed: Jan. 17, 2022. [Online]. Available: <https://www.proquest.com/docview/1648987999/abstract/82E8AFCB63C841EAPQ/1>
- *Should be cited as a dissertation. Format not available in the CSA reference guide.*
- [84] *Occupational health and safety management systems—Requirements with guidance for use*, ISO 45001:2018, ISO, Geneva, Switzerland, 2018.
- [85] R. Basu, *Implementing Quality: A Practical Guide to Tools and Techniques : Enabling the Power of Operational Excellence*. London, UK: Thomson Learning, 2004.
- [86] E. Salas, S. I. Tannenbaum, K. Kraiger, and K. A. Smith-Jentsch, "The science of training and development in organizations: What matters in practice," *Psychol Sci Public Interest*, vol. 13, no. 2, pp. 74-101, Jun. 2012, <https://doi.org/10.1177/1529100612436661>.
- [87] WSP. "How to tackle 'distance bias' when working from home | WSP." <https://www.wsp.com/en-GB/insights/how-to-tackle-distance-bias-when-working-from-home> (accessed Dec. 7, 2021).
- [88] D. Rock and K. Smith. "The Science of virtual work—and how it can make life easier for everyone." *Forbes*. <https://www.forbes.com/sites/davidrock/2020/03/17/the-science-of-virtual-work-and-how-it-can-make-life-easier-for-everyone/> (accessed Dec. 7, 2021).
- [89] H. G. Halvorson and D. Rock. "Beyond bias," *strategy+business*. <https://www.strategy-business.com/article/00345> (accessed Dec. 7, 2021).
- [90] K. Gurchiek. "Viewpoint on remote work depends on gender, ethnicity, industry." SHRM. <https://www.shrm.org/hr-today/news/hr-news/pages/viewpoint-on-remote-work-depends-on-gender-ethnicity-industry.aspx> (accessed Dec. 7, 2021).
- [91] M. Torres. "Office culture is so unwelcoming to black employees, they don't want to go back." *HuffPost*. https://www.huffpost.com/entry/black-workers-prefer-remote-work-racist-office_160c8f805e4b0f7e7ccf59fa1 (accessed Dec. 7, 2021).
- [92] P. Rajai. "How inequity is showing up in virtual work environments." *Culture Amp*. <https://www.cultureamp.com/blog/how-inequity-is-showing-up-in-virtual-work-environments> (accessed Dec. 7, 2021).
- [93] S. Bond. "Remote work is leading to more gender and racial harassment, say tech workers," *NPR*. <https://www.npr.org/2021/03/30/982449551/remote-work-is-leading-to-more-gender-and-racial-harassment-say-tech-workers>
- [94] Mind Garden. "Mind Garden." <https://www.mindgarden.com/> (accessed Jan. 17, 2022).
- [95] COPSOQ, "COPSOQ International Network." <https://www.copsoq-network.org/> (accessed Jan. 17, 2022).
- [96] Howatt. "Howatt White Papers," *HowattHR*. <https://www.howatthr.com/white-papers/> (accessed Jan. 17, 2022).
- [97] PSWA. "Psychologically Safe Workplace Awards – Psychologically Safe Workplace Awards." <https://www.psychologicallysafeworkplace.com/> (accessed Jan. 17, 2022).
- [98] PHSC. "Psychological Health and Safety Certification," Psychological Health and Safety Certification. <https://psychologicalhealthandsafetycertification.com/> (accessed Jan. 17, 2022).

- [99] CMHA. "Psychological Health & Safety Training," *CMHA National*. <https://cmha.ca/what-we-do/national-programs/workplace-mental-health/psychological-health-safety-advisor-training/> (accessed Jan. 17, 2022).
- [100] Howatt. "Psychologically Safe Leader Training," *HowattHR*. <https://www.howatthr.com/products-services/workplace-learning/learning-for-leaders/> (accessed Jan. 17, 2022).
- [101] ROI Institute Canada. "ROI Institute Canada | Phillips ROI Methodology Partner." ROI Institute Canada. <https://roiinstituteCanada.com/> (accessed Jan. 17, 2022).
- [102] A. Olivier. "Small group of nurses protests against mandatory vaccines outside Montreal hospital | *Globalnews.ca*." <https://globalnews.ca/news/8186681/nurses-protest-mandatory-vaccines-montreal-hospital/> (accessed Dec. 7, 2021).
- [103] C. Kury de Castillo. "Protesters in Calgary, Edmonton oppose mandatory vaccinations." *Global News*. <https://globalnews.ca/news/8184436/calgary-edmonton-anti-mandatory-vaccinations-rally/> (accessed Dec. 7, 2021).
- [104] J. Moon and I. Mak. "Dozens of protesters target Toronto hospital to protest vaccine mandates after 'silent vigil' in Queen's Park." *The Toronto Star*. <https://www.thestar.com/news/gta/2021/09/13/toronto-mayor-and-health-experts-call-for-safe-zones-as-protests-target-ontario-and-canadian-hospitals.html> (accessed Dec. 7, 2021).
- [105] K. Delamont. "'Like a smack in the face': anti-vaccine mandate group protests at QEII Health Sciences Centre." *CityNews Halifax*. <https://halifax.citynews.ca/local-news/like-a-smack-in-the-face-anti-vaccine-mandate-group-protests-at-qeii-health-sciences-centre-4328844> (accessed Dec. 7, 2021).

Appendix A – Survey Items

Organizational Demographics

What is your organization's business sector?

- Agriculture, forestry, fishing and hunting
- Associations, Labour & Member organizations
- Construction / Trades
- Education
- Engineering / Scientific / Technical Services
- Environmental
- Finance & Insurance
- Government / Judicial / Policing
- Health Care and social assistance
- I.T., Telecommunications, Information
- Management consulting services
- Manufacturing
- Media and cultural
- Mining / Oil & Gas
- Real Estate / Property Management
- Retail Trade
- Transportation / Logistics
- Utilities, power generations and transmission
- Wholesale Trade / Reseller
- Other (please specify)

What is your organization type?

- Private corporation
- Public corporation
- Federal Government
- Provincial Government
- Municipality
- NGO
- Non-profit

What is the size of your organization?

- Less than 150 employees
- 150 to 499 employees
- 500 to 999 employees
- 1,000 to 4,999 employees
- 5,000 to 9,999 employees
- 10,000 employees or more

In which province or territory does your organization primarily operate?

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon
- Outside of Canada

What best describes the community in which your organization mostly operates?

- Rural
- Urban

Does your organization include unionized employees?

- Yes
- No

National Standard

What best describes how you are using the National Standard to assist in addressing your first most important psychosocial factor?

- Not aware of the National Standard
- Not using the National Standard
- Using the National Standard as reference
- Adapting parts of the National Standard
- Adopting all aspects of the National Standard

Psychosocial Factors

Psychosocial factors, when not managed, can put employees' mental health at risk and negatively impact employees' mental health. (If you require a definition for each psychosocial factor [click here](#)).

What are the top two psychosocial factors your organization is concerned about during COVID-19?

First Most Important Factor:

- Civility and respect
- Clear leadership and expectations
- Engagement
- Growth and development
- Involvement and influence
- Organizational culture
- Protection of physical safety
- Psychological job demands (Psychological competencies and requirements)
- Psychological protection from violence, bullying, and harassment
- Psychological support
- Recognition and reward
- Work/life balance
- Workload management
- Cumulative exposure to critical or stressful events
- Isolation (working remotely)

To what degree do you believe your organization is taking action to mitigate or address your first most important psychosocial factor?

- Not sure
- Little to no action
- Planning stages only, nothing has been implemented yet
- We have a plan but are just getting started implementing it
- We have fully implemented a plan
- We have fully implemented a plan and have collected data showing it is having an impact

Second Most Important Factor:

[drop down menu of factors – same as above]

To what degree do you believe your organization is taking action to mitigate or address your second most important psychosocial factor?

- Not sure
- Little to no action
- Planning stages only, nothing has been implemented yet
- We have a plan but are just getting started implementing it
- We have fully implemented a plan
- We have fully implemented a plan and have collected data showing it is having an impact

If there are other psychosocial factors that your organization is concerned about but they were not mentioned in our listing, please specify.

Organizational practices, policies or programs

What kinds of practices, policies or programs has your organization put in place or already existed to support employees' psychological health and safety and/or to mitigate the negative impact of COVID-19 on employees' psychological health and safety?

For each listed item: Practices, policies or programs offered during COVID 19

- Adjusted flexible worktime policy
- Adopt or adapt the CSA psychological health and safety "Standard"
- Leaders trained in how to support employee at risk for mental health concerns in workplace.
- Adjusted sick time policy
- Adjusted work-from-home policy
- Buddy system (every employee was assigned a buddy)
- Digital mental health applications APPs
- Caregiver support (CSA B701: Carer-inclusive and accommodating organizations)
- Cognitive behavioural therapy (CBT)

- Regular communications (e.g., daily organizational huddles, email, intranet)
- Educational webinars on various topics (e.g., working remotely, loneliness)
- Employee and family assistance program (EFAP)
- Facilitate social connections (e.g., employee-manager and team check-ins, social activities)
- Leaders trained in how to be a psychological safe leader
- On-demand resources (e.g., Life Speak, other educational resources)
- Suicide prevention training for managers
- Paramedical psychological services
- Peer support program
- Promote local community resources (e.g., CMHA, suicide, domestic violence shelters, wellness together <https://ca.portal.gs/>)
- Pulse checks to monitor employees' experience
- Resiliency training
- Upgraded technology: stable and secure video conference platform
- Workplace survey designed to obtain employees' perceptions and mental health benchmark (e.g., Mental Fitness Index)

Have you offered this program/policy during COVID-19?

- Yes
- No

If yes: What was the primary intention for offering this program / policy during COVID-19?

- Prevention
- Intervention
- Both
- Unsure

If yes: What data do you primarily collect to track the impact of this program / policy during COVID-19?

- Employee Survey
- Audit
- One-on-one interview
- Program evaluation
- Focus groups
- Health Risk Assessments (HRA) data
- Short-term or Long-term Disability
- Complaints / Grievances
- Not currently collecting data

CSA Group Research

In order to encourage the use of consensus-based standards solutions to promote safety and encourage innovation, CSA Group supports and conducts research in areas that address new or emerging industries, as well as topics and issues that impact a broad base of current and potential stakeholders. The output of our research programs will support the development of future standards solutions, provide interim guidance to industries on the development and adoption of new technologies, and help to demonstrate our on-going commitment to building a better, safer, more sustainable world.