

MENTAL HEALTH LITERACY: A REVIEW OF APPLICATIONS AND EFFECTIVENESS
IN THE HIGHER EDUCATION WORKPLACE

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Abstract

A growing body of international evidence indicates that education, prevention efforts and early intervention are critical to the mental health of our populations. These efforts are taking place across social systems and within organizational structures including public health, educational institutions and workplaces.

Purpose: To review current literature in an effort to identify themes related to successful workplace-based mental health literacy (MHL) programs, specifically in the area of higher education. The purpose was also to use a UBC case study to highlight potential connections between existing evidence and higher education applications.

Method: The bodies of literature consulted for the review were reflective of the unique interplay between the concept (MHL), context (workplaces) and setting (higher education) of this project. The supporting case study synthesizes the training outcomes of staff and faculty participants in two mental health literacy (MHL) education programs, and outlines the results of post-training surveys designed to measure MHL measures collected from 191 training participants.

Findings: The project identified multiple sets of promising practices in areas of effective workplace health promotion, successful mental health literacy applications, and higher education workplace interventions. It also revealed a gap in current research examining MHL outcomes within higher education workplaces. The UBC case study results aim to close this gap by demonstrating the value and effectiveness of Mental Health First Aid and The Working Mind in increasing MHL of staff and faculty.

Next steps: The aim of this paper is to grow the emerging research in this area as well as support the current MHL training efforts within UBC's department of Human Resources.

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Introduction

A growing body of international evidence indicates that education, prevention efforts, and early intervention, are critical to the mental health of our citizens. While many definitions of mental health (MH) exist, in Canada and at UBC, it is understood as the capacity to feel, think, and act in ways that enhance one's ability to enjoy life and deal with challenges (Public Health Agency of Canada, 2014). While good MH is associated with happiness, enjoyment of life, confidence, self-esteem, and work satisfaction, declining MH or prolonged mental illness can result in addiction, disability, decreased life expectancy and death (CAMH, 2019; Rodger, Hibbert, Leschied, Pickel, & Atkins, 2014). Due to a lack of widespread education and pervasive social and structural stigma, many people living with mental illness will not disclose their situation and will not seek help (Andrade et al., 2014; CAMH, 2019; Moll, VandenBussche, et al., 2018). In an effort to support the 1 in 5 Canadians who experience a mental illness in a given year (CAMH, 2019), as well as those working to maintain their mental health, education efforts are taking place across social systems and within organizational structures including public health organizations, educational institutions and workplaces (Mental Health Commission of Canada, 2018e; Public Health Agency of Canada, 2014; Rodger et al., 2014). With a larger portion of Canadians being of working age, it can be assumed that the negative impacts of poor mental health or mental illness would be felt within workplaces as well.

As a health promotion specialist in Human Resources (HR) at the University of British Columbia (UBC), I have witnessed the significant role that workplaces can play in supporting, or detracting from, the health of employees. In an effort to align current UBC HR objectives with existing research, I undertook a literature review in early 2018 to learn about evidence-based practices that support and enhance mental health literacy (MHL) in professional settings (Massie,

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2018). Unfortunately, the results of this initial review yielded little consistent results, or existing supportive evidence, for MHL practices within the workplace. The literature review identified the following gaps in the research: an absence of validated or reliable impact analysis of MHL training in the workplace; sporadic or incomplete evidence to support the use of MHL components in workplace-based mental health training; and limited workplace research that identified, engaged or measured all four components of MHL. MHL is a concept that comes from the area of health literacy (Kutcher et al., 2016) and which has evolved over a number of years. The current Canadian definition describes MHL as the following: understanding how to obtain and maintain positive mental health; understanding mental disorders and their treatments; decreasing stigma related to mental disorders; and, enhancing help-seeking efficacy (Kutcher et al., 2016; Whitley & Gooderham, 2016; Whitley, Smith, & Vaillancourt, 2012). The review did identify two professional contexts (education and health care), in which MHL research exists and has yielded some emerging results. However, despite higher rates of study in these areas, the focus of these workplace programs was improved outcomes for the client base (be it students or patients), not for the employees. Beyond health care, the largest amount of literature that exists to support the use of MHL is in the area of K-12 student MH outcomes (Fortier, Lalonde, Venesoen, Legwegoh, & Short, 2017; Kutcher, Wei, McLuckie, & Bullock, 2013; McLuckie, Kutcher, Wei, & Weaver, 2014; Rodger et al., 2014; Wei, McGrath, Hayden, & Kutcher, 2016; Whitley et al., 2012). The primary focuses within this body of evidence are the perceived benefits of MHL training on student MH, as educators have been identified as uniquely positioned to support the early identification of mental health problems in students (Kutcher et al., 2013). While the evidence supports the value of trained educators as a means to improve student mental health (McLuckie et al., 2014), there is a consistent lack of acknowledgement or

evidence for the benefits of MHL on the wellbeing of teachers, or on the impact of this type of professional development within the workplace. (Massie, 2018). MHL, professional development, and the wellbeing of these employees appears to be a secondary and uninvestigated outcome.

The goal of this project was two-fold: 1) to examine the current evidence related to workplace MHL education in the context of higher education, and 2) to analyse the MHL outcomes of two workplace mental health training programs at UBC. The project attempts to fill the gaps identified in my previous findings, while also showcasing identified promising practices that UBC, as an employer, is currently using to enhance the MHL of its employees. It examines a number of concepts linked to MHL promotion, including workplace wellbeing, mental health in the workplace, the unique features of higher education workplaces, and the outcomes related to workplace MHL programs. The case study examines the MHL outcomes from the evaluation and analysis of two specific training programs currently being offered to employees at UBC, Mental Health First Aid and The Working Mind. It highlights potential connections between existing evidence and current higher education applications. I hope to use the results of the project to enhance my professional practice, MHL education efforts nationally, and to guide future MHL programming within UBC's unique workplace and the broader realm of higher education.

Workplaces as Sites of Health Promotion

Workplaces act as sites of personal and professional development where continuous growth and learning can not only benefit individuals and organizations, but the overall economic growth of a society (Lowe & Graves, 2016; P Ochoa, Lepeley, & Essens, 2019; World Health Organization, 2008). Workplace health promotion has long been championed internationally as

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a recognized method for embedding positive health behaviours into organizational cultures (Buck Consultants, 2014; Dickson-Swift, Fox, Marshall, Welch, & Willis, 2014; World Health Organization, 2008). According to a report by Buck Consultants (2014), the top ranked wellbeing programs globally incorporate paid leave or time off, as well as flexible work arrangements. In Canada, top priorities include building the overall health and wellbeing of the workforce and workplace culture, with a specific focus on physical, emotional, financial and social wellbeing (Willis Towers Watson, 2016, 2017). Workplaces are increasingly being viewed as spaces that support personal fulfillment and lifelong education, in addition to professional growth (Dickson-Swift et al., 2014). As such, workforces are pushing employers to innovate and deliver competitive benefits in order to attract and retain the best talent (Lowe & Graves, 2016). At the same time, stress rates among working Canadians are on the rise as one quarter of all workers are highly stressed, with work accounting for 62% of this stress (Statistics Canada 2017). In a report by Willis Towers Watson (2017), 85% of Canadian employers reported that stress was their top workplace issue. I argue that these factors are contributing to increased, and more intentional, development of programs that target absenteeism, productivity and employee engagement. The results have produced somewhat of an opposing phenomenon: high (and rising) levels of workplace stress, accompanied by the rapid expansion of workplace wellbeing programs (White, 2009; Willis Towers Watson, 2016, 2017).

Globally, workplaces have been identified as contributing factors to the overall health, engagement and life satisfaction of working-age populations (Dickson-Swift et al., 2014; Lowe & Graves, 2016; P Ochoa et al., 2019). These impacts can be positive in the form of increased engagement and productivity; higher retention rates; lower absenteeism; and increased work-life balance and overall health (Chu, Koh, Moy, & Müller-Riemenschneider, 2014; Lowe & Graves,

2016; P Ochoa et al., 2019; Willis Towers Watson, 2017). Conversely, when employees are negatively impacted by their workplaces, it leads to higher levels of depression and stress; increased discomfort and frustration; reduced psychological safety; and rising sick days and rates of absenteeism (Mental Health Commission of Canada, 2018b; P. Ochoa & Blanch, 2019; Willis Towers Watson, 2017). In an effort to mitigate these negative impacts, many workplaces have adopted or expanded their workplace health programs (Lowe & Graves, 2016; White, 2009; Willis Towers Watson, 2016). This has led to the emergence of promising practices in the field. The first promising practice identified is the promotion of physical exercise and health-related activities which have been found to reduce absenteeism and occupational stress, while increasing the overall health of employees. (Bhui, Dinos, Stansfeld, & White, 2012; Chu et al., 2014; Iqbal & Kokash, 2011). Practical examples of this include subsidised gym memberships, on-site fitness classes and paid time for team-based activities. The second promising practice is strategic manager development and increased leadership training, both of which have been identified as key factors for fostering positive coping strategies and healthy work environments (Bhui et al., 2012; Chu et al., 2014). The third promising practice is increased opportunities for social time at work, including teambuilding activities among colleagues. Fostering social connections has been shown to reduce occupational stress and burnout, and to improve job satisfaction rates and overall health (Griffie, Lueders, So, & Prideaux, 2014; Iqbal & Kokash, 2011).

As noted above, workplaces can produce significant positive and negative impacts on the mental health and psychological safety of employees. Many emerging programs aim to improve outcomes related to employee stress, work-life balance and depression (Buck Consultants, 2014) with workplaces playing a unique part in the promotion and dissemination of

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mental health information and education. Protective factors such as the provision of training and information, along with counselling support and mental health resources (Oakman, Macdonald, Bartram, Keegel, & Kinsman, 2018) have been shown to increase psychological capital, thereby augmenting the psychological wellbeing of employees (Avey, Luthans, Smith, & Palmer, 2010). Conversely, the absence of social support, lack of recognition and low job control have been identified as contributing factors to the development of mental illness amongst workers (Hilton et al., 2008; Lamontagne et al., 2014). I would suggest that workplaces have a responsibility to support and educate their workforce, not only to benefit individual mental health, but to also protect the wellbeing of the organizations themselves. Among the factors listed above, the literature identified three current drivers leading to organization-wide solutions to improve and maintain the mental health of employees: legal mandates, rising financial costs stemming from absenteeism and sick time, and increased demand for training. These factors are expanded upon below.

Legal Mandates

In many countries, there is a legal duty for employers to ensure the health and safety of their workforce (Institution of Occupational Safety and Health, 2018a). In British Columbia, this falls within the BC Human Rights Code and the Workers Compensation Act, specifically Bill 14. Through a 1997 decision by the BC Human Rights Tribunal (n.d.) employers have a legal duty to inquire as to whether changes in an employee's behaviour are related to a mental illness or mental disability. Effective compliance demands a certain level of knowledge and understanding related to MHL on the part of an employer. Inversely, Bill 14 enables employees to claim compensation for a mental injury or disorder stemming from workplace policies or conditions,

effectively requiring employers to mitigate potential psychological health risks through adequate policies, training and timely action (Province of British Columbia, n.d.).

Financial Bottom Lines

The Mental Health Commission of Canada (2018b) reports that mental health problems are costing the Canadian economy over \$50 billion annually, with over \$6 billion stemming from lost productivity as a result of absenteeism, presenteeism and turnover. I have observed that strategies to preventatively address mental health in the workplace are growing in popularity across the country as employers realise that it is in their best financial interest to support employee wellbeing.

Learning How to Respond

There continues to be a lack of understanding for how to best manage workplace mental health issues, including the support of employees with pre-existing conditions or poor mental health (Institution of Occupational Safety and Health, 2018a). As such, employees and managers lacking adequate mental health information and knowledge might be challenged in how to respond to colleagues in distress. Training and education can support shifts in thinking and attitude, thereby facilitating positive changes in behaviour and daily practice (Turney, 2003). There is evidence that workplace mental health education results in increased knowledge and help-seeking behaviour, as well as reduced stigma and perceived stress (Czabala, Charzyńska, & Mroziak, 2011; Moll, VandenBussche, et al., 2018; Nishiuchi, Tsutsumi, Takao, Mineyama, & Kawakami, 2007; Oakie, 2017). There is also strong evidence that supports the use of adult education as a tool for improving equity, and reducing disability related stigma in the workplace (Martin & Fisher, 2014; McLean, 2011). These findings suggest that both leaders within

organizations, and the organizations themselves play vital roles in the promotion of mental health within professional settings.

Workplace Mental Health Education

Ideally, by pursuing increased education, workplaces will start to see cultural shifts related to how mental health and mental illness are supported and addressed organizationally. Currently, Canadian statistics suggest that more education is needed as pervasive stigma continues to exist related to the professional capabilities of people with mental illnesses, and towards those who disclose a mental illness at work. According to a National Report Card on Health Care (2008), only 49% of Canadians would socialize with a colleague who has a mental illness and only 23% report that they would feel comfortable talking to their employer if they had a mental illness or were experiencing poor mental health. Similar to national statistics, according to UBC's Workplace Experience Survey, only 51% of staff and 38% of faculty feel comfortable raising issues about their MH with their supervisor or head (University of British Columbia, 2014). Despite these ongoing challenges related to stigma and barriers to support, promising evidence indicates that improvements are being achieved with 81% of Canadians reporting that they are more aware of mental health issues (as compared to five years ago) and 70% feeling that attitudes about mental health have improved (CAMH, 2019). At UBC 75% of staff and faculty feel supported with personal or family issues at work (University of British Columbia, 2014), and 91% are committed to contributing to an environment that supports mental health and wellbeing (University of British Columbia, 2017b). These statistics suggest positive shifts in MH education, attitudes and support that I believe can be attributed to a number of promising practices found within the literature. Key themes that emerged include: holistic and imbedded mental health programs that address both prevention and treatment (Institution of Occupational

Safety and Health, 2018a; Willis Towers Watson, 2017); awareness and acknowledgement of the impact of the workplace on psychological health (Mental Health Commission of Canada, 2013; Turney, 2003); robust and diverse learning opportunities with focuses on mental health literacy, equity and disability (Massie, 2018; McLean, 2011); effective management and leadership training (Institution of Occupational Safety and Health, 2018b; Kakuma et al., 2011; Mental Health Commission of Canada, 2013; Willis Towers Watson, 2016); and the development and promotion of informal support resources including peer-to-peer and colleague support (Jorm, 2012). Evidence specifically suggests that academic and administrative staff working in higher education could also benefit from increased training and education as this has been shown to benefit both their work life and personal wellbeing (Margrove, Gustowska, & Grove, 2014). The unique context of higher education workplaces is explored further below.

Unique Context: Features of Higher Education Workplaces

An examination of workplace mental health is further complicated when the workplace is situated within the context of a research-intensive university like UBC, due to the unique intersection of teaching, learning, research, service and people management. In my experience, universities are sites of constant regeneration characterized by changing environments, evolving cultures, and increasing complexity and demand. Institutions are administratively intensive and their ability to be effective is largely dependent on academic faculty and professional staff (Poalses & Bezuidenhout, 2018; Schulz, 2013). This effectiveness is centred around the experience of their clients. In the higher education workplace, students represent a long-term client-base that requires consistent and effective support to ensure ongoing satisfaction (van der Velden, 2012). A heavy reliance on worker productivity, combined with the decentralized and

deeply varied nature of these institutions, could be to blame for high levels of occupational stress among post-secondary faculty and staff (Iqbal & Kokash, 2011; Jiang, Du, & Dong, 2017; Margrove et al., 2014; Poalses & Bezuidenhout, 2018). When paired with factors like student interactions, evolving professional practices, and workplace competition, unique settings-based challenges emerged that contribute to rising rates of workplace stress (Feltz, 2018; Poalses & Bezuidenhout, 2018; Schulz, 2013). Some of these unique factors are expanded upon below.

The Student Experience

High levels of mental distress are being reported globally amongst youth and post-secondary students (Mcluckie et al., 2014; Weare & Nind, 2011; Wei, Magimba, et al., 2016). Given the amount of contact that university faculty and staff have with students, they are viewed as well positioned to provide support in times of crisis or declining MH (Margrove et al., 2014). As such, higher education workforces are increasingly being relied on to support student mental health. For example, in a study by Margrove et al. (2014), 63% of university staff at two U.K. institutions reported they had previously provided psychological support to students in distress. This was despite the fact that over half reported that their roles did not involve regular contact with students. The study indicates that both academic and administrative staff are experiencing higher levels of stress in response to student distress, regardless of the amount of direct student contact they have. In the literature, training has been identified as one method for mitigating this stress (Iqbal & Kokash, 2011; Margrove et al., 2014). This appears to be particularly important as 70% of staff from the above study reported that they had never received the mental health training required to manage these growing professional demands, and 64% expressed a desire for additional training (Margrove et al., 2014).

The Changing Role of Academics

There is evidence in the literature that supports a significant shift in the roles of academic staff (faculty and instructors) within large and longstanding research-intensive universities (Tytherleigh, Webb, Cooper, & Ricketts, 2007). Traditionally, the roles of academics have comprised of teaching, research, and community engagement, accompanied by significant amounts of autonomy and flexibility (Schulz, 2013). Today, additional pressures and demands have been added to these roles, requiring academic staff to re-define their professional identity, which has been shown to impact mental health and overall wellbeing (Schulz, 2013). Within the literature, professional identity is comprised of job scope, reputation, responsibilities, values, and experiences (Iqbal & Kokash, 2011; James, 2017) that impact the quality of teaching and learning, motivation, decision making, and behaviour of the academic (Feltz, 2018; James, 2017; Naidoo, 2018). Challenges to existing professional identity also include rapid sociological advances, more precarious job environments, and competition. As Jiang (2017) indicates, the growing intensity of competition between post-secondary institutions is leading to greater job duties and more demands than ever before being placed on instructors. Many of the key themes in the literature that were attributed to shifts in professional identity, are the same, or similar, to factors previously discussed in relation to the context of higher education. These include, increased administrative work (Poalses & Bezuidenhout, 2018; Schulz, 2013); reduced or lack of autonomy (Schulz, 2013); growing job insecurity (Sun, Wu, & Wang, 2011; Tytherleigh et al., 2007); growing separation of research and teaching (Elen, Lindblom-Ylänne, & Clement, 2007); increased external accountability (government, funding agencies, private sector partnerships) (Elen et al., 2007; Schulz, 2013); rapidly changing technology, and a perceived lack of resources (Iqbal & Kokash, 2011; Poalses & Bezuidenhout, 2018; Schulz, 2013; Sun et al., 2011). All of

these elements ultimately impact overall wellbeing and productivity (Schulz, 2013) by way of increased occupational stress, higher burnout rates, job dissatisfaction, increased interpersonal conflict, and competition (Elen et al., 2007; Jiang et al., 2017; Naidoo, 2018; Poalses & Bezuidenhout, 2018; Schulz, 2013).

Competition

A “struggle for positional advantage in the global economy, the enhanced global mobility of corporate research and development, and the competition for highly skilled knowledge workers have all contributed to fierce competition” in higher education, along with an acceptance of this competition as a natural element of academia (Naidoo, 2018, p. 605). Within higher education, it appears that it is widely understood that competition should be expected.

According to Naidoo (2018), competition has the ability to enhance excellence, efficiency and equity, and produce feelings of power, pleasure and passion. In contrast, the evidence also suggests that competitive environments can produce extreme inequality resulting in power imbalances, and unhealthy levels of perfectionism resulting in psychological distress among academic workers (Jiang et al., 2017; Naidoo, 2018; Sun et al., 2011). I suspect that when competition is a persistent factor, not only within higher education but within higher education workplaces, that it could significantly impact the culture of the environment and those working within it.

Long-term Impacts

Long-term impacts of the unique characteristics found within higher education workplaces are significant and have led to a global rise in occupational stress among university employees (Poalses & Bezuidenhout, 2018). This increase in stress has resulted in significant impacts on burnout rates, effective coping, job satisfaction, wellbeing, and mental health (Feltz,

2018; Jiang et al., 2017; Poalses & Bezuidenhout, 2018). If left unaddressed or unmanaged, high levels of occupational stress can affect overall employee wellbeing, in addition to workplace productivity, innovation and work quality (Iqbal & Kokash, 2011, p.139). Within existing literature, there are calls for additional and expanded research into the wellbeing of university staff and faculty to better understand how this unique workplace is impacting the psychological health of its workforce (Feltz, 2018; Jiang et al., 2017; Margrove et al., 2014; Poalses & Bezuidenhout, 2018).

Mental Health Literacy: Workplace Implications

Improving mental health literacy (MHL) is an attempt to move beyond simple awareness of one's mental health, to a place of greater understanding and skill development related to maintaining mental health and effectively coping with challenges. MHL is widely recognized as a foundational element of mental health promotion, and of the prevention, early identification, and treatment of mental disorders (Kutcher et al., 2013; Mcluckie et al., 2014; Wei, McGrath, et al., 2016). MHL promotion can be achieved in many ways, including but not limited to: the dissemination of information and resources related to how to foster and maintain mental health (e.g. mindfulness training and self-care information); providing evidence-based training programs that explain mental disorders and their treatments (e.g. Mental Health First Aid and The Working Mind); endeavours to reduce social, structural and self-stigmas related to mental disorders (e.g. active bystander intervention and coaching); (Kutcher et al., 2016). Evidence suggests that successful application of MHL programs also requires that they be context specific (applicable within setting specific situations), developmentally appropriate (tailored to different levels of knowledge across a lifespan), and effectively integrated into existing social and

organizational structures (including schools and community organizations) (Kutcher et al., 2016).

In relation to the context of UBC, there are currently two MHL programs being offered to staff and faculty: Mental Health First Aid (MHFA) and The Working Mind (TWM). These accredited training programs, produced and administered by the Mental Health Commission of Canada (MHCC) (Mental Health Commission of Canada, 2018c, 2019a), are positioned as workplace-based MHL training programs. Each program will be discussed below in terms of history, content and training outcomes.

Mental Health First Aid

Mental health first aid is the assistance provided to someone with declining mental health or in the midst of a mental health crisis. Support is given until the person is connected with appropriate professional help or the crisis is resolved (Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010). MHFA training provides participants with an action plan that includes how to assess the risk of suicide or harm; how to listen non-judgmentally; how to provide reassurance and information; and how to encourage appropriate professional help or self-help strategies (Jorm et al., 2010). Participants who take this course become certified in MHFA and acquire the necessary knowledge, skills and resources to help individuals in crisis connect with professional, social, and self-help supports (Massey et al., 2014). Originally founded and developed in Australia, MHFA is now a licensed and recognized MHL training program in 14 countries (Massey et al., 2014). A growing body of promising research supports the effectiveness of MHFA as a tool for MHL. Studies have demonstrated that MHFA training positively impacts participants through improved mental health knowledge; reduced stigmatizing attitudes; changed beliefs about mental health treatments and treatment effectiveness; increased confidence in

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providing health support to others; improved mental health, and improved choices related to personal mental health care (Jorm et al., 2010; Kitchener & Jorm, 2004, 2006; Massey et al., 2014; Morgan, Ross, & Reavley, 2018; Narayanasamy, Geraghty, Coole, & Nouri, 2018).

The literature supports the effectiveness of MHFA within professional contexts, and suggests that the program is easily adapted to workplace settings and therefore could be widely applied in a range of organizational environments (Kitchener & Jorm, 2004; Massey et al., 2014). It appears to promote capacity-building within participating organizations (Massey et al., 2014), and trained employees have demonstrated greater confidence in providing help to others, an increased likelihood of encouraging others to seek professional help, an improved understanding of mental health treatments, decreased stigmatizing attitude, and overall improved mental health (Kitchener & Jorm, 2004, 2006; Massey et al., 2014; Moll, Patten, et al., 2018; Narayanasamy et al., 2018). However, this program has not yet been evaluated or applied within an academic workplace.

The Working Mind

The Working Mind is a workplace-based mental health training program, originally developed as an anti-stigma and resilience building program for the Canadian Department of National Defense, called Road to Mental Readiness (R2MR) (Carleton et al., 2018; The Mental Health Commission of Canada, 2017). Due to its success (Carleton et al., 2018), it was adapted in 2013 for a more general workplace audience with the goal of supporting employees to understand, identify and manage their mental health for optimal coping in the face of stress, trauma or adverse events (Mental Health Commission of Canada, 2018c). Historically, this type of program has been categorized as resilience-based training. While resilience has a multitude of definitions often dependent on context, in this case it is defined as a worker's "ability to adapt

and recover from stressful experiences” (Carleton et al., 2018, p. 511). Resilience-based training programs have demonstrated an ability to increase employee wellbeing, performance, and help seeking behaviours, while decreasing stress and stigma (Carleton et al., 2018). Since its development, many workplaces, including the Canadian parliament (Canada NewsWire, 2018), have begun to adopt this program as a means of increasing individual and organizational resilience. Recently, it was announced that The Working Mind program will be expanded internationally (Mental Health Commission of Canada, 2019b). Evidence to support the effectiveness of TWM is limited compared with MHFA (Carleton et al., 2018; Mental Health Commission of Canada, 2018a, 2018d), likely due to the fact that TWM is a much more recent program that has yet to be expanded to an international audience. Literature does exist to support the effectiveness of TWM at improving overall communication skills as they relate to MH awareness and understanding, while reducing stigma by correcting inaccurate perceptions about mental health and mental health treatments (Karaffa & Koch, 2016 as cited in Carleton et al., 2018). It has also been hypothesized that these outcomes might lead to increases in help seeking behaviour as people are more aware of their own behaviours and feel less fearful of reaching out for support (Carleton et al., 2018).

Currently, the only published literature related to the effectiveness of TWM pertains to the original R2MR training for first responders. Carleton et al. (2018), found small, but statistically significant reductions in stigma (post-training), and they speculate that this may have helped to promote help-seeking among participants. They also found that the training was helpful in changing attitudes related to mental health and in improving communication, all of which are intended learning outcomes of TWM training. However, the study reported a critical need for more published research on the topic. The Mental Health Commission of Canada

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(MHCC) has conducted a number of workplace case studies to further support the success of TWM training. In these cases, participants agreed that they learned new information related to mental health, mental illness and resilience (87%); that they would be able to apply the information in the workplace (96%); that the topics were important to their role (93%); and that the program increased their understanding and comfort with these topics in the workplace (84%) (Mental Health Commission of Canada, 2018a, 2018d).

While these two programs shed some initial light onto promising workplace outcomes, neither specifically address the setting of higher education. In a meta-analysis, Massey et al. (2014) reported that the majority of workplace MHFA studies have focused solely on one particular occupation or work setting, specifically high school teachers, first responders or medical professionals (nurses, medical residents, pharmacy students). Despite a lack of visibility for academic and administrative staff within the literature, the analysis does propose that post-secondary institutions represent promising sites of implementation due to their optimal positioning for supporting those with mental health challenges. It states that MHFA could be successfully applied in higher education settings as a method of increasing knowledge, enhancing sensitivity, and boosting the confidence of staff with regards to MH support of students. Like the evidence pertaining to MHL in higher education, most of the available MHFA literature is linked to better student outcomes rather than the wellbeing of staff and faculty, however Massey et al. (2014), did uncover an unanticipated outcome attributed to MHFA training: the enhanced wellbeing of employees as a result of their participation.

While it is heartening to see that research related to both MHFA and TWM is increasing, a number of challenges continue to persist related to these specific programs, as well as MHL education in general. While work is currently being conducted to assess the effectiveness of

existing MHL measurement scales there continues to be a lack of understanding for how to adequately assess impact (Kutcher et al., 2016), along with a lack of widely validated assessment tools (O'Connor & Casey, 2015; O'Connor, Casey, & Clough, 2014; Wei, McGrath, Hayden, & Kutcher, 2017, 2018; Wei, McGrath, et al., 2016). Wei et al. (2017, 2018) have begun to look into the quality of MHL measurement tools for evaluating stigma and help-seeking, but stop short of making any formal recommendations. A research team in Australia conducted a review of MHL measurement scales and upon discovering a gap, created the first scale-based tool to assess all components of MHL (O'Connor & Casey, 2015; O'Connor et al., 2014). Despite some promising headway in this area, there continues to be a lack of consensus, and consistency, in use of MHL evaluation tools, along with an inability to generalize findings to larger or more diverse populations. Similarly, while many organizations have introduced MHFA training, few are measuring its impact and success (Narayanasamy et al., 2018). Similarly, few studies have been conducted that assess learning outcomes or sustained behaviour change over time (Moll, Patten, et al., 2018; Morgan et al., 2018). Some data does suggest that MHFA consistently produces impacts on understanding and attitude, however these results have not been tested over long periods of time to determine if they are maintained or translate into sustained behaviour change (Moll, Patten, et al., 2018). In their meta-analysis, Morgan et al. (2018) found that only two studies examined outcomes after 12 months, and that there is a lack of evidence to support the translation of changes in knowledge and attitudes into behaviour modifications (Moll, Patten, et al., 2018).

As noted earlier, context is an important component of training efficacy, and the academic context is a unique one. When educational programs are not customized according to a specific context, the effectiveness and success of the training can be jeopardized. Context

specificity and effective integration into organizational structures were both identified by Kutcher et al., (2016) as being instrumental to the successful application of MHL. Emerging evidence also identifies that policies, procedures, resources and workplace performance are areas of opportunity for customized training within workplaces (Moll, Patten, Stuart, MacDermid, & Kirsh, 2018). Neither MHFA nor TWM specifically address the context of higher education workplaces. In terms of MHFA, the research indicated that the program is limited by the fact that it is not designed or marketed as a professional development program but rather a community mental health course. The course description does not reference the workplace, or any context specific application which might lead workplaces, leaders and potential participants to perceive it as valuable and relevant. A lack of clarity and expectations of the role of staff within a workplace once trained in MHFA has also been shown to limit the success of the program (Narayanasamy et al., 2018). TWM, as noted earlier also has limited research, and none specific to higher education workplace settings.

Case Study: The University of British Columbia (UBC)

UBC Programs, Policies and Actions

Current UBC-wide health and wellbeing promotion efforts are being guided by a set of global, local and workplace frameworks. At a global level, UBC has adopted the *Okanagan Charter for Health Promoting Universities and Colleges*, which calls upon higher education institutions to embed wellbeing at all levels of campus life and culture (Canadian Health Promoting Universities and Colleges Network, 2015; UBC Wellbeing, n.d.). Locally, UBC has prioritized the wellbeing and sustainability of its people and places through the development and endorsement of a university-wide strategic plan, *Shaping UBC's Next Century*, and a new *Wellbeing Strategic Framework* (University of British Columbia, 2018b, 2019). Workplace

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specific efforts look to HR's *Focus on People Strategy*, as well as external sources such as the *National Standard for Psychological Health and Safety*, for guidance and best practices (Mental Health Commission of Canada, 2018b; University of British Columbia, 2018a).

UBC's current MHL focus came about both organically (through the evolution of professional practice), and intentionally (in acknowledgment of a growing body of research related to the effectiveness of MHL over MH awareness) (Global Newswire, 2018). Research partnerships within the Faculty of Education related to youth mental health introduced both the concept of MHL, and Dr. Stan Kutcher, to on-campus professionals (teenmentalhealth.org, 2019). A collective new direction in support of MHL was then agreed upon by health promotion practitioners within the HR and Student Services portfolios. Though many of UBC's workplace MH programs already targeted some MHL outcomes, this more intentional direction has resulted in deliberate shifts to work from a common understanding of the components of MHL, and their desired outcomes.

Feedback gathered from staff and faculty through UBC's Workplace Experiences Survey (an evaluation tool for employee engagement) is also used to inform programs, policies and actions. UBC's most recent Workplace Experiences Survey (2017a) received a response rate of 40%, representing a 100% increase in participation since its inception in 2009, with a 1% margin of error with 95% confidence (University of British Columbia, 2017b). Based on the 2017 data, 94% of faculty and staff reported that they understand how they can contribute to a respectful workplace and 85% of feel they can make a positive impact at work. Additionally, 91% are committed to contributing to an environment that supports mental health and wellbeing. This aligns nicely with observations made through my role as a campus health promotion specialist. It appears that the values of the UBC workforce are supportive of the current direction that HR's

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Health, Wellbeing and Benefits unit (of which I am a member) is taking in its approach to MHL. MHL education programs are one component of a larger array of health promotion and prevention strategies currently being used to support thriving and productive individuals, and safe and supportive workplaces.

Methodology

UBC HR has offered MHFA training to employees since 2012. To date, over 400 staff and faculty have been trained and certified. There are currently four UBC staff members acting as accredited MHFA trainers and they deliver multiple trainings per year, including one specifically for faculty and instructors. TWM became available in early 2018 and to date 116 participants have been trained including 71 managers and supervisors. There is one UBC staff member certified to deliver TMW and it is currently being offered twice per year to managers and supervisors, twice per year to employees, and on an on-demand basis to departments and units. In an effort to further legitimize a MHL approach, HR began to evaluate both training programs in April 2018. A UBC specific evaluation tool (a 10-question paper-based survey using a 6-point Likert scale) was developed for a number of reasons: the previously mentioned lack of validated MHL measurement tools, the length of existing MHL measurement tools (many of which contain 35+ measures), and the desire to ensure relevance and alignment within UBC's unique workplace context. Survey questions were created using the four MHL components as learning outcomes (see Table 1 for mapping of these outcomes to questions). Surveys were administered immediately post-training by program facilitators in an effort to measure perceived knowledge, attitudes and future behaviours. While these surveys provide a descriptive snapshot immediately post-training, they do not control for, or account for, external conditions or potentially manipulated variables (Denscombe, 2014; Kelley, Clark, Brown, & Sitzia, 2003).

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The advantage to using surveys is that they provide a large enough sample to be representative of existing UBC populations, allowing the results to be generalized to across the workforce (Kelley et al., 2003). In addition, we are able to gather a large amount of data in a short period of time, with no added cost to the regular operating budget.

Between April 2018 and February 2019, all 213 participants in either MHFA or TWM programs were surveyed upon course completion (97 from MHFA and 116 from TWM). Out of 213 total participants, 191 responses were complete, for an overall response rate of 90% (93 from MHFA and 98 from TWM). The analysis below was conducted by the author of this review, a certified facilitator of both MHFA and TWM who is very familiar with the course design, content and materials.

Results

Table 1. Combined survey results for both training programs

Survey Questions	% that strongly agree/agree	MHL outcomes	Targeted measures
As a result of this training:			
I understand... Basic concepts and knowledge about mental illness and mental disorders.	99%	Understanding mental disorders and their treatments	Knowledge and understanding
I understand... The risk factors and causes of mental illness and mental disorders.	98%	Average: 99%	Average: 99%
I am confident... In my knowledge of available mental health resources, services and professional support.	76%	Understanding how to obtain and maintain positive mental health	Translating knowledge into action (application of skills for self and others)
I am confident... In my ability to seek out reliable mental health information.	90%	Average: 86%	Average: 90%
I am confident... In my knowledge of practical tips and information to support my own mental health or the mental health of others.	92%		
I am confident... In my willingness to seek out appropriate mental health resources, services and professional support.	94%	Enhancing help-seeking efficacy	
I am confident... In my willingness to direct others to appropriate mental health resources, services and professional support.	93%	Average: 93%	
If a friend, colleague or family member had a mental health problem, I know what information to provide for getting help and support.	91%		
I value... Engaging in conversations about mental health as a way of challenging mental health stigma.	98%	Decreasing stigma related to mental disorders	Attitudes 99%
I value... Building mental health literacy as a means to aid in the recognition, management and prevention of mental health challenges.	100%	Average: 99%	

Table 2: Comparison results for MHFA and TWM

Survey Question	% that strongly agree/agree	% that strongly agree/agree	+/-	+/-	MHL outcomes
	MHFA	TWM	MHFA	TWM	
I understand... Basic concepts and knowledge about mental illness and mental disorders.	100%	96%	+4%		Understanding mental disorders and their treatments
I understand... The risk factors and causes of mental illness and mental disorders.	97%	97%	=	=	
I am confident... In my knowledge of available mental health resources, services and professional support.	69%	84%		+15%	Understanding how to obtain and maintain positive mental health
I am confident... In my ability to seek out reliable mental health information.	86%	93%		+7%	
I am confident... In my knowledge of practical tips and information to support my own mental health or the mental health of others.	93%	91%	+2%		
I am confident... In my willingness to seek out appropriate mental health resources, services and professional support.	97%	90%	+7%		Enhancing help-seeking efficacy
I am confident... In my willingness to direct others to appropriate mental health resources, services and professional support.	88%	96%		+8%	
If a friend, colleague or family member had a mental health problem, I know what information to provide for getting help and support.	91%	90%	=	=	
I value... Engaging in conversations about mental health as a way of challenging mental health stigma.	97%	98%	=	=	Decreasing stigma related to mental disorders
I value... Building mental health literacy as a means to aid in the recognition, management and prevention of mental health challenges.	100%	99%	=	=	

= used for differential of 1 or <1

Analysis

Table 1 displays the overall survey outcomes as self-reported by program participants immediately after training. Based on the percentage of participants who agreed or strongly agreed that the training had an impact on their knowledge, behaviours and attitudes, it appears that both programs are effective tools for enhancing MHL. All four MHL outcomes received ratings of 85% or higher with ‘understanding mental disorders and their treatments’, and ‘decreasing stigma related to mental disorders’ rating 99%, ‘enhancing help-seeking efficacy’ rating 93% and ‘understanding how to obtain and maintain positive mental health’ rating 86%. Based on observations and knowledge of course content, I believe the slightly higher ratings for ‘understanding mental disorders and their treatments’, and ‘decreasing stigma related to mental disorders’ could possibly be attributed to the amount of time and attention given to these themes within the programs. Both MHFA and TWM focus a large portion of training content on the signs and symptoms of mental disorders and on understanding, identifying and challenging stigma. There is less time and focus within the trainings allotted to topics like self-care, general mental health maintenance and specific supportive resources. When examining the individual questions, it appears that both programs were most successful in increasing knowledge and in shifting values and attitudes. Participants reported the highest scores in response to their ‘understanding of basic concepts and knowledge about mental illness and mental disorders’ (99%) and their values related to ‘building mental health literacy as a means to aid in the recognition, management and prevention of mental health challenges’ (100%).

Overall at UBC, it appears that MHFA and TWM are most effective at providing knowledge and understanding (at 99%) and in challenging or changing attitudes related to mental illness (at 99%). Ratings indicate that both programs might be slightly less effective in

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supporting the translation of this knowledge, and these attitudes, into behaviours (at 90%).

These results could be reflective of a number of factors including: the surveys were administered directly after the training and did not provide time for participants to practically apply their newly acquired skills; participants may have had previous experience, or a particular interest in the subject matter, leading them to be more receptive to the program content; the fact that knowing and doing are different. The current evaluation structure does not include a mechanism for further follow up, which might provide a better gauge for behaviour change than responses immediately following training.

Mental health is one of the most challenging concepts for program participants to understand. I have observed that even outside of formalized training programs (like MHFA and TWM), confusion persists that often leads mental health to be conflated with mental illness. As such, mental health tends to be approached through a deficit lens where it is viewed as a problem rather than a desired state (Tudor, 2013). In my experience as a facilitator, many participants can easily understand when something is wrong, or can learn the signs and symptoms that indicate illness, however they are less aware of how to stay well, or of what being ‘mentally well’ looks or feels like. This lack of understanding and awareness appears to also be reflected in the individual questions that scored the lowest related to confidence in ‘knowledge of available mental health resources, services and professional support’ (76%) and in the perceived ‘ability to seek out reliable mental health information’ (90%). Perhaps as a result of this, effective help seeking also ends up being a challenging concept for many participants. If they are uncertain of how to obtain and maintain good mental health, they may not recognize effective help seeking as a supportive practice. Interestingly, despite lower reported scores in confidence in knowledge about resources, participants report that they are more confident in their ability to direct others to

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said resources (93%). What leads participants to feel more confident in supporting others when they just reported a lack of confidence in their own knowledge? Might this confidence pose a risk that leads to people (who admit a lack of knowledge in the area of mental health), to misdirect others to resources and supports? Might this be a case of participants externalizing challenges as existing for others, but not for themselves? Perhaps people have a greater willingness to reach out or direct others to supports but lack the confidence in translating this willingness into action? I suspect that these potential factors, coupled with the fear of doing or saying the wrong thing, might contribute to the reinforcement of barriers that prevent people from seeking out, and receiving, much needed support.

Overall, there was no major difference in the average ratings for each program with MHFA receiving an average rating of 92%, and TWM receiving a rating of 93%, across all measures. However, when compared across each MHL outcome, TWM rated equal or higher on all four measures. Table 2 displays the differences in survey results between the two trainings. When compared, the MHL outcome that emerges the strongest in MHFA is ‘understanding mental disorders and their treatments’ while the outcome that emerges the strongest in TWM is ‘understanding how to obtain and maintain positive mental health’. Both showed strengths in ‘enhancing help-seeking efficacy’ with MHFA rating stronger at building confidence for supporting oneself, and TWM rating stronger for a willingness to support others. Both programs rated equally strong in reports of ‘decreasing stigma related to mental disorders’.

In examining the individual survey questions, MHFA produced 4% higher result for ‘understanding basic concepts and knowledge about mental illness and mental disorders’. As a facilitator, this is not surprising as MHFA is designed around four specific mental disorder categories with significant time and attention spent on signs, symptoms and treatments. MHFA

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produced a small 2% increase for confidence in ‘knowledge of practical tips and information to support my own mental health or the mental health of others’. I believe this might be the result of the ‘crisis first-aid’ components of the course which provide step-by-step instructions for responding to specific mental health crisis situations. The most significant positive difference for MHFA training, was a 7% higher rating than TWM in ‘willingness to seek out appropriate mental health resources, services and professional support’. I wonder if this is due to the 12-hour length of time required for this training, compared with the TWM which is either four or eight hours. Perhaps the additional time in MHFA provides more opportunities for role play, activities and practical application practice. I suspect this might also explain the higher ratings of confidence in translating skills into action.

As previously stated, successful application of MHL programs requires that they be “context specific, developmentally appropriate, and effectively integrated into existing social and organizational structures” (Kutcher et al., 2016, p.155). While MHFA has been effectively integrated into UBC’s workplace health promotion programs, it is not context specific (i.e. the training materials are not specific to a workplace context), nor is it always developmentally appropriate, as participants possess varying levels of mental health literacy when they arrive. MHFA is a community-based training program that is not specifically designed with workplaces in-mind. It does not always meet the needs of all participants, particularly those with previous clinical knowledge and expertise (such as faculty members or counselling staff).

The most significant difference between the MHL results of both programs was a 15% higher result reported from TWM participants, over MHFA participants, in their ‘confidence in knowledge of available mental health resources, services and professional support’. I suspect that this difference is due to the fact that TWM training is contextualized to a workplace setting

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and promotes UBC specific support resources. Unlike MHFA, TWM training program is context specific. It is intentionally designed for delivery within workplaces and provides the flexibility to include organization specific statistics, benefits information, and support services. TWM also provides two separate trainings, one for managers and supervisors, and one for employees, ensuring that the content is contextually appropriate for an employee's specific role and responsibilities within the workplace environment. TWM participants reported higher ratings for 'confidence in the ability to seek out reliable mental health information' (+7%) and for 'confidence in willingness to direct others to appropriate mental health resources, services and professional support' (+8%). Given the significant increase in confidence and knowledge of available resource (+15%), it makes sense that participants would also feel an increased willingness and ability to use, and direct others to these resources.

According to the literature, the success of these programs is often dependent on an accompanying set promising practices related to implementation and application. These include: training being offered to employees on a voluntary basis (Hounsell, 2015); strong managerial support of the program (Narayanasamy et al., 2018); training being framed as a proactive form of professional development (Massey et al., 2014); establishment of networks or communities of practice for trained employees as ways to promote connection, skill development and continued awareness and education (Narayanasamy et al., 2018); clear vision and rationale from senior leadership, preferably through embedment of training into organizational strategic plans (Narayanasamy et al., 2018). These findings provide organizations like UBC with a set of guiding principles for how to best implement MHL training for optimal sustainability and success.

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While the training results did not differ greatly, when combined with the evidence from the literature review, my comparative analysis indicates that TWM is more supportive of MHL outcomes in a higher education workplace context. TWM training is aligned with many of the promising practices identified for effective MH and MHL education as it addresses both prevention and treatment (Institution of Occupational Safety and Health, 2018a; Willis Towers Watson, 2017); it acknowledges the role of the workplace on psychological health (Mental Health Commission of Canada, 2013; Turney, 2003); it provides effective management and leadership training (Institution of Occupational Safety and Health, 2018b; Kakuma et al., 2011; Mental Health Commission of Canada, 2013; Narayanasamy et al., 2018; Willis Towers Watson, 2016); and it promotes the use of informal resources like peer support (Jorm, 2012). Offering TWM within a higher education workplace also aligns with Massey's findings (2014), that universities represent a unique and promising context for supporting mental health in which trainings can be leveraged to enhance empathy, increase knowledge, and bolster confidence among staff on issues related to mental health. These initial results are promising and suggest that TWM could be utilized to enhance outcomes beyond MHL such as the creation and maintenance of supportive workplace environments, enhanced leadership development, and an overall shift away from awareness towards literacy and action.

Like the challenges presented earlier regarding the measurement of workplace MHL programs, this case study is not without limitations. Firstly, the participants who took part in both MHFA and TWM trainings did so voluntarily, which may have influenced the survey outcomes because attendees could have arrived at the training with higher levels of MHL. Despite this, the literature does appear to support voluntary enrollment over forced or mandated training (Hounsell, 2015). Another limitation was the selected measurement tool. As previously

stated, the tool was designed by the Health, Wellbeing and Benefits unit at UBC to serve its program and reporting needs. It is not validated and was not designed with the intention of being used for academic or research purposes. It also lacked a pre-survey to serve as a baseline. Conflicting evidence exists regarding the accuracy of pre and post self-reported measures, with some believing that it is impossible for both sets of responses to be reported under the same situational and contextual factors, thereby invalidating the results (Howard, 1980). Others believe that in order to draw any causal relationship between a training program and participant outcomes, a pre and post-test experimental design is required (Denscombe, 2014). Given our inability to ensure control for all variables between groups (program facilitators, environmental conditions, participant characteristics), along with time and financial constraints, we do not have a baseline with which to compare the post-training results, or any mechanism for participant follow-up. Like many of the challenges with MHL measurement discussed earlier, we are unable to determine if these outcomes will be sustained over time (Moll, Patten, et al., 2018). Given the challenges that exist in determining if reported attitudes will translate into skill acquisition (American Psychological Association, 2019), this leaves us unable to truly assess the translation of knowledge and attitudes into sustained behaviour change over time.

Conclusion

Based on the literature collected and reviewed for this paper, it is clear that professional settings are increasingly being used as sites to promote and enhance the wellbeing of both employees and organizations. I believe that workplaces present valuable opportunities for MHL education that can extend beyond the workforce into homes, families and the broader community. Despite a lack of robust or diverse evidence specifically examining MHL in higher

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education workplaces, we can assume that outcomes such as increased understanding of mental disorders and their treatments, improved understanding how to obtain and maintain positive mental health, enhanced help-seeking efficacy, and decreased stigma, would be beneficial to employee mental health. Further examination and research related specifically to MHFA and TWM within higher education workplaces is needed in order to draw more concrete conclusions about behaviour changes, but initial reviews suggest they are very successful at increasing knowledge and in shifting attitudes. At UBC, opportunities exist to incorporate recommendations that emerged from the literature into our current practices, including the establishment of networks or communities of practice for trained employees to further promote connection, skill development and continued awareness and education (Narayanasamy et al., 2018); and communicating clear vision and rationale from senior leadership, ideally by embedding training programs and supports into organizational strategic plans (Narayanasamy et al., 2018). Higher education workplaces are incredibly unique and diverse environments that can present challenges to widespread health promotion endeavors. I hope that these findings, and an increase in context specific MHL research, can help to bolster support and acknowledgment for the use of programs like MHFA and TWM at UBC and within institutions across Canada. With a growing body of research that highlights unique occupational stressors experienced by academic and administrative staff within research intensive universities, MHL might be an entry point to addressing some of these challenges. While I recognize that MHL education is not the only solution to addressing individual, organizational and structural factors that challenge wellbeing, it presents a well-supported avenue for further exploration into solutions to enhance the overall health and productivity of a workplace.

Works Cited

- American Psychological Association. (2019). Applying Assessment Strategies in Psychology: Choosing Assessment Methods. Retrieved April 21, 2019, from <https://www.apa.org/ed/governance/bea/assess-critique>
- Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., ... Kessler, R. C. (2014). Barriers to mental health treatment: results from the WHO World Mental Health surveys. *Psychological Medicine*, 44(06), 1303–1317. <http://doi.org/10.1017/S0033291713001943>
- Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health Psychology*, 15(1), 17–28. <http://doi.org/10.1037/a0016998>
- BC Human Rights Tribunal. (n.d.). Employment - Leading Cases - Law Library. Retrieved June 1, 2019, from <http://www.bchrt.bc.ca/law-library/leading-cases/employment.htm#when-employee>
- Bhui, K., Dinos, S., Stansfeld, S., & White, P. (2012). A synthesis of the evidence for managing stress at work: A review of the reviews reporting on anxiety, depression, and absenteeism. *Journal of Environmental and Public Health*, 1–21. <http://doi.org/10.1155/2012/515874>
- Buck Consultants. (2014). Working Well: A Global Survey of Health Promotion and Workplace Wellness Strategies. *Medical Benefits*, 31(16), 1–3.
- CAMH. (2019). Mental Illness and Addictions: Facts and Statistics. Retrieved April 1, 2018, from http://www.camh.ca/en/hospital/about_camh/newsroom/for_reporters/Pages/addictionmentalhealthstatistics.aspx

MENTAL HEALTH LITERACY: A REVIEW

Canada NewsWire. (2018). Parliamentarians Champion Mental Health by Receiving Literacy Training, pp. 1–2. Ottawa.

Canadian Health Promoting Universities and Colleges Network. (2015). The Okanagan Charter. Retrieved April 1, 2018, from <http://www.healthpromotingcampuses.ca/288-2/>

Canadian Medical Association. (2012). *12th Annual National Report Card on Health Care*. Retrieved from http://www.bc-psychologist.com/downloads/other/National_Report_Card_EN.pdf

Carleton, R., Korol, S., Mason, J., Hozempa, K., Anderson, G., Jones, N., ... Bailey, S. (2018). A longitudinal assessment of the road to mental readiness training among municipal police. *Cognitive Behaviour Therapy*, 47(6), 508–528. <http://doi.org/10.1080/16506073.2018.1475504>

Chu, A. H. Y., Koh, D., Moy, F. M., & Müller-Riemenschneider, F. (2014). Do workplace physical activity interventions improve mental health outcomes? *Occupational Medicine*, 64(4), 235–245. <http://doi.org/10.1093/occmed/kqu045>

Czabała, C., Charzyńska, K., & Mroziak, B. (2011). Psychosocial interventions in workplace mental health promotion: An overview. *Health Promotion International*. <http://doi.org/10.1093/heapro/dar050>

Denscombe, M. (2014). *The Good Research Guide: For Small-scale Social Research Projects* (5th Edition). New York: Open University Press. Retrieved from https://books.google.ca/books?hl=en&lr=&id=C5BFBgAAQBAJ&oi=fnd&pg=PR3&dq=Denscombe+M.+The+Good+Research+Guide:+For+Small-scale+Social+Research+Projects.+Buckingham:+Open+University+Press,+1998.&ots=guQk7t-r8A&sig=kLP7xLxpuj5BhNV-QYfB3DjsHZE&redir_esc=y#v=

MENTAL HEALTH LITERACY: A REVIEW

- Dickson-Swift, V., Fox, C., Marshall, K., Welch, N., & Willis, J. (2014). What really improves employee health and wellbeing Findings from regional Australian workplaces. *International Journal of Workplace Health Management*, 7(3), 138–155. <http://doi.org/10.1108/IJWHM-10-2012-0026>
- Elen, J., Lindblom-Ylänne, S., & Clement, M. (2007). Faculty Development in Research-Intensive Universities: The role of academics' conceptions on the relationship between research and teaching. *International Journal for Academic Development*, 12(2), 123–139. <http://doi.org/10.1080/13601440701604948>
- Feltz, J. (2018). *Health-related quality of life/well-being influences on servant leaders in a higher education context*. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&db=psych&AN=2018-48572-187&site=ehost-live>
- Fortier, A., Lalonde, G., Venesoen, P., Legwegoh, A., & Short, K. (2017). Educator mental health literacy to scale: from theory to practice. *Advances in School Mental Health Promotion*, 10(1), 65–84. <http://doi.org/10.1080/1754730X.2016.1252276>
- Global Newswire. (2018). The importance of mental health literacy among all of the awareness. Retrieved from <https://www.globenewswire.com/news-release/2018/01/30/1314605/0/en/FOR-IMMEDIATE-RELEASE-The-importance-of-mental-health-literacy-among-all-of-the-awareness.html>
- Griffie, S., Lueders, D., So, N., & Prideaux, C. (2014). Poster 8 Group Health Challenge: A Catalyst for Improved House Staff Wellness. *PM&R - The Journal of Injury, Function and Rehabilitation*, 6(9), S184. <http://doi.org/10.1016/j.pmrj.2014.08.409>
- Hilton, M. F. et al., Whiteford, H., Sheridan, J., Cleary, C., Chant, D., Wang, P., & Kessler, R.

- (2008). The Prevalence of Psychological Distress in Employees and Associated Occupational Risk Factors. *Journal of Occupational and Environmental Medicine*, 50(746–757). <http://doi.org/DOI: 10.1097/JOM.0b013e31817e9171>
- Hounsell, C. (2015). Mental health first aid training helps cut stress in the workplace. *Occupational Health*, 67(2), 11. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=101641477&site=ehost-live>
- Howard, G. S. (1980). Response-Shift Bias: A Problem in Evaluating Interventions with Pre/Post Self-Reports. *Evaluation Review*, 4(1), 93–106. Retrieved from <https://journals-sagepub-com.ezproxy.library.ubc.ca/doi/pdf/10.1177/0193841X8000400105>
- Institution of Occupational Safety and Health. (2018a). *Mental Health First Aiders: Workplace considerations*. Retrieved from www.who.int/mental_health/in_the_workplace/en/
- Institution of Occupational Safety and Health. (2018b). *Mental health in the workplace: benchmarking questions*. Retrieved from www.iosh.co.uk/MHFAworkplace
- Iqbal, A., & Kokash, H. (2011). Faculty Perception of Stress and Coping Strategies in a Saudi Private University : An Exploratory Study. *International Education Studies*, 4(3), 137–149. <http://doi.org/10.5539/ies.v4n3p137>
- James, D. (2017). Professional Identity, Learning Cultures and Educational Quality: Some Lessons from Further Education. *Cylchgrawn Addysg Cymru / Wales Journal of Education*, 19(1), 107–124. <http://doi.org/10.16922/wje.19.1.6>
- Jiang, X., Du, J., & Dong, R. (2017). Coping style, job burnout and mental health of university teachers of the millennial generation. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(7), 3379–3392. <http://doi.org/10.12973/eurasia.2017.00734a>

MENTAL HEALTH LITERACY: A REVIEW

- Jorm, A. (2012). Mental health literacy; empowering the community to take action for better mental health. *American Psychologist*, 67(3), 231–243. <http://doi.org/10.1037/a0025957>
- Jorm, A., Kitchener, B., Sawyer, M., Scales, H., & Cvetkovski, S. (2010). Mental health first aid training for high school teachers: A cluster randomized trial. *BMC Psychiatry*, 10(1), 51. <http://doi.org/10.1186/1471-244X-10-51>
- Kakuma, R., Minas, H., Van Ginneken, N., Dal Poz, M., Desiraju, K., Morris, J., ... Scheffler, R. (2011, November 5). Human resources for mental health care: Current situation and strategies for action. *The Lancet*. Elsevier. [http://doi.org/10.1016/S0140-6736\(11\)61093-3](http://doi.org/10.1016/S0140-6736(11)61093-3)
- Kelley, K., Clark, B., Brown, V., & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care*, 15(3), 261–266. <http://doi.org/10.1093/intqhc/mzg031>
- Kitchener, B., & Jorm, A. (2004). Mental health first aid training in a workplace setting: A randomized controlled trial [ISRCTN13249129]. *BMC Psychiatry*, 4(1), 23. <http://doi.org/10.1186/1471-244X-4-23>
- Kitchener, B., & Jorm, A. (2006, January 26). Mental health first aid training: Review of evaluation studies. *Australian and New Zealand Journal of Psychiatry*. SAGE PublicationsSage UK: London, England. <http://doi.org/10.1111/j.1440-1614.2006.01735.x>
- Kutcher, S., Wei, Y., & Coniglio, C. (2016). Mental Health Literacy: Past, Present, and Future. *The Canadian Journal of Psychiatry*, 61(3), 154–158. <http://doi.org/10.1177/0706743715616609>
- Kutcher, S., Wei, Y., McLuckie, A., & Bullock, L. (2013). Educator mental health literacy: A programme evaluation of the teacher training education on the mental health & high school curriculum guide. *Advances in School Mental Health Promotion*, 6(2), 83–93.

<http://doi.org/10.1080/1754730X.2013.784615>

LaMontagne, A. D., Martin Angela, A., Page, K. M., Reavley, N. J., Noblet Andrew, A. J., Milner, A. J., ... Smith, P. M. (2014). Workplace mental health: developing an integrated intervention approach BMC Psychiatry. *BMC Psychiatry*, 1–11.

<http://doi.org/10.1186/1471-244X-14-131>

Lowe, G., & Graves, F. (2016). *Redesigning work: A blueprint for Canada's future well-being and prosperity*. Retrieved from <https://books-scholarsportal-info.ezproxy.library.ubc.ca/en/read?id=/ebooks/ebooks3/utpress/2017-02-24/1/9781442660625#page=4>

Margrove, K. L., Gustowska, M., & Grove, L. S. (2014). Provision of support for psychological distress by university staff, and receptiveness to mental health training. *Journal of Further and Higher Education*, 38(1), 90–106. <http://doi.org/10.1080/0309877X.2012.699518>

Martin, A., & Fisher, C. (2014). Understanding and improving managers' responses to employee depression. *Industrial and Organizational Psychology*, 7(2), 270–274.

<http://doi.org/10.1111/iops.12147>

Massey, J., Brooks, M., & Burrow, J. (2014). Evaluating the effectiveness of mental health first aid training among student affairs staff at a Canadian university. *Journal of Student Affairs Research and Practice*, 51(3), 323–336. <http://doi.org/10.1515/jsarp-2014-0032>

Massie, M. (2018). *Impacts of Mental Health Literacy Training in the Workplace*.

McLean, M. (2011). Getting to Know You: The Prospect of Challenging Ableism Through Adult Learning. *New Directions for Adult and Continuing Education*, 132, 13–22.

<http://doi.org/10.1002/ace.427>

McLuckie, A., Kutcher, S., Wei, Y., & Weaver, C. (2014). Sustained improvements in students'

MENTAL HEALTH LITERACY: A REVIEW

- mental health literacy with use of a mental health curriculum in Canadian schools. *BMC Psychiatry*, 14(379), 1–6. <http://doi.org/10.1186/s12888-014-0379-4>
- Mental Health Commission of Canada. (2013). *Psychological health and safety in the workplace - Prevention, promotion, and guidance to staged implementation. Standards Council of Canada.*
- Mental Health Commission of Canada. (2018a). City of Halifax Case Study | The Working Mind. Retrieved February 25, 2019, from <https://theworkingmind.ca/city-halifax-case-study>
- Mental Health Commission of Canada. (2018b). National Standard. Retrieved April 1, 2018, from <https://www.mentalhealthcommission.ca/English/national-standard>
- Mental Health Commission of Canada. (2018c). The Working Mind. Retrieved February 25, 2019, from <https://www.theworkingmind.ca/>
- Mental Health Commission of Canada. (2018d). Thunder Bay Case Study | The Working Mind. Retrieved February 25, 2019, from <https://theworkingmind.ca/thunder-bay-case-study>
- Mental Health Commission of Canada. (2018e). Workplace. Retrieved April 1, 2018, from <https://www.mentalhealthcommission.ca/English/focus-areas/workplace>
- Mental Health Commission of Canada. (2019a). Mental Health First Aid. Retrieved February 25, 2019, from <https://www.mentalhealthcommission.ca/English/resources/mental-health-first-aid>
- Mental Health Commission of Canada. (2019b). Opening minds around the world. Retrieved February 16, 2019, from <https://www.mentalhealthcommission.ca/English/catalyst-january-2019-opening-minds-around-world>
- Moll, S., Patten, S., Stuart, H., MacDermid, J., & Kirsh, B. (2018). Beyond Silence: A Randomized, Parallel-Group Trial Exploring the Impact of Workplace Mental Health

MENTAL HEALTH LITERACY: A REVIEW

- Literacy Training with Healthcare Employees. *The Canadian Journal of Psychiatry*, 63(12), 826–833. <http://doi.org/10.1177/0706743718766051>
- Moll, S., VandenBussche, J., Brooks, K., Kirsh, B., Stuart, H., Patten, S., & MacDermid, J. (2018). Workplace Mental Health Training in Health Care: Key Ingredients of Implementation. *The Canadian Journal of Psychiatry*, 1–7. <http://doi.org/10.1177/0706743718762100>
- Morgan, A., Ross, A., & Reavley, N. (2018). Systematic review and meta-analysis of mental health first aid training: Effects on knowledge, stigma, and helping behaviour. *PLoS ONE*, 13(5), 1–21. <http://doi.org/10.1371/journal.pone.0197102>
- Naidoo, R. (2018). The competition fetish in higher education: Shamans, mind snares and consequences. *European Educational Research Journal*, 17(5), 605–620. <http://doi.org/10.1177/1474904118784839>
- Narayanasamy, M., Geraghty, J., Coole, C., & Nouri, F. (2018). *Mental health first aid in the workplace (MENTOR): A feasibility study*. Retrieved from www.iosh.co.uk/MHFAworkplace
- Nishiuchi, K., Tsutsumi, A., Takao, S., Mineyama, S., & Kawakami, N. (2007). Effects of an Education Program for Stress Reduction on Supervisor Knowledge, Attitudes, and Behavior in the Workplace: A Randomized Controlled Trial. *Journal of Occupational Health*, 49(49), 190–198. Retrieved from https://www.jstage.jst.go.jp/article/joh/49/3/49_3_190/_pdf/-char/en
- O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research*, 229(1–2), 511–516. <http://doi.org/10.1016/j.psychres.2015.05.064>

MENTAL HEALTH LITERACY: A REVIEW

- O'Connor, M., Casey, L., & Clough, B. (2014). Measuring mental health literacy-a review of scale-based measures. *Journal of Mental Health*. Shadowfax Publishing and Informa UK Limited. <http://doi.org/10.3109/09638237.2014.910646>
- Oakie, T. (2017). *Validating the Co-Worker Mental Health Awareness Training Program (CHAT)*. Retrieved from http://proquest.umi.com.library2.smu.ca/xmlui/bitstream/handle/01/27132/Oakie_Taylor_MASTERS_2017.pdf?sequence=1&isAllowed=y
- Oakman, J., Macdonald, W., Bartram, T., Keegel, T., & Kinsman, N. (2018). Workplace risk management practices to prevent musculoskeletal and mental health disorders: What are the gaps? *Safety Science*, 101, 220–230. <http://doi.org/10.1016/j.ssci.2017.09.004>
- Ochoa, P., & Blanch, J. M. (2019). Psychosocial wellbeing at work: reasons to invest in healthy employees and workplaces. In P. Ochoa, M. Lepeley, & P. Essens (Eds.), *Wellbeing for Sustainability In the Global Workplace* (pp. 3–14). Oxon.
- Ochoa, P., Lepeley, M.-T., & Essens, P. (2019). *Wellbeing for Sustainability In the Global Workplace*. (P. Ochoa, M. Lepeley, & P. Essens, Eds.). Oxon: Routledge.
- Poalses, J., & Bezuidenhout, A. (2018). Mental health in higher education: A comparative stress risk assessment at an open distance learning university in South Africa. *International Review of Research in Open and Distance Learning*, 19(2), 169–191. <http://doi.org/10.19173/irrodl.v19i2.3391>
- Province of British Columbia. (n.d.). Address Bullying. Retrieved February 16, 2019, from <https://www2.gov.bc.ca/gov/content/careers-myhr/all-employees/working-with-others/address-issue/address-bullying>
- Public Health Agency of Canada. (2014). Mental Health Promotion. Retrieved April 11, 2019,

MENTAL HEALTH LITERACY: A REVIEW

from <https://www.canada.ca/en/public-health/services/health-promotion/mental-health/mental-health-promotion.html>

Rodger, S., Hibbert, K., Leschied, A., Pickel, L., & Atkins, M.-A. (2014). *Mental Health Education In Canada: Curricula Literature Review*.

Schulz, J. (2013). The impact of role conflict, role ambiguity and organizational climate on the job satisfaction of academic staff in research-intensive universities in the UK. *Higher Education Research & Development*, 32(3), 464–478.
<http://doi.org/10.1080/07294360.2012.680209>

Statistics Canada. (2017). Infographic: Work-Related Stress. Retrieved February 16, 2019, from https://www150.statcan.gc.ca/n1/pub/11-627-m/contest/finalists-finalistes_2-eng.htm

Sun, W., Wu, H., & Wang, L. (2011). Occupational stress and its related factors among university teachers in China. *Journal of Occupational Health*, 53(4), 280–286. Retrieved from https://www.jstage.jst.go.jp/article/joh/53/4/53_10-0058-OA/_pdf/-char/en

teenmentalhealth.org. (2019). Research Publications. Retrieved from <http://teenmentalhealth.org/publications/>

The Mental Health Commission of Canada. (2017). *The Working Mind - Workplace Mental Health: A Managers Training Guide (Facilitator Guide)*.

Tudor, K. (2013). *Mental Health Promotion: Paradigms and Practice*. Routledge.
<http://doi.org/10.4324/9781315812670>

Turney, L. (2003). Mental health and workplace bullying: the role of power, professions and “on the job” training. *Australian E-Journal for the Advancement of Mental Health*, 2(2), 1–9.
<http://doi.org/10.5172/jamh.2.2.99>

Tytherleigh, M. Y., Webb, C., Cooper, C. L., & Ricketts, C. (2007). Occupational stress in UK

- higher education institutions: a comparative study of all staff categories. *Higher Education Research & Development*, 24(1), 41–61. <http://doi.org/10.1080/0729436052000318569>
- UBC Wellbeing. (n.d.). The Okanagan Charter. Retrieved April 1, 2018, from <https://wellbeing.ubc.ca/okanagan-charter>
- University of British Columbia. (2014). Workplace Experience Survey Results | Focus on People. Retrieved February 2, 2019, from <http://focusonpeople.ubc.ca/workplace-experiences-survey/2014-survey-results/>
- University of British Columbia. (2017a). Workplace Experiences Survey Results | Focus on People. Retrieved January 27, 2019, from <http://focusonpeople.ubc.ca/workplace-experiences-survey/2017-workplace-experiences-survey-results/>
- University of British Columbia. (2017b). *Workplace Experiences Survey UBC Overall Results*. Retrieved from <https://focusonpeople.ubc.ca/files/2018/02/UBC-WES-2017-Overall-Results.pdf>
- University of British Columbia. (2018a). Focus on People - Reporting & Metrics. Retrieved March 2, 2019, from <http://focusonpeople.ubc.ca/reporting/>
- University of British Columbia. (2018b). UBC Strategic Plan: Shaping UBC's Next Century. Retrieved March 2, 2019, from <https://strategicplan.ubc.ca/>
- University of British Columbia. (2019). Wellbeing Strategic Framework. Retrieved June 1, 2019, from <https://wellbeing.ubc.ca/framework>
- van der Velden, G. (2012). Institutional level student engagement and organisational cultures. *Higher Education Quarterly*, 66(3), 227–247. <http://doi.org/10.1111/j.1468-2273.2012.00521.x>
- Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools:

MENTAL HEALTH LITERACY: A REVIEW

What does the evidence say? *Health Promotion International*, 26(SUPPL. 1).

<http://doi.org/10.1093/heapro/dar075>

Wei, Y., Magimba, A., Sabuni, N., Perkins, K., Kutcher, S., Ubuguyu, O., ... Brown, A. (2016).

A school mental health literacy curriculum resource training approach: effects on Tanzanian teachers' mental health knowledge, stigma and help-seeking efficacy. *International Journal of Mental Health Systems*, 10(1). <http://doi.org/10.1186/s13033-016-0082-6>

Wei, Y., McGrath, P., Hayden, J., & Kutcher, S. (2016). Measurement properties of tools

measuring mental health knowledge: A systematic review. *BMC Psychiatry*, 16(1), 1–16.

<http://doi.org/10.1186/s12888-016-1012-5>

Wei, Y., McGrath, P., Hayden, J., & Kutcher, S. (2017). Measurement properties of mental

health literacy tools measuring help-seeking: a systematic review*. *Journal of Mental Health*, 26(6), 543–555. <http://doi.org/10.1080/09638237.2016.1276532>

Wei, Y., McGrath, P., Hayden, J., & Kutcher, S. (2018). The quality of mental health literacy

measurement tools evaluating the stigma of mental illness: A systematic review.

Epidemiology and Psychiatric Sciences, 27(5), 433–462.

<http://doi.org/10.1017/S2045796017000178>

White, J. (2009). Stress cited as top global health risk. *Benefits Canada*.

Whitley, J., & Gooderham, S. (2016). Exploring Mental Health Literacy among Pre-Service

Teachers. *Exceptionality Education International*, 26(2), 62–92. Retrieved from

<https://ir.lib.uwo.ca/eei/vol26/iss2/5/>

Whitley, J., Smith, J. D., & Vaillancourt, T. (2012). Promoting Mental Health Literacy Among

Educators: Critical in School- Based Prevention and Intervention. *Canadian Journal of School Psychology*, 28(1), 56–70. <http://doi.org/10.1177/0829573512468852>

MENTAL HEALTH LITERACY: A REVIEW

Willis Towers Watson. (2016). *2015/2016 Staying @ Work Report: Canada Summary*.

Willis Towers Watson. (2017). *Employers seek to improve effectiveness of workforce well-being programs*.

World Health Organization. (2008). *Preventing noncommunicable diseases in the workplace through diet and physical activity*. Geneva: World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/43825/9789241596329_eng.pdf;jsessionid=6FDABBA9D7523BA573FC8388B58DB75B?sequence=1