Mental Health in the Workplace

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I have never really seen anything like this product before, and I think it is really valuable.

John Creswell, University of Nebraska–Lincoln

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Workplace Antistigma Programs at the Mental Health Commission of Canada: Part 1. Processes and Projects

Programmes anti-stigmatisation en milieu de travail de la Commission de la santé mentale du Canada : 1re partie – Processus et projets

Andrew Szeto, PhD1,2, Keith S. Dobson, PhD1,2, Dorothy Luong, PhD3, Terry Krupa, PhD2,4, and Bonnie Kirsh, PhD2,5

Abstract
The Opening Minds Initiative of the Mental Health Commission of Canada has taken a novel approach to reducing the stigma of mental illness by targeting specific sectors. This first article describes Opening Minds’ research and programming initiatives in the workplace target group. This article describes the context of mental illness stigma in Canada and the development of the Opening Minds initiative of the Mental Health Commission of Canada, with a specific focus on the workplace sector. We outline the steps that were taken to develop an evidence-based approach to stigma reduction in the workplace, including reviews of the state of the art in this workplace antistigma programming, as well as the development of tools and measures to assess mental illness stigma in the workplace. Finally, 2 specific program examples (e.g., Road to Mental Readiness and The Working Mind) are used to highlight some of the procedural and logistical learnings for implementing antistigma and mental health initiatives within the workplace. In a second related article, we further examine the Opening Minds workplace initiative, with a discussion of the lessons learned from the implementation and evaluation of antistigma programming in the workplace.

Abrégé
L’initiative Changer les mentalités de la Commission de la santé mentale du Canada a adopté une nouvelle approche en vue de réduire la stigmatisation de la maladie mentale en ciblant des secteurs spécifiques. Ce premier article décrit les initiatives de recherche et de programmation de Changer les mentalités dans le groupe cible en milieu de travail. Cet article décrit le contexte de la stigmatisation de la maladie mentale au Canada et l’élaboration de l’initiative Changer les mentalités de la Commission de la santé mentale du Canada, qui met un accent particulier sur le secteur du milieu de travail. Nous présentons les mesures qui ont été prises pour mettre au point une approche fondée sur les données probantes visant la réduction de la stigmatisation en milieu de travail, y compris des revues des techniques de pointe dans cette programmation anti-stigmatisation en milieu de travail, ainsi que l’élaboration d’outils et de mesures afin d’évaluer la stigmatisation de la maladie mentale en milieu de travail. Finalement, deux exemples de programmes spécifiques (p. ex., En route vers la préparation mentale et L’esprit au travail) servent à présenter certains apprentissages procéduraux et logistiques pour la mise en œuvre des initiatives d’anti-stigmatisation et de santé mentale en milieu de travail. Dans un deuxième article connexe (voir ce volume, Szeto et coll.,

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The Mental Health Commission of Canada (MHCC)\textsuperscript{1} was formed in 2007 with a 10-year mandate by the Government of Canada to function as a catalyst to improve the health and wellness of Canadians. Since its inception, the MHCC has explored the many ways in which people living with mental illnesses are viewed in the community with a goal of changing how Canadian society treats people who experience mental illnesses. This was addressed through a series of focused initiatives that targeted conditions associated with mental illnesses, such as stigma, homelessness, and suicide. These initiatives also functioned as a catalyst to bring different mental health stakeholders together to work together on ways to improve the Canadian mental health care system. Subsequently, the MHCC received another 10-year mandate and will continue its work through to the year 2027.

One of the critical aspects related to mental illnesses is the problem of stigma. Stigma is a multilayered process that begins when labels and stereotypes are attached to those with a human difference (e.g., a mental illness), which leads to the separation from the nonlabelled and can result in loss of status, prejudice, and discrimination towards those holding this difference.\textsuperscript{2} Stigma is a significant concern for those living with a mental illness and has been identified as a major barrier to timely and accessible care, recovery, and quality of life.\textsuperscript{3} Many people affected by mental illnesses fear being stigmatized, which then leads them to remain silent about their illness. This silence can be a barrier to seeking treatment and to pursuing important life opportunities and resources.\textsuperscript{4} Combatting stigma has been found to lead to increased readiness to seek professional help.\textsuperscript{5} It has the potential to significantly improve the lives of those living with mental illnesses. As such, reducing the stigma and discrimination associated with mental illness has been an important component of the MHCC’s mandate.

This article discusses some of the experiences of the workplace projects from the Opening Minds initiative of the MHCC. The central focus of this article is on the process that the Opening Minds workplace researchers took to develop an evidence-based approach to workplace stigma reduction, including both prejudicial attitudes and discriminatory behaviours (referred to generally as “stigma” in this article) and some of the workplace partnerships that were formed. We discuss our target populations, our measurement and program challenges, the programs that have been developed to address stigma in the workplace, and future issues. In a complementary article (see Szeto et al.\textsuperscript{6}), we discuss the lessons learned from this process and working with the workplace partners Opening Minds has formed through the years.

The Opening Minds Initiative

The Opening Minds (OM) initiative has been discussed elsewhere\textsuperscript{7} and so is only briefly reviewed here as a backdrop for the current article. The OM initiative was created to reduce the stigma of mental illnesses by changing the attitudes and behaviours of Canadians towards individuals with mental illnesses. It is the largest systematic effort undertaken in Canadian history to reduce this type of stigma. While many programs exist with the intent to reduce mental illness stigma, many have no evaluation data attesting to their efficacy. OM’s philosophy was to build on the strengths of and to promote existing evidence-based programs, rather than to “reinvent the wheel.” To this end, OM conducted evaluations of various programs to determine their success at reducing stigma, with the goal of promoting and replicating effective programs nationally. Given the breadth of scope of these issues, OM strategically targeted 4 areas of focus: health care providers, youth, media, and the workplace, as stigma reduction in these 4 areas could have a broad impact on the negative consequences associated with stigma.

Stigma reduction initiatives varied across the 4 target groups. The OM researchers who focused on health care providers, for example, developed a health care provider stigma scale,\textsuperscript{8,9} conducted evaluations of antistigma programs in various groups (e.g., pharmacy students\textsuperscript{10}), and conducted a meta-regression with 22 antistigma programs on key ingredients for stigma reduction interventions in health care environments.\textsuperscript{11} In the youth target group, OM researchers conducted numerous evaluations of various programs as well as created a fidelity/process model for youth antistigma programs.\textsuperscript{12} In addition to holding talks and symposiums at journalism schools, OM researchers are conducting the largest media monitoring project in Canada. They have tracked newspaper articles about mental illness from major newspaper outlets since 2005 to examine trends in the tone and content. Some of this project has been described by Whitley and colleagues.\textsuperscript{13,14}

In the area of workplace stigma, OM researchers have evaluated numerous workplace programs in different organizations across Canada. Although the workplace was the last target group for OM to initiate, mental health and mental illness has been topical in the Canadian workplace, which has resulted in many opportunities to promote mental health awareness and education and, in so doing, to implement and evaluate programs. The current article details the processes involved in the creation and maintenance of OM partnerships with work organizations and the “lessons learned” from the implementation and evaluation of workplace
antistigma programs in Canada. The other articles in this series provide information about the outcomes of our program evaluations and directions for further research in this domain.

**Why Did OM Target the Workplace?**

Several factors contribute to the importance of reducing stigma in the workplace and provided the impetus for our focus on programs in this target group. Beyond moral and ethical reasons to reduce stigma and improve mental health in the workplace, financial and productivity considerations also make these efforts imperative. The financial impact of poor mental health and mental illnesses is enormous. Mental illnesses have been ranked as a leading contributor to the overall economic costs affecting employers in the United States. One estimate sets the cost of mental illnesses to the Canadian economy at approximately $51 billion a year. At an organizational level, poor mental health in employees often results in lost productivity in the forms of absenteeism, presenteeism, and turnover. Businesses can also incur significant costs for short-term and long-term disability claims due to mental illnesses. Mental illness–related disability accounts for almost one-third of all work-related disability claims and has been shown to be more costly and longer in duration than non–mental health–related claims.

The removal of attitudinal barriers, such as stigma, and inaccurate perceptions about structural barriers (e.g., cost, lack of services) and nonrecognition of one’s mental illness can result in reduced losses in workplace productivity. This result implies that workplace programs that address these barriers can reduce losses to workplace productivity related to mental illnesses or poor mental health. In fact, workplace programs that address these barriers have positively affected organizations’ finances and have demonstrated positive return on investment outcomes. In their systematic review of economic evaluations of mental health interventions, Hamberg-van Reenen et al. found positive effects for workplace outcome measures (e.g., productivity, disability) and positive financial returns in return-to-work interventions. One economic model simulation found that a comprehensive depression screening program would offer an organization a 4 to 1 return on investment based on reductions in presenteeism and absenteeism alone. Beyond the financial benefits of workplace programs, a 2009 systematic review reported that workplace mental health interventions have positive effects on outcomes such as stress, job satisfaction, and psychological symptomology. In general, mental health programs in the workplace have both positive financial effects and positive outcomes at the individual employee.

Targeting workplaces also makes sense from the perspective of employees. Many individuals spend most of their waking hours at work. It is also during their prime working years that individuals experience mental health–related problems. One Canadian survey found that 44% of their adult working sample has had or currently has a mental health problem, and a Canadian population-based study found a “treated prevalence” (i.e., have ever been treated by a professional for a mental illness) of 16.5% in working adults. These authors also found that this prevalence increased to 27.7% if the participant rated his or her job as extremely stressful.

Many employees have access to employee benefits or employee and family assistance programs that offer confidential psychological services for mental health concerns, but many employees are reluctant to disclose a mental health problem or access these services for fear of potential stigma and negative work-related consequences. This reluctance is exacerbated by how employers and managers handle mental health problems. Thorpe and Chénier found that only 26% of their sample believed their supervisor could effectively support someone with a mental illness. Similarly, these authors found that 44% of managers surveyed had not received any training on mental illnesses in the workplace. Programs that reduce stigma and provide workplace mental health knowledge would likely increase help seeking and may even contribute to a more supportive workplace atmosphere.

The final factor that contributes to the importance the workplace is the unique way stigma presents itself in this context. Social relations within workplaces create multiple avenues where stigma might present itself. For example, stigma might be directed at an individual with a mental illness by his or her coworker, supervisor, or supervisee or employee. As a result, individuals who experience a mental illness in the workplace may face direct discrimination in the form of negative attitudes (such as feelings of distrust from others) or behaviour (such as avoidance in the workplace), which could in turn lead to experiences of underemployment, failure to advance, unemployment, or labelling and alienation at work. A conceptual model of workplace stigma suggests that stigma operates through multiple pathways, and exclusionary practices may emerge from multiple intentions. Particular assumptions about mental illness are salient in the employment context (e.g., that they lack the task-related and/or social competence to perform the job). These assumptions influence the disposition to act in a discriminatory manner. To counteract these influences, anti-stigma interventions should identify key assumptions that exist in the workplace, identify where and how they emerge, and directly challenge them. While broad public service campaigns may challenge some of these assumptions in a general manner, these messages may not be applied to all contexts. As such, programs are needed that address the unique structure and context of the workplace.

**OM Workplace Processes and Projects**

Our first step to develop an evidence-based approach to workplace antistigma initiatives was to conduct a scholarly review of relevant antistigma intervention programs. A
review\textsuperscript{23} explored workplace antistigma programs from various countries and of various types and formats. The second, a scoping study,\textsuperscript{28} identified and described principles and characteristics of 22 antistigma initiatives identified from peer-reviewed, grey, and other relevant literatures. Although multiple programs were identified and many showed promise, both reviews identified a need for more scientific rigor in the evaluation and implementation of these programs. In particular, standardized interventions and validated evaluation tools that could determine the stigma reduction efficacy of programs were deemed to be essential but absent. These 2 major gaps in knowledge were the impetus behind OM workplace team’s subsequent activities.

Due to the lack of well-validated measures to assess stigmatizing attitudes towards people with mental illnesses in the workplace, we created 2 new scales. The Opening Minds Scale for Workplace Attitudes is a 22-item measure that assesses stigmatizing attitudes, beliefs, and behaviours in the workplace. This measure was initially validated on a student sample, was used in subsequent research,\textsuperscript{29} and is being evaluated in both an employed community sample and other workplace samples. The Opening Minds Scale for Supervisor Workplace Attitudes\textsuperscript{30} is an 11-item measure of stigmatizing attitudes, beliefs, and behaviours specific to the supervisor role. This measure was derived from items from various market research studies\textsuperscript{31-33} and is undergoing psychometric evaluation.

Coincident with the development of tools to evaluate programs, we cultivated partnerships with a wide range of organizations across a range of occupational categories groups and antistigma program developers. We targeted medium and large organizations as they have the structural capacity to implement initiatives. As well, many antistigma initiatives were more practical for a larger organizational context. The learnings from these organizations could serve as a model for smaller sized businesses. Our goal was to connect employers with appropriate programs and engage employers to implement and evaluate these programs. Our plan was to create a database that would then enable a systematic evaluation of program outcomes and consequent decisions regarding best practices for program content and implementation in workplace antistigma programs. Within each partnership, our team, in consultation with the employer and/or program developer, designed an evaluation framework. The framework served as a guide to the evaluation process. It provided an opportunity to clearly identify the need for an intervention in the specific workplace context and address the potential issues related to implementing and evaluating programs in the workplace. For example, 1 eastern Canadian site identified the stressful demands of the job and wanted to implement an initiative that would increase uptake of its health and wellness initiatives while another site prided itself on offering the most up-to-date workplace health initiatives to employees. Some issues that did appear in implementation included the cost related to time away from work to participate in interventions, recruitment issues for evaluations, and concerns with privacy or confidentiality.

Although the “gold standard” for experimentation is the randomized control trial, even employers who were ready to implement stigma reduction programs wanted fairly rapid implementation of workplace programs. As such, our research design usually consisted of a pre, post, and 3-month follow-up design. In this scenario, participants received evaluation measures prior to the intervention (pre), immediately after the intervention (post), and approximately 3 months after the intervention. This type of an evaluation design was used for many reasons such as its flexibility to fit into organizational processes and timelines (e.g., scheduled mandatory training). This design, however, resulted in some limitations of the resulting data as is expanded upon below. Following data collection and analyses, partner organizations that wished as well as program developers (if applicable) received a final report and debriefing on the program results.

**OM Workplace Projects**

The OM workplace team was formalized in 2010. Since then, numerous programs at various sites across Canada have been evaluated. Partner sites range from medium to large (from fewer than 50 employees to greater than 10,000), come from various sectors (e.g., public, private, education), reflect a range of occupational categories (e.g., sales and service, social and government services, health services), and operate at all levels (i.e., local, provincial, and national). Although each partnership had its unique considerations and processes, we describe below examples of projects to give a sense of the breadth and depth of work. Table 1 provides a summary of the following description and includes a summary of the key purposes, processes, programs, and evaluation strategies used in this work.

One of the early experiences for the OM workplace group was with an industrial company. The leadership of this particular company was fairly certain that there were mental health concerns in its workforce, which was predominantly male and had a significant proportion of immigrant workers. As an initial stage of consultation, the OM researchers came to the company and met with the leadership as well as a few workers in focus groups. We were advised by the workers that they did not experience particular concerns, so we employed a survey of mental health concerns and stigma. When the results were analysed, the data suggested that the average worker was not significantly distressed and did not report significant stigma. These results were shared with the leadership, who ultimately advised us that they were concerned about bullying in the workplace. Based on our results, they did not plan further activities, as they were satisfied that the issues had been investigated.

Another early experience was an evaluation of a mental health awareness program implemented by an oil and gas company. This program used contact-based education,
which has been cited as an important antistigma program component. The presentation consisted of a detailed and impassioned description of a worker’s past and continuing struggles with mental illness. There was relatively little emphasis in the talk about resources or adaptive coping. Our evaluation revealed that this presentation was associated with increased stigma ratings on our measures, which we attributed to the fact that the personal story did not emphasize recovery in mental illnesses, provide descriptions of help seeking, and describe the adaptive tools to deal with mental illnesses.

Our process of workplace antistigma programs took a dramatic turn when we discovered that the Canadian Department of National Defence had developed and was using a program it called the Road to Mental Readiness (R2MR) to engage in stigma reduction, provide mental health literacy, and develop coping resources. We were able to work with defence experts to examine the program, and with their approval, we modified the program for use with a large urban police service. Major adaptations included a dedicated antistigma component (i.e., a dedicated module on stigma) and fully incorporated contact-based education.

The Road to Mental Readiness created by the Opening Minds Program has several foci, including mental health knowledge and literacy, stigma reduction, building resiliency, early help seeking, and reconceptualising how one talks and thinks about mental health and mental illness. These core components are embodied in the mental health continuum model, the Big 4 skills, and contact-based education. The mental health continuum model is a key component of the R2MR program and a common thread that connects all other components of the program. Rather than a diagnostic framework, it categorizes signs and indicators of good to poor mental health into a 4-colour continuum: green (healthy), yellow (reacting), orange (ill), and red (injured). This model teaches that everyone is on the mental health continuum model, and it uses the intuitive idea of color coding to train individuals to look for signs and indicators in themselves (and others) for each colour. The model also recognizes that there can be desynchrony among various signs and indicators, so for example, one’s sleep may be dysfunctional, even though other aspects of functioning are all right, at least for a time. The model also emphasizes that mental health can either move “up” or “down” the continuum and that even being in the “red” (i.e., having an acute mental illness) is not a permanent attribute. The model proposes appropriate actions at various stages of the continuum, to either stay mentally healthy or take action when signs and indicators emerge.

The Big 4 skills are 4 coping strategies (SMART goal setting, mental rehearsal, positive self-talk, and diaphragmatic breathing) that have been widely used (especially in sports psychology) to help people manage stressful situations and increase their performance. These skills are roughly consistent with several aspects of cognitive-behavioural therapy but adapted to promote effective workplace performance. The final core component is contact-based education, wherein individuals who have experienced and recovered from mental illnesses present the workshop and can discuss their experiences with mental illness and stigma. Most critically, these issues include help seeking, recovery, and receiving social support. This first-person discussion is supplemented with prepared video clips from actual employees, who present material relevant to different parts of the program. This use of contact-based education is consistent with research, as it is one of the most effective ways to reduce the stigma of mental illnesses.

Although implementation is not identical across our partner R2MR sites, the most popular and sustainable form of implementation is where the organization holds a train-the-trainer session, in which internal candidates take a weeklong course to become facilitators of the program. Afterwards, successful facilitators can provide the half-day workshop for employees and frontline staff or an extended full-day leadership/supervisor workshop. R2MR has now been translated into a French-language version and has been further adapted for use by a variety of first responder groups, including firefighters, corrections workers, and emergency service providers. With each adaption, we engage in a consultation process with the relevant target group to adapt the materials to the context, and new videos are created to highlight the challenges for each unique type of first responder group.

The R2MR incorporates mental health literacy and knowledge, coping skills, and antistigma components. The OM research group realized that these components could be easily modified into a version that could be created for other nonmilitary workplaces, such as office settings. The

### Table 1. Main Features of Programs within the Opening Minds Initiative.

<table>
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<th>Program Feature</th>
<th>Sample Content</th>
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| Purposes        | • Examination of current mental health status of employees
|                 | • Promotion of mental health awareness and literacy
|                 | • Development of mental health programs
|                 | • Program development and evaluation
|                 | • Discussion of employer concerns and issues
|                 | • Meeting with senior leadership
|                 | • Program adaptation and delivery
|                 | • Program evaluation and reports to employers
| Programs        | • The Road to Mental Readiness (R2MR; renamed the Working Mind for First Responders)
|                 | • The Working Mind (TWM)
| Evaluation      | • Mental health literacy
|                 | • Stigma reduction
|                 | • Mental health service utilization
|                 | • Program evaluation and qualitative experiences of employees and employers
Working Mind (TWM\textsuperscript{37}) program was thus developed and incorporates the core elements of R2MR. It also has both a shorter half-day version for frontline office workers and a longer full-day version for managers and leaders, which highlight their extended roles to assess, support, and manage issues related to mental health and illness in the people who report to them.

Evaluation results of the 2 types of workshops (frontline and leaders/managers) for both of the R2MR and TWM programs have been positive (see Dobson et al.\textsuperscript{38}; Szeto et al.\textsuperscript{6}). These results indicate that participants show significant decreases in stigma from pre to post and that these reductions are generally retained at the 3-month follow-up. Resiliency (i.e., perceptions of their ability to deal with stressful situations) show significant and positive gains as well. Anecdotal experience suggests that the adaptation of the program to different work settings and the use of the train-the-trainer models have helped to ensure that the programs are relevant and sustainable. In general, the implementation of these 2 programs has been successful, and we are encouraged by our preliminary results. We have been especially encouraged by the widespread adoption of these programs, as over 100,000 first responders in Canada have taken R2MR, and TWM has now reached over 40,000 employees, reflecting government, postsecondary institutions, and the private sector at the time of writing this article.

**Continuation of This Approach and Beyond**

It is now clear that the approach the OM workplace team adopted was successful and having tangible impact across Canadian workplaces. To date, approximately 140,000 people have received 1 or more of the programs described above. A lot of the draw for employers was the evidence-based and evidence-informed approach OM took to address the problem of stigma and poor mental health in the workplace. Workplaces, particularly in the first responder sector, gravitated to our approach in working with them to develop a program that was relevant and respectful of their needs, restrictions, and contexts.

As some of the larger evaluation projects wind down, OM has begun to address some of the issues that have arisen from scaling antistigma and mental health programming from limited sites to large-scale implementation and programs across Canada. Some of these issues are discussed in subsequent articles in this volume (i.e., Dobson et al.\textsuperscript{38}, Knaak et al.\textsuperscript{39}, Szeto et al.\textsuperscript{6}). One logistical issue is how to maintain the momentum the programs have generated in workplaces (and the learnings gained). Currently, “booster sessions” have been developed and being pilot tested at various sites. These boosters should serve the dual purpose of reinforcing the learnings from the programs as well as keeping employees thinking about mental health generally, sustaining the importance of mental health in the workplace. Other current OM endeavours include working with different organizations to develop and pilot more accessible forms of program delivery, including exploring blended approaches (i.e., online and face-to-face), or enhancing the current programming, such as the development of a version of R2MR for first responder families (see Dobson et al.\textsuperscript{38}).

Beyond this, OM has also taken a similar approach to address stigma and mental health in postsecondary students. The Inquiring Mind is a program that contains the core components of R2MR and TWM (i.e., stigma reduction, coping skills, and the mental health continuum model). This program was developed with a stakeholder committee composed of postsecondary students, faculty members, and student services staff, with extensive student consultation. Currently, The Inquiring Mind program is being pilot tested and evaluated at more than 15 universities and colleges in Alberta, Nova Scotia, New Brunswick, and Newfoundland. Despite initial successes, more work is still needed to address workplace mental health and the stigma associated with mental illnesses. For example, more clarity is needed in regards to the economic returns on implementation of anti-stigma and mental health programming in the workplace despite some positive research (see above). Similarly, more research is needed to examine the longitudinal effects of programming. This extends to both the impacts of programming at the individual level (e.g., stigma reduction, resiliency) and at the organizational level (e.g., culture surrounding mental health). Some recent research has shown the limitations of program retention beyond 12 months.\textsuperscript{40} These opportunities, as well as others, are what the OM workplace researchers hope to address as a part of the renewed mandate of the MHCC.

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**References**


Workplace Antistigma Programs at the Mental Health Commission of Canada: Part 2. Lessons Learned

Programmes anti-stigmatisation en milieu de travail de la Commission de la santé mentale du Canada : 2e partie - Leçons apprises

Andrew Szeto, PhD¹,², Keith S. Dobson, PhD¹,², Dorothy Luong, PhD³, Terry Krupa, PhD²,⁴, and Bonnie Kirsh, PhD²,⁵

Abstract
The Opening Minds Initiative of the Mental Health Commission of Canada has worked with many workplaces to implement and evaluate mental illness stigma reduction programs. This article describes the lessons learned from Opening Minds’ research and programming initiatives in the workplace target group and details some of the most valuable learnings from collaborating with workplace partners. These insights range from issues such as the recruitment of potential partners to the implementation of evaluation in the workplace. The lessons learned described here are not intended as the optimal ways of developing partnerships or conducting research in a workplace setting but are intended to highlight some of our experiences in implementing antistigma programming. These experiences are provided so that those who are in the same situation can draw from our learnings to make their efforts more efficient. To conclude, we discuss some of our thoughts in which the implementation of workplace mental illness stigma reduction programming should work towards in the future.

Abrégé
L’initiative Changer les mentalités de la Commission de la santé mentale du Canada a collaboré avec de nombreux milieux de travail à mettre en œuvre et évaluer des programmes de réduction de la stigmatisation en santé mentale. Le présent article décrit les leçons tirées des initiatives de recherche et de programmation de Changer les mentalités dans le groupe cible des milieux de travail, et explique certains des apprentissages les plus utiles obtenus de la collaboration avec les partenaires en milieu de travail. Ces leçons touchent des enjeux comme le recrutement de partenaires potentiels jusqu’à l’exécution de l’évaluation du milieu de travail. Les leçons apprises décrites ici ne se veulent pas des façons optimales de former des partenariats ou de mener une recherche dans un milieu de travail, mais elles visent à faire état de certaines de nos expériences de mise en œuvre de programmation anti-stigmatisation. Ces expériences sont présentées de sorte que ceux qui vivent la même situation puissent profiter de nos apprentissages et rendre leurs initiatives plus efficaces. En conclusion, nous discutons de certaines de nos idées sur l’endroit où la mise en œuvre de programmes de réduction de la stigmatisation de la santé mentale en milieu de travail devrait fonctionner à l’avenir.

Keywords
mental health, stigma, workplace

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This article describes many of the insights and learnings that have been obtained since 2010, when the Opening Minds (OM) initiative of the Mental Health Commission of Canada was formed (see Szeto et al1). Overall, our efforts to develop and evaluate evidence-based workplace projects and partnerships have been successful. Programs such as The Working Mind (TWM) and The Road to Mental Readiness (R2MR) are having a strong acceptance in both general workplace and first responder settings. The reach of these programs has exceeded our expectations and has encompassed hundreds of sites in various sectors and across most of Canada. Despite our successes, there has been a steep learning curve in taking on projects with employers and organizations of various sizes and types and importing an academic way of doing things to a workplace context. This article offers some of our experiences and lessons learned, not necessarily as the absolute or “best” ways to implement programs and conduct research in applied settings. Rather, we highlight some of our experiences so that others in our situation can maximize their time, effort, and efficacy without necessarily repeating some of the barriers and challenges we encountered.

The Recruitment and Adoption Processes

Although the OM workforce researchers were largely in place by mid-2010, our partnerships, program implementation, and research and evaluations did not really begin until approximately 2 years later. Despite a couple of early adopters, and although some workplaces were willing to discuss workplace mental health and mental illness stigma reduction, many were resistant to formally committing to program implementation and evaluation (this, despite the fact that the program would be offered at cost, the OM team would handle logistics, and the evaluation was offered as a “free” but required service). Our perception was that one of the largest factors that affected uptake by a company or organization was the extent to which the senior managers or executives acknowledged the potential impact of the stigma of mental illness and psychological health and safety in their workplace. Relatedly, other organizations did not see the benefits of reducing stigma or increasing awareness of mental health in the workplace, and some even believed that implementation of such programming would imply that there was a problem within the organization or leave it vulnerable to liability or lawsuits. In other cases, while they were willing to consider some form of program, they were resistant to the idea of evaluation, as this process might represent a formal documentation of what was previously more of a vague concern (and added to the time of workers away from their workplace duties). Suffice it to say, there was a lot of “door knocking” at the initial stages. In many cases, if a partnership was struck, the process from initial agreement to actual implementation was a long and time-consuming “courtship” process. Sometimes the process needed multiple levels of approval or multiple meetings with various levels of leadership. Other times there were delays in attaining approvals. It often took more time to implement and evaluate a program than was expected.

Our experience was that successful OM partnerships usually started with an employee at the managerial level, such as a human resources (HR) manager. These individuals understood the importance and effects of mental health and mental illness in the workplace and were often enthusiastic about a partnership with Opening Minds. In most cases, however, these individuals needed approval from senior executives to proceed with a partnership agreement or the delivery of an intervention or an evaluation, and sometimes this is where progress was slowed or stalled. In contrast, at other sites, senior-level executives demonstrated comprehension of the impact of mental illness in the workplace and endorsed psychological safety in the workplace. In these cases, the process from initial interest to implementation of interventions and evaluations progressed with minimal delays. In addition, support by senior executives created a culture that was accepting of interventions or evaluations, as well as mental health more generally. One of the most important lessons learned was that while general approval is needed from senior executives, there is a need for specific endorsement of a given antistigma initiative. If this precursor is not present, the researchers and program providers need to take the time to develop and obtain executive-level endorsement so that the partnership and subsequent actions progress more smoothly.

Sometimes, existing partnerships stalled or ended due to factors that were largely out of anyone’s control or due to unforeseen circumstances. For example, reduced activities often occurred during the summer months, and holiday seasons sometimes delayed planning and progress. Another barrier that affected some potential partnerships was organizational change and restructuring or leadership change. On several occasions, potential partners had expressed interest in partnering with Opening Minds, but workplace mental health had ceased to be an organizational priority as a result of subsequent changes to the organization or leadership. Similarly, when the “champion” of the partnership at the company or organization left, this sometimes dramatically affected the pace with which the partnership proceeded and sometimes led to existing partnerships to stall or end.

Program Implementation and Evaluation

Challenges and barriers also existed after partnerships had been formed and implementation agreed upon. In our experience, research in the workplace setting can result in rich information, but many factors are not under the researchers’ control, especially compared to research conducted in a laboratory setting. The following are some of our lessons with respect to program implementation and evaluation.

Participation in Program

Many of the programs offered at partner sites had enrolment rates of less than 50%. This rate was due to the voluntary
nature of participation for many of the programs offered in the workplace. Although it is unclear what the impact of low enrollment on stigma reduction and organizational culture change is, we suspect it is not a positive one. The fact that antistigma programs are optional, in and of itself, sends the signal that the organization has not fully accepted the importance of the topic. Low enrollment in an antistigma intervention can therefore maintain the status quo and reduce the shift to a culture of acceptance regarding mental illness, a finding that has been subsequently supported in qualitative research.\(^2\) There also needs to be support from senior leadership to ensure employees’ willingness to participate in evaluations and ensure uptake of a program. A program “champion,” especially at the senior leadership role, helps to persuade leadership peers to accept the program and encourage employees to attend.\(^2\) At one of our sites, a departmental vice president (VP) discussed the importance of mental health and participation in programs at various meeting and town halls. This endorsement was associated with an almost 100% program participation in the VP’s department of approximately 300 personnel. Another approach may be to strongly recommend a training program of this nature or even to build it into ongoing professional development or training that is needed to be promoted or once promoted.

Similarly, there needs to be an increased sense of expected and mandatory participation, as well as dedicated time in the workplace for participation. At sites where this has occurred, higher uptake has been associated with more ease in program implementation and evaluation. Sites where programs were embedded as part of ongoing training had the highest uptake (e.g., at police and other first responder sites). Embedding antistigma programs into the normal training cycle, and thus making them quasi-mandatory or normative, is ideal to facilitate cultural change in the workplace. While mandatory or universal program delivery may not be viable for all organizations, voluntary attendance is less effective in engaging employees and may end up as a program for employees who have an interest in mental health or already have less stigma.

**Evaluation Research**

Organizational support and a culture of “expectation” of participation are also important factors to increase the participation in evaluations. Careful attention to recruitment processes is also important. The ability to conduct evaluations onsite and right at the time of the program’s delivery increases participation. In addition, dedicated time for the completion of evaluation measures increases participation, as it reflects corporate or organizational interest and relies less on individual goodwill to obtain evaluation data.

A common problem that we encountered in our OM work was that evaluation was not prioritized within the organization. Participation in the project not only involved organizations to sign up to offer a program but involved program evaluation that went beyond “internal program improvement.” Organizations had to be a part of a larger evaluation research project that involved getting ethics clearance, with some occasions needing clearance from the internal workplace ethics board in addition to the university-based research ethics board. This process, although generally supported by organizations, needed to be explained to the organization and increased the timeline for the projects.

Workplace research needs to align with the existing culture and established processes in each workplace. This type of applied research sometimes requires trade-offs such as lack of research control (e.g., random assignment) in order to make logistical sense in the organization, maximize the generalizability of results, and ensure realism in the obtained results. For example, in some partner police organizations, program implementation was restricted by specific training schedules. In many cases, the program was given a specified amount of time, which left little time for participants to complete the evaluation instruments. Another example of lack of control pertains to our general research design. Ideally, we would have liked to conduct a randomized control trial at many of our partner sites. However, organizations were largely unreceptive to this request, and where the possibility existed, logistics, timing, and other factors prevented this type of research design. In large part, our partnerships were cooperative in nature, which required a balance between the needs and goals of the program evaluation and the goals and needs of the organization. This generally resulted in compromise and the research team relinquishing control over some aspects of the program and evaluation.

Another lesson learned was the need to be explicit about the research process, particularly the issue of confidentiality. It is incumbent on the researchers to address the concerns of the participants as well as the organizations themselves on issues of confidentiality. These concerns were generally alleviated when the evaluation process was explained in greater detail and how survey instruments were anonymous and would not be given to employers for review. In cases where evaluation reports were created for the partner organization, it was stressed that all results would be aggregated and could not reveal responses from individual participants.

Finally, one strategy we used in the evaluations to maintain anonymity but retain ability to connect pre-, post-, and follow-up data was to develop a system whereby the participants could generate a unique identification code through 3 pieces of what should be permanent information (e.g., the first 2 letters of the mother’s maiden name). Unfortunately, many participants did not complete this process carefully, which resulted in considerable nonmatching evaluation questionnaires over the multiple time points. To adequately measure change over time, as a function of the intervention, and conduct the appropriate statistical analyses, each participant’s questionnaires need to be linked. A related problem is participant attrition, in that some participants only completed the first of 2 or 3 questionnaires (e.g., just before and after the R2MR\(^2\) or TMW\(^4\) workshop). Ideally, a dedicated
person could organize and coordinate the research at each site, to ensure proper completion of all sets of questionnaires and reduce attrition rates. In the absence of such a person, clear communications are needed to reduce both nonmatches and attrition.

Communication

Another factor that affected intervention implementation and evaluation was the nature of the communications plan. Although this problem occurred only in a small number of sites, there were some communication problems related to program uptake, as well as confusion surrounding program elements, how to participate, and methods to complete evaluations. In contrast, a clear communications plan helps to create enthusiasm for the initiative and makes it clear that the current initiative is a part of continuing actions to address employee mental health in the workplace. Such a communications plan and its implementation may be best left to internal organizational units (i.e., communications department) if one exists or a coordinated approach with an internal stakeholder or champion who may know the most appropriate way to promote the project.

Increasing Program Efficacy

Despite the above challenges, our experience was generally that once an organization adopted a program and had formally agreed to the OM evaluation process, a best faith effort was made. Indeed, many organizations wanted context-specific and tailored programs to maximize the employees’ identification with and adoption of the program’s ideas. As stated above, the train-the-trainer model required employees from the local organization to be trained and to deliver the program. Furthermore, the training and handout materials that were developed included the opportunity for organizations to add their own logo and identification. Our experience was that another key aspect of identification was the production and utilization of videos that were from the workplace sector in which the program was used. Thus, we had videos created with police officers when the program was presented in the policing context, firefighters when working with fire departments, and so on. Although the content of the program was therefore consistent across domains, this customization process allowed participants to better identify with the program and its messages. Beyond the standardized R2MR and TWM programs, in some cases, internal organizational champions did speak to their lived experience and offered contact-based education that was very powerful and relevant for employees. Some caution is needed in these cases so that the person conveying the message is credible and the message content is consistent with best practices.5,6

As the R2MR and TMW programs evolved, it became clear that some tangible tools were needed. As such, the program includes a workbook for each participant, as well as a wallet-sized card that quickly summarizes the continuum model of mental health, the coping strategies that are embedded in each program, and local resources for the workplace where the program was delivered.

One of the emergent needs for the program was for some form of continuing education or booster training. Thus, while the core program was generally viewed favorably, and the feedback suggested that the materials were useful, some type of refresher materials was needed. We were advised that it would not be practical to have employees retake the core program but that some form of a quick and accessible version of the program materials would be a benefit. The OM initiative of the Mental Health Commission of Canada has now completed a contract to create a web-based delivery mechanism for booster training of the R2MR program. This booster program will be evaluated, and if its results are positive, other web-based delivery of training is possible. As with all other aspects of the OM workforce programs, this development is being conducted in a purposeful and evidence-based fashion to ensure that the work meets local need and has maximal opportunity for success.

The Future of Workplace Antistigma Programs

The experience of the workplace Opening Minds program has been enlightening in many respects. The program has moved from a position of trying to find workplaces that might be willing to conduct workplace mental health programs, without any clear measures and limited success, to having 2 well-established and widely used programs that have been disseminated to a wide variety of workplace settings. In doing so, we have had some stumbles, such as evaluating programs that were unsuccessful and having discussions with organizations that ultimately withdrew from action. We can be criticized for not insisting on a randomized trial in at least some settings but instead allowing open trials and broad roll-out of programs, which precludes strong evaluation of the program’s efficacy. We are fortunate to be in the process of now conducting a first randomized trial, which will provide improved efficacy data.

Notwithstanding the above limitations, the Opening Minds has had remarkable success in the development, adaptation, and dissemination of workplace mental health programs for both first responder groups and the general workplace at large. These programs use evidence-based elements such as contact-based education, group discussion, and other methods that have validity to reduce stigma, communication strategies to address mental health issues in the workplace, psychoeducational aspects of mental health literacy using a nondiagnostic and nonmedicalized framework, coping skills from cognitive-behavioral therapy, and application of reasonable workplace accommodations. The use of a train-the-trainer model helps to ensure that there are staff members in the businesses that adopt program, to continue their delivery with high fidelity and competency.
One of our major implementation insights is the critical importance of cultural shifts within organizations to permit discussion related to mental illness in the workplace, to signal a receptivity to enacting programs that treat mental and physical illness in the same manner, and to facilitate the training, growth, development, retention, and recognition of employees who either have had or may have a mental illness. Ultimately, it is this type of shift that leads to the ability to openly talk about mental health problems without fear of stigma, retribution, or discrimination. This type of shift is not easy, and it does take time and perseverance, but it can happen. Our belief is that such a cultural shift leads to business efficiency such as improved return to work, reduced absenteeism and presenteeism, and a financial return on investment. We continue to work with agencies to try to operationalize and directly measure the return on investment model by pairing them with researchers with expertise in financial analysis to collect relevant data.

Of most importance is that workplace stigma reduction and mental health education programs are of direct benefit for those who deal with these issues and their families. All adults seek meaning and value in their lives, and for most adults, the workplace and the development of a career are a significant part of that meaning. A civil society such as Canada has the ability and the moral necessity to address these issues, and we are pleased to have taken a small part of action on the behalf of employed Canadians.

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The Road to Mental Readiness for First Responders: A Meta-Analysis of Program Outcomes

En route vers la préparation mentale pour les premiers intervenants : une méta-analyse des résultats du programme

Andrew Szeto, PhD¹, Keith S. Dobson, PhD¹, and Stephanie Knaak²

Abstract

Objectives: First-responder mental health, especially in Canada, has been a topic of increasing interest given the high incidence of poor mental health, mental illness, and suicide among this cohort. Although research generally suggests that resiliency and stigma reduction programs can directly and indirectly affect mental health, little research has examined this type of training in first responders. The current paper examines the efficacy of the Road to Mental Readiness for First Responders program (R2MR), a resiliency and anti-stigma program.

Methods: The program was tested using a pre-post design with a 3-month follow-up in 5 first-responder groups across 16 sites.

Results: A meta-analytic approach was used to estimate the overall effects of the program on resiliency and stigma reduction. Our results indicate that R2MR was effective at increasing participants’ perceptions of resiliency and decreasing stigmatizing attitudes at the pre-post review, which was mostly maintained at the 3-month follow-up.

Conclusions: Both quantitative and qualitative data suggest that the program helped to shift workplace culture and increase support for others.

Abridged

Objectifs : La santé mentale des premiers intervenants, spécialement au Canada, est un sujet d’intérêt croissant étant donné le taux élevé de mauvaise santé mentale, de maladies mentales et de suicides. Bien que la recherche suggère généralement que la résilience et les programmes de réduction de la stigmatisation puissent influer directement et indirectement sur la santé mentale, la recherche a très peu étudié ce type de formation chez les premiers intervenants. Le présent article examine l’efficacité du programme En route vers la préparation mentale pour les premiers intervenants (RVPM), un programme de résilience et d’anti-stigmatisation.

Méthodes : Le programme a été vérifié à l’aide d’un concept de suivi avant, après et à 3 mois auprès de 5 groupes de premiers répondants, dans 16 endroits.

Résultats : Une approche méta-analytique a servi à estimer les effets généraux sur la résilience et la réduction de la stigmatisation. Les résultats indiquent que le programme RVPM a été efficace pour accroître les perceptions de la résilience chez les participants et pour réduire les attitudes stigmatisantes au suivi avant, après et à 3 mois, où elles se sont maintenues pour la plupart. Les données quantitatives et qualitatives suggèrent également que le programme a eu un effet sur le changement de culture en milieu de travail et sur le soutien accru des autres.

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**Conclusions**: La discussion porte sur une partie du contenu du programme et sur les facteurs de mise en œuvre qui ont pu mener aux résultats actuels.

**Keywords**
absenteeism, meta-analysis, stigma, evaluation

**Introduction**

There has been a recent interest in the mental health of first responders, highlighted by media reports of poor mental health and high rates of suicide in these groups. In addition to media reports of stress, trauma, and self-injury in these groups, there is evidence that first responders have a higher incidence of mental illness than the general population. For example, a recent study\(^1\) reported that 44.5% of a sample of 5,813 Canadian first responders had a positive screen for at least one mental illness on a battery of self-reported diagnostic measures. A recent meta-regression of 29 studies suggested that 10.0% of first responders currently experience post-traumatic stress disorder (PTSD).\(^2\) Similarly, Carleton and colleagues found that 23.2% of their sample screened positively for PTSD. Comparatively, these are much higher prevalence rates than those found in the general population, where, for example, the 1-year prevalence of mental illness is about 20%.\(^3,4\) It should be noted, however, that many of the first-responder studies cited above used convenience samples and self-report measures rather than representative population-based samples and diagnostic interviews to generate their estimates of disorders.

Other research suggests that first responders are exposed to high levels of stress in their work environments. For example, Johnson et al.\(^5\) examined the level of psychological symptoms indicative of stress in 26 occupations and found that Fire Services personnel, Paramedics, and Police Services personnel ranked third, fourth, and eleventh, respectively. Paramedics had the worst physical symptoms associated with stress, whereas prison officers, paramedics, and police workers were ranked first, second, and third, respectively, in terms of lower job satisfaction. In a large survey of about 4,500 police officers, Duxbury and Higgins\(^6\) found that 50% of their sample rated their perceived stress as high, with 46% in the moderate range. These authors also found that 30% of their sample had a high depressed mood and 40% a moderate depressed mood. In the workplace of paramedics, both operational and organizational stressors, such as excessive demand/workload, a lack of time for rest, a lack of control over job situation, a lack of decision making ability (e.g., “hierarchical bureaucracy”), and a lack of support from the employer, exacerbate the physical and psychological demands.\(^7\) Taken together, the literature suggests that first responders have high-stress occupations that are related to worse mental health outcomes and a higher incidence of mental illness.

A logical extension of these conclusions is that the implementation of programming to improve mental health and increase the individuals’ ability to manage stress or deal with challenges would be beneficial for this population. Similarly, a program that reduces the stigma associated with mental illness may help to increase early help-seeking and create a supportive mental health culture, and therefore potentially benefit organizational productivity and financial well-being.\(^8,9\) For example, a recent meta-analysis in first responders found that stigma is a barrier to care, with particular concerns about confidentiality and its impact on one’s career.\(^10\)

Research on mental health promotion and prevention in the workplace has generally demonstrated positive outcomes.\(^11\) For example, one review showed that 80% of the primary interventions aimed at reducing burnout were successful, with the effect sustained in the long-term.\(^12\) In a systematic review of 24 available workplace mental health prevention studies from 2001 to 2006, Corbière et al.\(^13\) found that almost 70% of the studies had positive effects on psychological outcomes (e.g., stress, mental illness). Further, 10 of 17 studies that included workplace measures (e.g., job satisfaction) showed positive effects in that domain. Workplace mental illness anti-stigma programs also generally lead to reduced stigma and increased knowledge and support; albeit, methodological and design issues are concerns in the extant literature.\(^14\)

Despite evidence that prevention-focused mental health programs increase resilience and improve mental health, along with the need to reduce mental illness stigma in first responders, there is scant research in this domain. Andersen and colleagues\(^15\) have argued that, although resilience training is relatively new, evidence does suggest that police organizations should implement resilience training more widely. Gayton and Lovell\(^16\) similarly noted that little attention has been given to resilience training for paramedics despite the potentially positive impact of this type of training both financially and in terms of individual wellbeing. Finally, as indicated before, Haugen et al.\(^10\) found that stigma is an issue for first responders and that it has negative consequences in terms of reduced help-seeking. Given these lines of research, it seems evident that implementation of a program that addresses resilience and stigma reduction in first responders is warranted and may offer positive impact (e.g., improved mental health).

**The Road to Mental Readiness for First Responders and the Current Study**

The current study is an evaluation of the efficacy of the Road to Mental Readiness (R2MR) for First Responders program.
This program addresses the need for increased resiliency training in first responders as well as providing ways to reduce the stigma of mental illness. The R2MR for First Responders was developed by the Canadian Department of National Defence (DND) in conjunction with the Calgary Police Service (CPS) and the Opening Minds Initiative of the Mental Health Commission of Canada. It was adapted from the R2MR program developed by the DND (see Szeto and Adair17; Szeto et al.8). The development process started in early 2013 with a focus on police personnel, and was spearheaded by the CPS. The pilot R2MR for First Responders program was finalized between September and December, 2013, with training for the program trainers initiated in December 2013. The program was implemented at several police organizations in 2014 with a larger roll out of the program in 2015. During this time, the program was also adapted for Paramedics, Fire Services personnel, 911 call centres, and Corrections Officers. The current study reports on this wider dissemination of the R2MR program to various first-responder groups.

The program has been described extensively in other publications (e.g., Szeto & Adair17; Szeto et al.8; as well, for DND’s version of the program see http://www.forces.gc.ca/en/caf-community-health-services-r2mr/index.page). The R2MR Program for First Responders is a 4-h program intended for frontline staff. The program contains 3 main components: stigma reduction through video contact-based education, the Mental Health Continuum Model, and the “Big 4” coping and resilience skills. Two of the main goals of the program are to decrease mental illness stigma and increase resiliency. An 8-h version of the program also exists for supervisors and leaders with the same core components as well as additional discussions and skill building tools for supervisors and leaders to take care of their staff at various stages of the Mental Health Continuum Model. The extended version also incorporates ways to create a supportive working environment and describes how to follow-up after stressful or critical incidences.

This paper reports on the results of a pooled analysis from 16 replications of the R2MR for First Responders program for numerous Canadian first-responder groups who undertook the program between February 2015 and June 2016. It was expected that program completion would decrease mental illness stigma and increase resiliency when compared with assessments conducted before the program. These hypotheses were tested with study-level meta-analysis methods, with data assessed both immediately after the program and at the 3-month follow-up.

### Methods

**Data Sources, Participants, and Procedures**

Details about the various program implementations are provided in Table 1, including the number of participants and survey completions across the 16 sites. All implementations were evaluated using a non-randomized quasi-experimental pre-post follow-up design. Further, except for sites 9 and 16, all sites included a 3-month follow-up survey. Surveys were linked across time points while preserving confidentiality through a process whereby participants answered 4 questions at each time point (e.g., the sixth digit of home phone number) to generate a pseudorandom code.

Participants completed the R2MR for First Responders program (either the 4 or 8-h version) as a part of their organizational training. All participants completed the pre-intervention questionnaire package, including consent forms before undertaking the program. The post-intervention questionnaire package was completed at the end of the program. At this time point, participants provided their email address for the 3-month follow-up questionnaire. At about 3 months, participants were sent a link via email to access the follow-
up questionnaire package online. All participants were sent 2 reminder emails. Ethics approval for this evaluation was granted by the University of Calgary Conjoint Faculties Research Ethics Board (ID: REB14-1611).

Primary Outcomes

Two primary outcomes were identified for the program: reduction in mental illness stigma and improvement in resiliency skills. Stigma was measured using the Opening Minds Scale for Workplace Attitudes (OMS-WA). The OMS-WA is a 22-item scale designed specifically for workplace environments to assess attitudes, stereotypes, and behavioural intentions toward persons with mental illness. Examples of scale items included: “Most employees with a mental illness are too disabled to work,” “Employees with a mental illness often become violent if not treated,” “I would help a co-worker who got behind in their work because of a mental illness,” “You can’t rely on an employee with a mental illness,” and “I would try to avoid an employee with a mental illness.” There were 5 subscales on the OMS-WA: desire for avoidance, perceptions of dangerousness and unpredictability, attitudes about mental illness in the workplace, attitudes towards helping people with a mental illness, and beliefs about responsibility for having a mental illness. All items were scored on a Likert-like scale from 1 to 5, where lower scores indicated less stigma. Mean scores were used for the full scale and each of the 5 subscales. Previous studies have shown that this measure has good internal consistency (i.e., $\alpha > 0.70$) (e.g., Szeto et al.18; Szeto et al.19).

The outcome of improvement in resiliency skills was assessed with a 5-item scale, developed specifically for the current evaluations. The scale captured participants’ perceptions of their level of skill and ability to recover from adverse or traumatic situations. Scale items included “I have the skills to cope with traumatic events or adverse situations,” and “I believe I can recover quickly if I am negatively affected by traumatic events or adverse situations.” Responses were scored on a Likert-like scale from 1 to 5, with higher scores indicating greater perceived resiliency skills.

Additional Outcomes

Three additional outcomes were explored. First, stigma and resiliency skills were evaluated at the 3-month follow-up. Second, 4 questions explored the extent to which participants’ understanding of workplace mental health improved after the program, and their willingness to discuss mental health in general, to seek help, and support colleagues regarding mental health in the workplace. These questions related to workplace mental health were rated on a 5-point Likert-like scale from strongly agree to strongly disagree, and participants were asked these questions at pre-test and at the 3-month follow-up. The statements were: “I understand how mental health problems present in the workplace;” “I plan to seek help for my mental health problems, when needed;” “When I am concerned, I ask my colleagues how they are doing;” and “I talk about mental health issues as freely as physical health issues.” Finally, at the 3-month assessment, participants were asked about the extent to which they were using the skills and knowledge learned through the R2MR program. Participants were asked if they had used any of what they had learned in the R2MR program at home or at work (yes/no response), and also to describe their response in more detail. Open-ended responses were coded for themes and analysed by producing frequency tables.

Although the primary outcomes may be viewed as a direct assessment of program impact, the additional outcomes were identified to assess changes over the longer term, which may be one way to glimpse whether broader organizational or cultural shifts regarding workplace mental health might be taking place. It should be noted that the evaluation surveys contained numerous additional questions that were not analysed for the purposes of this report. The full set of measures used for these evaluations can be found on The Working Mind website under site reports (http://theworkingmind.ca/working-mind#Research).

Results

Approach to Data Analysis

The analysis approach was 2-fold and conducted using STATA v.12. First, using an effect measure of pre- to post-test change, the “metan” command was used to show outcomes by study, using a forest plot to visually display program outcomes. A random effects model was chosen, as such models account for both random variability and the variability in effects among data sets. Studies were weighted based on the inverse of the variance of the study’s estimated effect. An assessment of the consistency of the effect is a key advantage of the meta-analysis technique, and this approach permits a consideration of program fidelity. Both the Q statistic and the $I^2$ test were used to examine heterogeneity of the results across the studies.21,22 $I^2$ describes the percentage of variation due to heterogeneity rather than chance, where a value of 0% indicates no observed heterogeneity, values between 25% and 50% may be considered “low,” those between 50% and 75% as moderate, and those between 75% and 100% as large.22

Second, a pooled dataset was produced to explore participant-level fixed effects on program outcomes. A random intercept linear mixed model approach was used for analysis, with study also being modelled as a random effect. This approach supported the modelling of participant characteristics as independent variables, with the random intercept used to account for random variability across different studies. Participant characteristics were entered separately. Tests included pre-post change by participant type (frontline staff or supervisor), first-responder type (police, firefighters,
Preliminary Analysis

The dataset for the pooled analysis included 5,598 participants across 16 sites, with a total of 4,649 completed and matched pre-post surveys. Attrition was mainly due to difficulties in matching some of the pre and post surveys (i.e., inconsistencies in responses across the identifier questions). The number of matched surveys at follow-up was 845, with a total of 1,154 follow-up surveys completed. The main reason for attrition at follow-up was non-response; although, again, there were some difficulties in survey matching. We analysed the non-response for the follow-up sample, and found that participants who completed all 3 surveys had lower (i.e., more positive) baseline stigma scores than did participants who did not complete all 3 surveys (1.92 and 1.99 respectively, \( p < 0.001 \)). Those who completed all 3 surveys were also on average slightly older (41.5 and 40.0 years, respectively, \( p < 0.001 \)). Women were also more likely than men to complete all 3 surveys (non-completers: male, 68.3%, female, 31.7%; completers: male, 55.9%, female, 44.1%, \( p < 0.001 \)). No significant differences in marital status, education level, or baseline resiliency scores were observed between those who completed all 3 surveys and those who did not. Two sites (study 9 and 16, see Table 1) did not issue a follow-up survey.

Cronbach’s alphas for the OMS-WA were 0.91 at pre-test, 0.93 at post-test, and 0.92 at follow-up. For the OMS-WA subscales, Cronbach’s alphas were acceptable or near acceptable at all time points (social avoidance: 0.85, 0.89, 0.89; danger/unpredictability: 0.74, 0.80, 0.80; work-related beliefs: 0.79, 0.80, 0.81; helping behaviour: 0.61, 0.69, 0.69; responsibility for one’s illness: 0.68, 0.76, 0.77). The subscales for helping behaviour and responsibility for one’s illness contain few items (4 and 3, respectively), which likely contributed to lower internal reliability for these subscales. Values for Cronbach’s alpha for the resiliency skills scale were 0.84 at pre-test, 0.87 at post-test, and 0.85 at follow-up, indicating a high level of internal consistency at all 3 time points. An examination of a histogram and the Q–Q plot showed a normal distribution of change scores for both primary outcome measures. Table 2 shows the participant characteristics for the pooled sample.

Primary Outcomes

Figure 1 shows the forest plot of the individual program effects for the OMS-WA measure. Program effect sizes or standardized mean differences (SMDs; i.e. Cohen’s d) ranged from 0.12 to 0.45, with an overall combined effect size of 0.26. The test of SMD = 0 revealed a z-score of 12.43, which was significant at the 95% confidence interval (CI; \( p < 0.001 \)). Heterogeneity across studies was not observed (Heterogeneity \( \chi^2 (Q) = 11.99, df = 15, p = 0.680; I^2 = 0.0% \)).

For the pooled sample, the OMS-WA mean score at pre-test was 1.97 (SD = 0.47). At post-test, the score was 1.85 (SD = 0.49), representing an overall mean stigma reduction of 0.12 scale points. Table 3 provides the results of the mixed model analysis for the pre to post change on the OMS-WA. Statistically significant reductions in stigma were observed for the total scale and all subscales. The analysis of participant factors found no difference in the outcomes by participant type (frontline vs. supervisor), age, education, marital

Table 2. Summary of Participant Characteristics (n = 4649).

<table>
<thead>
<tr>
<th>Variable</th>
<th>%</th>
<th>(n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Responder Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrections</td>
<td>9.0%</td>
<td>(418)</td>
</tr>
<tr>
<td>Emergency Services (9-1-1)</td>
<td>3.9%</td>
<td>(192)</td>
</tr>
<tr>
<td>Fire Services</td>
<td>17.7%</td>
<td>(821)</td>
</tr>
<tr>
<td>Police Services</td>
<td>56.5%</td>
<td>(2,623)</td>
</tr>
<tr>
<td>Paramedics</td>
<td>13.0%</td>
<td>(605)</td>
</tr>
<tr>
<td>Participant type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frontline staff</td>
<td>75.8%</td>
<td>(3,449)</td>
</tr>
<tr>
<td>Supervisory staff</td>
<td>26.4%</td>
<td>(1,120)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>65.2%</td>
<td>(3,029)</td>
</tr>
<tr>
<td>Female</td>
<td>33.2%</td>
<td>(1,542)</td>
</tr>
<tr>
<td>No response</td>
<td>1.7%</td>
<td>(78)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>0.2%</td>
<td>(10)</td>
</tr>
<tr>
<td>High school</td>
<td>13.4%</td>
<td>(624)</td>
</tr>
<tr>
<td>Some post-secondary/Non-university certificate</td>
<td>41.4%</td>
<td>(1,926)</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>34.7%</td>
<td>(1,611)</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>7.9%</td>
<td>(367)</td>
</tr>
<tr>
<td>No response</td>
<td>2.3%</td>
<td>(111)</td>
</tr>
<tr>
<td>Age group (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>17.9%</td>
<td>(831)</td>
</tr>
<tr>
<td>30-39</td>
<td>31.9%</td>
<td>(1,485)</td>
</tr>
<tr>
<td>40-49</td>
<td>28.5%</td>
<td>(1,323)</td>
</tr>
<tr>
<td>50-59</td>
<td>16.5%</td>
<td>(767)</td>
</tr>
<tr>
<td>60+</td>
<td>2.6%</td>
<td>(123)</td>
</tr>
<tr>
<td>No response</td>
<td>2.3%</td>
<td>(120)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>16.7%</td>
<td>(778)</td>
</tr>
<tr>
<td>Married</td>
<td>59.6%</td>
<td>(2,770)</td>
</tr>
<tr>
<td>Divorced or Separated</td>
<td>7.6%</td>
<td>(355)</td>
</tr>
<tr>
<td>Common Law</td>
<td>13.6%</td>
<td>(634)</td>
</tr>
<tr>
<td>Widowed</td>
<td>0.6%</td>
<td>(27)</td>
</tr>
<tr>
<td>No response</td>
<td>1.9%</td>
<td>(85)</td>
</tr>
<tr>
<td>Self-rated mental health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>0.8%</td>
<td>(38)</td>
</tr>
<tr>
<td>Fair</td>
<td>6.2%</td>
<td>(288)</td>
</tr>
<tr>
<td>Good</td>
<td>28.9%</td>
<td>(1,343)</td>
</tr>
<tr>
<td>Very good</td>
<td>41.0%</td>
<td>(1,905)</td>
</tr>
<tr>
<td>Excellent</td>
<td>20.1%</td>
<td>(936)</td>
</tr>
<tr>
<td>No response</td>
<td>3.0%</td>
<td>(139)</td>
</tr>
</tbody>
</table>
status, or self-rated mental health. Significant differences were found for gender (more improvement for men) and first-responder type (more improvement for police). A repeat of the mixed model analysis including a baseline score as a control variable resulted in non-significant results for both gender ($p = 0.97$) and first-responder type ($p = 0.37$).

Table 4 shows the results of the mixed model analysis for the pre to post change on the resiliency skills scale. The mean score for resiliency skills was 3.65 (SD = 0.64) at pre-test and 3.84 (SD = 0.60) at post-test, representing an overall mean improvement of 0.19 scale points, which was statistically significant at the 95% CI. No differences in outcome was found for age, education, marital status, gender, or first-responder type. A significant difference was found for participant type, with a greater improvement observed among supervisors. A significant difference was found for self-rated mental health, where a lower self-rated mental health correlated with a larger improvement in resiliency skills. Differences persisted when the mixed model analysis was repeated with the baseline score included as a control variable. Figure 2 shows the forest plot of the individual program effects for resiliency skills outcomes. Program effects ranged from 0.15 to 0.49 (SMD), with an overall combined effect size of 0.32 ($z = 12.95$, $p < 0.001$). The Q test for heterogeneity across the studies was not significant ($Heterogeneity \chi^2 (Q) = 18.73$, df = 15, $p = 0.23$), and shows an $I^2$ in the very low range (19.9%).

**Additional Outcomes**

A total of 1,179 follow-up surveys were completed, 845 (72%) of which could be matched to corresponding pre and post surveys. Table 5 shows the results of the post to follow-up analysis for the OMS-WA total scale and subscales, the resiliency skills scale, and the pre to follow-up change for the 4 statements pertaining to mental health knowledge and
intentions in the workplace. Reductions in stigma were maintained until the final follow-up for the total scale and for the 2 subscales of avoidance and danger/unpredictability. Additional significant improvements were observed for the subscales of work-related beliefs and responsibility for one’s illness. The improvement in the helping behaviour subscale was not retained at the final follow-up. An analysis of participant factors showed the loss in gain on the helping subscale was greater for supervisors than for frontline staff (coefficient = 0.109; SE = 0.053; z = 2.04; p = 0.041; constant = −0.215).

A reduction in reported resiliency skills was observed from post to follow-up; although, the follow-up scores were still significantly improved over those at baseline (coefficient = −0.134; SE = 0.24; z = −5.63; p < 0.001). Scores for the resiliency skills at the 3 time points were pre (baseline) = 3.61 (SD = 0.64), post-test = 3.83 (SD = 0.60), follow-up = 3.76 (SD = 0.61) (n = 793 matched). An analysis of participant groups showed that Fire Service participants had better retention of resiliency skills scores as compared with the other first-responder groups (coefficient = −0.088; SE = 0.042; z = −2.11; p = 0.035; constant = 0.093). There were no other post- to follow-up differences.

The items pertaining to participants’ mental health in the workplace, intentions towards seeking help, and behaviours related to openness and supporting fellow colleagues were all significantly improved from baseline to follow-up (see Table 5). Scores were: Q1: baseline = 3.35 (SD = 0.80), follow-up = 3.77 (SD = 0.60); Q2: baseline = 3.78 (SD = 0.76), follow-up = 3.99 (SD = 0.89); Q3: baseline = 4.09 (SD = 0.64), follow-up = 4.18 (SD = 0.55); Q4: baseline = 3.25 (SD = 1.04), follow-up = 3.45 (SD = 0.97). Greater improvements for the question, “I understand how mental health issues as freely as physical health issues,” were observed among Fire Services as compared with other first-responder groups (coefficient = −0.243; SE = 0.098; z = −2.35; p = 0.017; constant = −0.362). Somewhat lower levels of improvement were also observed among participants in the workplace, intentions towards seeking help, and behaviours related to openness and supporting fellow colleagues were all significantly improved from baseline to follow-up (see Table 5). Scores were: Q1: baseline = 3.35 (SD = 0.80), follow-up = 3.77 (SD = 0.60); Q2: baseline = 3.78 (SD = 0.76), follow-up = 3.99 (SD = 0.89); Q3: baseline = 4.09 (SD = 0.64), follow-up = 4.18 (SD = 0.55); Q4: baseline = 3.25 (SD = 1.04), follow-up = 3.45 (SD = 0.97). Greater improvements for the question, “I understand how mental health issues as freely as physical health issues,” were observed among Fire Services as compared with other first-responder groups (coefficient = −0.243; SE = 0.098; z = −2.35; p = 0.017; constant = −0.362). Somewhat lower levels of improvement were also observed among participants in the workplace, intentions towards seeking help, and behaviours related to openness and supporting fellow colleagues were all significantly improved from baseline to follow-up (see Table 5).

### Table 3. Random Intercept Mixed Model Regression: OMS-WA Pre to Post-Change and Effect of Participant Characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Coef</th>
<th>SE</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scale</td>
<td>0.123</td>
<td>0.008</td>
<td>15.87</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Social distance/avoidance</td>
<td>0.128</td>
<td>0.010</td>
<td>12.94</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Dangerousness/unpredictably</td>
<td>0.207</td>
<td>0.013</td>
<td>16.18</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Work Beliefs</td>
<td>0.091</td>
<td>0.012</td>
<td>7.47</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Helping Behaviour</td>
<td>0.108</td>
<td>0.010</td>
<td>10.61</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Responsibility for Illness</td>
<td>0.055</td>
<td>0.007</td>
<td>7.55</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Supervisor vs Frontline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frontline staff</td>
<td>−0.009</td>
<td>0.011</td>
<td>−0.78</td>
<td>0.438</td>
</tr>
<tr>
<td>Supervisor (constant)</td>
<td>0.131</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Responder Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police</td>
<td>0.030</td>
<td>0.014</td>
<td>2.19</td>
<td>0.028</td>
</tr>
<tr>
<td>Other (constant)</td>
<td>0.106</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.014</td>
<td>0.006</td>
<td>2.54</td>
<td>0.011</td>
</tr>
<tr>
<td>Female (constant)</td>
<td>0.114</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yrs from 20</td>
<td>−0.001</td>
<td>0.001</td>
<td>−1.61</td>
<td>0.107</td>
</tr>
<tr>
<td>20 yrs old (constant)</td>
<td>0.136</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor Degree or higher</td>
<td>0.011</td>
<td>0.009</td>
<td>1.22</td>
<td>0.223</td>
</tr>
<tr>
<td>Less than Bachelor (constant)</td>
<td>0.118</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/common law</td>
<td>−0.001</td>
<td>0.001</td>
<td>−0.09</td>
<td>0.925</td>
</tr>
<tr>
<td>Other (constant)</td>
<td>0.124</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Self-rated mental health (1 to 5)</td>
<td>0.005</td>
<td>0.005</td>
<td>1.01</td>
<td>0.313</td>
</tr>
<tr>
<td>Rating from Poor</td>
<td>0.104</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor (constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 4. Random Intercept Mixed Model Regression: Resiliency Skills Pre to Post-Change and Effect of Participant Characteristics.

<table>
<thead>
<tr>
<th></th>
<th>Coef</th>
<th>SE</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Scale (5 items)</td>
<td>−0.190</td>
<td>0.015</td>
<td>−12.90</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Supervisor vs Frontline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frontline staff</td>
<td>0.041</td>
<td>0.020</td>
<td>2.06</td>
<td>0.040</td>
</tr>
<tr>
<td>Supervisor (constant)</td>
<td>−0.220</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>First Responder Type</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Police</td>
<td>0.050</td>
<td>0.026</td>
<td>1.91</td>
<td>0.057</td>
</tr>
<tr>
<td>Other (constant)</td>
<td>−0.218</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.001</td>
<td>0.010</td>
<td>0.09</td>
<td>0.926</td>
</tr>
<tr>
<td>Female (constant)</td>
<td>−0.191</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years from 20</td>
<td>−0.001</td>
<td>0.001</td>
<td>−0.81</td>
<td>0.40</td>
</tr>
<tr>
<td>20 years (constant)</td>
<td>−0.161</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor degree or higher</td>
<td>−0.003</td>
<td>0.016</td>
<td>−0.20</td>
<td>0.845</td>
</tr>
<tr>
<td>Less than Bachelor (constant)</td>
<td>−0.189</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/common law</td>
<td>−0.006</td>
<td>0.018</td>
<td>−0.37</td>
<td>0.714</td>
</tr>
<tr>
<td>Other (constant)</td>
<td>−0.187</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-rated mental health (1 to 5)</td>
<td>0.063</td>
<td>0.009</td>
<td>7.10</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Rating from Poor</td>
<td>0.425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor (constant)</td>
<td></td>
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Participants mentioned using the tools taught in the program, particularly the “Big 4” skills (62.8%) and, to a lesser extent, the Mental Health Continuum Model (12.5%). Talking more about mental health in the workplace and providing support to another person were also commonly mentioned (12.5% and 14.0%, respectively). Additionally, 6.3% of participants...
indicated that the program led them to seek professional help for their own mental health and/or enabled them to get a friend or colleague to seek professional help for their mental health. Most respondents who replied “No” did not provide further details (80.0%; n = 375). Several reasons were provided, however, for why the skills had not been used: there was a lack of need or opportunity (10.9%), they had forgotten what they had learned (2.6%), the course had not taught them anything new (3.4%), they were unsure how to use the skills (1.5%), and the course was not sufficient to improve support for workplace mental health in their specific organization (1.7%).

**Discussion**

The results indicate that R2MR for First Responders was effective at reducing the stigma of mental illness and increasing resiliency skills after program implementation in participants across 16 different sites and in 5 different first-responder groups. As such, our results indicate that the program was successful in achieving its main course objectives. In general, after taking the R2MR for First Responders program, participants reported fewer stigmatizing attitudes towards those with mental health illnesses and felt more prepared to handle stressful and traumatic events in their workplace.

It is important to note that all sites achieved positive outcomes for both main outcome measures, with low variability of the program effects across sites and first-responder groups (see Figures 1 and 2). The lack of variability suggests that the program has wide applicability and utility across diverse sites and first-responder audiences. The result also likely reflects the standardized training given to program trainers. Specifically, trainers attended a 5-day “train-the-trainer” session, in which they were taught the core components of the course and provided with additional mental health background information. Throughout the “train-the-trainer” program, participants were given feedback during “microteaching” sessions (e.g., Boman23; Levinson-Rose and Menges24) and the training stressed the importance of program fidelity and the use of the course manuals during course delivery. At the end of the 5-day “train-the-trainer” program, trainers were evaluated on a pass/fail basis, and trainers were not certified to teach the program if they did not pass. Overall, these results speak to the success of the standardized training and to program fidelity across sites. Beshai and Carleton25 have also recently recommended that “training for and application of peer support or crisis-focused psychological intervention programs involves systematic and comprehensive adherence to program protocols” (p. 8).

At face value, the mean effect sizes for both stigma reduction and resiliency improvement across the sites were small,26 which implies a modest program impact. That said, the program is 4-h or 8-h in length, and it is unlikely that such a short intervention will create a huge impact when compared with longer or more embedded interventions. In addition, the size of the stigma reduction outcome is consistent with the extant literature. For example, Knaak et al.27 found a mean Cohen’s d of 0.30 in the “Understanding Stigma” intervention for health care providers across 6 sites. Similarly, the meta-analysis by Corrigan et al.28 found a mean Cohen’s d of ~0.28 for both knowledge and contact-based interventions aiming to reduce the stigma of mental illness. Finally, Pettigrew and Troop’s29 meta-analysis of contact-based interventions to reduce prejudice in various groups (e.g., minorities, sexual orientation, etc.) also found a small effect (mean r of ~0.21) of the interventions, with an effect size of r = −0.18 for interventions specific for mental illness stigma.

The current analyses revealed that the R2MR program for First Responders yielded significant increases in self-reported resiliency, with effect sizes in the same range as for stigma reduction. This effect size was comparable with other workplace resiliency trainings30,31 as well as our own evaluation of The Working Mind (see Dobson et al.32). Despite the modest global impact, the open-ended questions suggested that the program had substantial impact for many
program participants. For example, well over half (59.2%) of the respondents reported at follow-up that they had actively used the skills learned in the program. Of those, 62.4% said they had used at least one of the “Big 4” coping skills before the 3-month follow-up. Furthermore, 14% of the follow-up respondents had used what they learned in the program to support someone else’s mental health, and 6.3% had sought professional help or helped a co-worker seek help because of the program. Although it is beyond the scope of this paper to attach financial numbers to these outcomes, there is an enormous benefit from even one person at an organization seeking help early and not having to go on disability. Dewa et al.31 found that in one Canadian resource sector organization, disability claims due to mental illnesses were double that of the average claim in both episode length and cost, at a total of 65 days and total cost of about $18,000.

The gains observed at the post-intervention assessment for stigma reduction were retained at the 3-month follow-up, and those for resiliency skills were partially maintained. These results suggest that participants retained the content of the program relatively well over time and did not return to baseline levels. The resiliency result suggests the need to augment program content and use over time, as coping skills may require repeated use. For instance, refresher or “booster” sessions may help maintain program skills, especially if these sessions reinforce the “Big 4” skills learned in the original training.

Two of the 5 OMS-WA subscales reduced (i.e., demonstrated enhanced stigma reduction) at the 3-month follow-up as compared with the post-training values. It is possible that the additional gains seen in the work-related beliefs and responsibility subscale could be connected to ongoing changes in workplace culture within these organizations and that these were increasingly supportive of mental health (see also Knaak et al.34). The responses to the 4 workplace mental health and support questions also suggest that the program affected workplace culture to some degree, making it more open and supportive of mental health and help-seeking. There has been a call to examine organizational-level and structural-level factors and to assess how they affect mental health and stigma in the workplace; this topic has emerged as one of the next frontiers for researchers.11,35,36

Strengths and Limitations

There are both strengths and limitations of the current work. In addition to the positive results, some of the strengths are based on the methodological approach of the study. First, the current study had a large sample size of over 5,000 participants, with over 4,500 matched pre- and post-test questionnaires. Similarly, the current sample comprised a group of diverse first responders, with participants from various geographic regions and occupations across Canada. Another strength was the use of both quantitative scales and qualitative open-ended questions. The open-ended questions helped provide elaboration to the quantitative findings. Finally, the inclusion of a follow-up time point sheds light on the medium-term sustainability of the effects found immediately post-intervention.

Despite the above strengths, it is also important to mention the limitations. First, the study design was a pre-post test with a follow-up open trial. A preferred design would have been a randomized control trial. However, it was difficult to have organizations agree to this type of design for multiple reasons (see discussion of this topic in Szeto et al.8). Future evaluations of such programs should ideally use randomized control trials to ascertain that the effects are not due to confounders or sample bias.15 Second, despite the large pre-post sample, there was substantial attrition at the follow-up time point. Some of this attrition was due to an inability to match participants using the coding system. Therefore, the follow-up data, although positive, should be interpreted with caution. Future research may use a “back-loaded” strategy for participant incentives to decrease the attrition rate at follow-up time points. An alternative matching system or a dedicated site coordinator (see discussion of this point in Szeto et al.) would also increase participant matches at follow-up and reduce attrition while maintaining anonymity. Finally, it is worth noting that the current study conducted follow-up assessment at a 3-month period. It is unclear how long these effects might persist beyond 3 months. Researchers have called for more longitudinal research in this domain,36,37 as interventions like the current one that focus on promotion and prevention may take longer to filter through an organization, as compared with a more targeted or clinical intervention.

Conclusions

The current results indicate that R2MR for First Responders is an effective program to reduce the stigma of mental illness and increase resiliency. Our results also indicate that these effects persist over the medium term. Further, the consistency of the results across sites, regions, and groups speaks favourably to the foundations of the current program. The wide-spread adoption of the program in the first-responder community in Canada is a testament to the desire for first-responder organizations to improve their members’ mental health and provide opportunities for first responders to better equip themselves to face the stressors and traumas in their daily working lives.

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Implementation, Uptake, and Culture Change: Results of a Key Informant Study of a Workplace Mental Health Training Program in Police Organizations in Canada

Mise en œuvre, adoption et changement de culture : résultats d’une étude auprès d’informateurs clés d’un programme de formation en santé mentale en milieu de travail dans des organisations policières du Canada

Stephanie Knaak, PhD¹, Dorothy Luong, PhD², Robyn McLean, PhD³, Andrew Szeto, PhD¹, and Keith S. Dobson, PhD¹

Abstract

Background: Organizational characteristics and attributes are critical issues to consider when implementing and evaluating workplace training. This study was a qualitative examination of the organizational context as it pertained to the implementation of a workplace mental health program called Road to Mental Readiness (R2MR) in police organizations in Canada.

Methods: We conducted a qualitative key informant study in 9 different policing organizations in Canada.

Results: The central theme of “successful cultural uptake” emerged as key to R2MR’s implementation and the ability to facilitate broader culture change. Successful cultural uptake was enabled by several contextual factors, including organizational readiness, strong leadership support, ensuring good group dynamics, credibility of the trainers, implementing widely and thoroughly, and implementing R2MR as one piece of a larger puzzle. Successful cultural uptake was also described as enabling R2MR’s impact for broader cultural change within the organization. This enablement occurred through enhanced dialogue about mental health and the introduction of a common language, a supportive workplace culture, increased help seeking, and organizational momentum for additional mental health programming and policy initiatives.

Conclusion: Successful uptake of R2MR has the potential to lead to promote change within policing organizations. The model derived from our research may function as a tool or roadmap to help guide other organizations in the process of or planning to implement R2MR or a similar intervention.

Abstract

Contexte: Les caractéristiques et attributs organisationnels sont des questions essentielles à examiner si l’on entreprend la mise en œuvre et l’évaluation d’une formation en milieu de travail. Cette étude était un examen qualitatif du contexte organisationnel qui était lié à la mise en œuvre d’un programme de santé mentale en milieu de travail nommé En route vers la préparation mentale (RVPM) dans les organisations policières du Canada.

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Understanding the mental health needs of police officers is an area of increasing interest and concern, as high numbers of police workers seem to experience mental health problems. A recent study of public safety workers in Canada found that 50.2% of federal police (Royal Canadian Mounted Police) and 36.7% of municipal/provincial police screened positively for 1 or more mental disorders. While the etiology of mental disorders is multifaceted and complex, the stressful nature of police work has been identified as one important factor. Importantly, sources of stress do come not only from the nature of the police work itself (i.e., regular exposure to potentially traumatic events) but also from organizational factors, such as high job demands, low supervisor or collegial support, and low levels of control over one’s working conditions. In fact, evidence suggests that organizational sources of job stress are better predictors of police distress than acute and potentially traumatic events.

Mental illness–related stigma within policing is pervasive. Stigma has been identified as a key barrier that prevents members from seeking help, and for those who do seek help, it can lead to ostracism from peers, lack of support from superiors, and perceived devaluation of their skills and abilities. Indeed, a recent Canadian study measuring levels of stigma within policing with an adapted version of Link’s Perceived Devaluation and Discrimination Scale—called the Police Officer Stigma Scale—found 85% of police officers agreeing that most police officers would not disclose to a supervisor/manager or colleague if they experienced a mental illness. Also, 62% agreed that most police officers would expect to be discriminated against at work if they experienced a mental illness. A similar proportion (59%) endorsed the belief that most police officers think being treated for a mental illness is a sign of personal failure. In addition to a focus on improved psychosocial care within police organizations, the mitigation of psychological injury requires meaningful attention to the problem of stigma and its underlying contributors, such as the cultural imperative towards emotional control and cultural gender role norms.

The Road to Mental Readiness (R2MR) for First Responders Program is a workshop-based intervention, adapted from previous work by the Canadian Department of National Defense, that was designed specifically for first responder populations to reduce mental illness–related stigma, improve resiliency skills, and encourage help seeking. The program contains 3 main components: video contact-based education, the mental health continuum model, and the “Big 4” coping and resiliency skills. A version for supervisors and leaders exists, with the same core components but additional education, discussion, and skills building for supervisors and leaders. One of the key evaluation outcomes of the R2MR program is improved attitudes and behavioural intentions related to mental illness and help seeking (see Szeto et al., this issue). As such, the longer term potential of this program may be identified as the facilitation of a broader cultural shift within the organization. This shift is one where mental health can be discussed openly and where the culture no longer associates the experience of having a mental health problem with prejudice and discrimination.

The organizational context is a critical aspect of cultural norms and possible change. A 3-year case study project with over 40 Canadian organizations and their experiences with uptake and implementation of Psychological Standard for Health and Safety in the Workplace identified several key contextual factors that helped or hindered implementation. These factors included consistent leadership support and involvement, existing processes, policies and programs to support employee psychological health and safety, consistent data collection, and adequate structure and resources.
In this context, Gursky and Kirkpatrick promoted evaluation models that emphasized the importance of understanding the effects of training at different organizational levels and argued that success at one level is necessary for success at the next level. Gursky’s model specifically includes the degree of organizational support and change, and it argues that when this factor is lacking, there is a negative effect on professional development efforts. The importance of organizational context provided the rationale for the current study, as it examined potential processes, practices, and cultural factors that may help or hinder the potential of R2MR to influence the broader organizational culture.

**Methods**

The objective of this study was to advance understanding of how organizational context influences implementation of a program such as R2MR and the extent to which this helps or hinders the ability of the training to affect larger cultural change within the organization. A qualitative key informant study of the R2MR program was conducted within police organizations in Canada. Ethical approval for the study was obtained from the University of Calgary’s Conjoint Faculties Research Ethics Board (REB16-0604), and all participants provided informed consent. We followed a purposeful sampling approach to data collection, and a benchmark of 10 to 15 interviews was used as a target number of interviews to conduct to achieve saturation in analysis.

A total of 11 key informants from 9 different policing organizations across Canada were interviewed by phone in March 2016. All respondents had played a key role in implementing the R2MR program in their organization. The participants were purposefully selected from a subset of organizations that had implemented the program within the previous 2 years. They were identified as those organizations that were far enough along in the implementation process that they could reflect on successes, failures, and perceptions of potential impacts (or lack thereof). Selection was based on representation from both large and small, as well as urban and rural police organizations. Each of the key informants participated in a single interview, lasting on average 45 minutes.

Interviews were semistructured and included 5 main topics for discussion: rationale and reasons for adopting R2MR, experiences with R2MR (including successes and challenges), perceived impacts of R2MR, organizational culture regarding mental health, and how R2MR fits (or does not fit) into the larger organizational context. Interviews were tape-recorded and transcribed and then imported into NVivo software for qualitative analysis. The data were analyzed for major themes using established procedures for content analysis as described by Hsieh and Shannon. After each interview was read as a whole, analysis entailed line-by-line coding, consideration of key concepts, and the organization of codes into related categories. Two coders were used for analysis. In addition, researchers met regularly to discuss codes and to reach consensus on the description of categories. The dimensions of these categories were then further developed, leading to final analytic themes, which were reviewed with the larger research team. Reflexive questioning and dialogue were employed throughout this process to help identify and challenge any unquestioned assumptions or preconceptions that may occur in the process of interpretation. The research was led by an independent consultant (third author) with no ties to the R2MR program or the Mental Health Commission of Canada.

**Results**

Figure 1 depicts the integrated theoretical model derived from the analysis. Elements of this model are described in more detail below.

**Successful Cultural Uptake**

Informants made a clear distinction between organizational structure and culture, noting that while the organizational structure of policing made the implementation of a training program such as R2MR relatively straightforward, it was the extent of cultural uptake that ultimately determined the program’s ability to facilitate broader culture change. Informants emphasized that changing perceptions, attitudes, and behaviours related to mental health can be particularly challenging in a workplace culture where there are strong prevailing views of what workers “should” be like, as well as entrenched stereotypes that associate mental illness with weakness and shame:

> When you are in a paramilitary organization it is very hard to change the culture. Ideas, beliefs, norms, values are entrenched in the culture. The idea is that you can take anything . . . there is a culture in policing that we are the cream of the crop, we can take anything, we are strong, we don’t break down—that has been a prevailing stereotype for decades and moving past that kind of stereotype doesn’t happen overnight. (Interview 4)

It was in this context that the analysis revealed the central theme of “successful cultural uptake” as a key implementation goal. Successful cultural uptake was articulated as the implementation achievement that enabled R2MR’s impact for broader cultural change within the organization. It was described as the process of cultural acceptance of R2MR and its key messages within the organization.

> Definitely here we are starting to make a cultural shift with regard to mental illness—that’s probably the biggest thing . . . our organization has accepted for the most part that the change is ongoing. (Interview 4)

The factors that informants described as enabling “successful cultural uptake” included both organizational factors and implementation factors. Organizational factors...
included cultural readiness, strong leadership support, and implementing R2MR as one piece of the puzzle. Implementation factors included implementing widely and thoroughly, ensuring positive group dynamics, and ensuring credibility of the trainers.

The cultural impacts that could be realized through achieving successful cultural uptake included the following: more dialogue about mental health and the introduction of a common language, a more supportive workplace culture, increased help seeking, and organizational momentum for additional mental health programming and policy initiatives.

These themes are described in greater detail below.

**Organizational Factors Contributing to Successful Cultural Uptake**

**Cultural readiness.** While the predominant cultural reality may be characterized as reluctant to discuss or embrace openness to workplace mental health, key informants noted that there has started to be a greater recognition of the importance of mental health and illness within policing and that the mental health of police officers is an organizational responsibility:

I think there was a recognition that the police officers in our organization—and any really—we’re dealing with a lot of challenges, and there was a lack of awareness and stigma accessing mental health services. What happened with us is there’s been increasing emphasis on PTSD [posttraumatic stress disorder], officer suicide, and general mental health issues in media and among chiefs of police and recognition that we need to do more. (Interview 8)

It was in this context that informants identified these shifts in thinking as symbolic of an organizational and cultural “readiness” for change. This often went hand in hand with a greater recognition of organizational “need” to better address mental health in the workplace, thereby setting the stage for interventions such as R2MR to be sought out and implemented.

**Strong support from leadership.** Successful cultural uptake of R2MR was also described by informants as being affected by the strength of leadership support and buy-in. Respondents suggested that a lack of perceived or real acceptance from leadership was a barrier to the larger cultural uptake and acceptance of the program and its messaging. Examples of such issues include if officers do not believe their supervisor supports the program’s content, if the supervisor denigrates its value, or if leadership lag in their own completion of the training:

We’ve had a few differences. A particular area—I think there was, some have said “my manager won’t support this, this is all for naught.”...

We’ve reminded them it’s not just about the managers, but supporting each other and themselves. (Interview 5)

Conversely, key informants also mentioned that strong leadership support was a key enabling factor for program success in terms of ease of implementation as well as cultural uptake:

By getting the inspectors and superintendents on board, then they were supportive, because they had that aha moment that helped us carry this forward. It did take a while for people to
warm up to it. It’s new—and there’s a lot of training out there. Taking people off the streets, or anyone in any organization, we have a lot of qualifications and training we have to take—so we have to justify why, how is this going to change things. (Interview 3)

While informants did not generally provide specific definitions of what they meant by leadership, their examples and comments suggested that leadership could include all levels of supervisory and management positions, as these individuals were seen as organizational culture carriers and that cultural uptake of a program like R2MR was ultimately helped or hindered by the perceived support and buy-in from these culture carriers.

Informants indicated there can be different ways to get leadership support and buy-in—acknowledging that if it is not there from the outset, it can be cultivated. Some respondents felt that training the leadership first in R2MR was a good way to do this. Others indicated that leveraging support from other organizational champions could also work:

Within our organization, it’s not about structure, but about individuals who believe in it. Our chaplain was a big part of the process, big part of being involved and validating. We have a health and safety officer who we had buy-in from and I had the buy-in from my boss. Easy to say get the buy-in from top down, but that’s not always easy. Sometimes good to get buy-in by working your way up the ladder—saying, “well he supports, and he supports, and he supports.” Need buy-in at all levels, really. Sometimes one can support the other. If it’s seen as a top-down thing, doesn’t always work. (Interview 7)

Implementing R2MR as one piece of the puzzle. R2MR was often described as fulfilling a specific function in terms of education and awareness, with the goal of reducing stigma and encouraging greater help seeking. Key informants emphasized that programs such as R2MR need to be rooted within a comprehensive set of broader mental health programs and policies to achieve maximal acceptance and uptake. In this context, the implementation of R2MR was seen to represent one element of a larger framework geared towards workplace mental health:

It’s important, as much as R2MR is great, you have to have the supports in place. We have a list of psychologists, and we make sure these resources are covered. . . . In R2MR we identify issues that need to be addressed—need to have supports in place for them. Goes hand in hand. If you didn’t have that, you’d have people needing help and looking for assistance—if you didn’t have that, there’d be questions about why we have the program. (Interview 9)

[R2MR] is for stigma reduction, or to be proactive—it’s not going to solve all problems, just another tool in the belt. You need to have EFAP [Employee and Family Assistance Program] or other resources in place. If someone comes out saying they are in the red, need to make sure they can provide support, have other systems in place, or it won’t be effective. Employees will come out needing help . . . [so you need to] have systems in place to deal with outcomes of training or to be more proactive. (Interview 5)

In this context, respondents believed that implementing R2MR as a “one-off” program without giving due attention to larger system concerns, such as access to mental health supports and workplace mental health policies, for example, as well as other identified mental health education and training needs, would hinder the likelihood of successful cultural uptake.

Many respondents also stressed the importance of sustaining the program and ensuring it is embedded into the organizational training structure, to maintain the momentum of cultural change. They again emphasized that providing training as a “one-off” activity will not reach everyone (e.g., due to staff turnover) and also that positive impacts risk being lost over time if the messages are not sustained and reinforced.

They need to understand that because you’re trying to make a cultural change, that you continue the messaging after the training is completed—not a one-off thing—that you need to continue forward providing messaging so that it’s consistent. Here, we created a website that members and families can access from home—with R2MR information, videos, etc. Also the marketing aspect—putting up posters, putting information in our bulletin about it, continuing to keep it on the forefront of people’s minds. (Interview 8)

Implementation Factors Contributing to Successful Cultural Uptake

Implementing widely and thoroughly. As noted above, interviewees commonly noted that the existing training structures within police organizations make a program such as R2MR relatively straightforward to implement. With mandatory training blocks already in place, many organizations incorporated R2MR into this structure, enabling the program to be delivered straightforwardly in a widespread and timely manner. All organizations participating in this study indicated that R2MR was being delivered organization-wide and as mandatory or essential training. This large-scale implementation strategy was identified by all respondents as central to the achievement of successful cultural uptake.

Specifically, respondents mentioned that while there was often somewhat of a cultural lag between the initial implementation of the program and its eventual acceptance amongst the staff, the process of cultural uptake progressed as more people became trained:

[There was] a lot resistance and fear around it when we first started. As we started training more and more and more talking about it—a dramatic shift, this is good stuff . . . Incorporating [the program at] various levels of training and rank [is important]. Creates the expectation that you will see it constantly. (Interview 1)
Conversely, respondents emphasized that successful uptake could be hindered if the organization was running the program “off the side of their desk” or in only training some employees and not others (e.g., frontline staff only). Put otherwise, a certain level of organizational commitment and importance needed to be assigned to the implementation of R2MR so that the training had momentum within the organization. The growth in cultural acceptance that occurred as more and more people became trained was thus seen as an important link between implementation and uptake.

**Ensuring positive group dynamics.** Positive group dynamics in training delivery was identified as another implementation factor for successful cultural uptake. Successful group dynamics in training delivery helps to ensure openness in dialogue, group trust, and an overall sense of responsibility for one’s own and each other’s mental health:

Depending on how tight the group was—so if people were more tight they responded more positively—the stronger the team, the more engagement they had throughout the course of the training. (Interview 1)

We have noticed the level of openness in different classrooms depends on who’s in the classroom. . . . If there is someone from HR, nobody says anything. Depends on who’s in the class for openness of discussion. (Interview 2)

Some informants believed the best approach to ensure positive group dynamics in training delivery was to reflect organizational structure, for example, to have similar ranks and/or specific work areas attend together. Other informants, however, favoured mixed groups, with less attention to rank and role, as they felt this delivery model offered logistical advantages and maintained consistency with other training in the organization. While a more mixed-group approach to training was employed by a number of organizations, some informants noted that this approach sometimes limited the level of trust and openness experienced by participants:

When we do the course, anyone can sign up for it. We lump them all together, we take 24 to 30 at a time, and whatever mix we get, we get. Sometimes there’s the odd comment about not wanting things mixed up. We’ve also had the comment about wanting the supervisors in the room because some feel that supervisors aren’t getting it . . . [and] a couple of experiences where someone will say “dispatch stresses me out . . . ” and dispatch might be there. (Interview 2)

**Credibility of the trainers.** Successful training dynamics were also described by informants as being heavily affected by the trainers themselves and that the credibility and trustworthiness of the trainers were central to successful participant engagement and acceptance. In this regard, respondents emphasized the importance of matching trainers to the group being trained, for example, having higher level trainers to train leaders. Key informants also emphasized the importance of finding the “right” trainers to deliver the R2MR program. In particular, respondents emphasized the importance of having trainers with lived experience of a mental illness, who were seen as credible and trustworthy by their peers. Respondents also emphasized that trainers would ideally be recruited from within, such that they would have personal experience and knowledge of both the organization and the nature of police work.

We had criteria for what we wanted in a trainer. Wanted people that were proud to carry the message. That made all the difference in the world. Had people trained internally, our troops talking to our troops, and that worked well. To have a psychologist talking wouldn’t have worked—but to have a staff sergeant with a lot of credibility talking about things he’s been through. [It’s about] getting the right people involved delivering your message. (Interview 7)

**Potential Impacts of Achieving Successful Cultural Uptake**

The achievement of successful uptake of R2MR was believed to lead to a number of positive cultural changes. Informants described 4 main ways the achievement of successful cultural uptake could positively influence the culture of mental health in policing: increased dialogue and openness about mental health in the workplace, less judgment about mental health-related matters, increased help seeking, and organizational momentum for the development of further initiatives and policies related to supporting workplace mental health. Informants described seeing these impacts within their own organizations to varying degrees.

**Increased dialogue and the introduction of a common language.** Many key informants described seeing increased positive dialogue about mental health in the workplace. Interviewees discussed the mental health continuum model in particular as being helpful in facilitating more openness and dialogue, as it provided a common language for staff to discuss mental health and to talk about their experiences in a nonthreatening way:

The continuum model. So hard for people to talk about this—great to have a common language. To be able to say a lot without saying much at all. (Interview 6)

People are more open to talk about it—our leaders take it more seriously. For example, someone might come to our door and say they’re in the yellow and I’ll talk to them about it. They’ve given us words to use that aren’t “depression” or “anxious.” (Interview 10)

**Less judgment/more supportive culture.** Another perceived cultural impact was that people were becoming more supportive and compassionate about colleagues who may experience challenges. In this context, many respondents said that that
they had noticed fewer judgmental and negative comments being made towards mental health–related matters:

I think where we’ve failed along the way is we have not been as open to talking about mental health issues and mental wellness of members. “He’s off duty mad.” . . . “Of course he’s on stress leave, it’s the summer.” . . . I really believe that R2MR has really helped us improve in that area. Are we there yet? No, but we are certainly a long way closer than we used to be. We have members that have spoken to the press about their mental health—that wouldn’t have happened a few years ago . . . and there’s certainly much more compassion for people who are suffering. (Interview 4)

**Increased help seeking.** The third area in which informants described a positive organizational impact from R2MR was increased help seeking:

The Chief sent an email saying that the access to EFAP has gone up, and think it’s in the last 2 years—hard to say if it’s a correlation with R2MR . . . but we think that people feel more comfortable asking for help. Doesn’t seem to me that it’s a coincidence. (Interview 4)

My colleague went for training a group of about 25 to 30 senior police officers, people with years and years in the field—eight people went to the wellness unit in the next week to get services for them or their family. Very rarely do we have [a class that someone doesn’t ask for help or resources]. (Interview 6)

Key informants discussed the main areas of impact—more openness and positive dialogue, a more supportive workplace environment, and increased help seeking—as a mutually reinforcing process. Specifically, informants noticed that as people became more comfortable talking about mental health issues and the colours of the mental health continuum model, people also spoke more positively about mental health. This pattern both reflected and further reinforced improvements in attitudes, reductions in stigma, and more openness and dialogue, and it also led to increased motivation for help seeking and accessing resources and supports. The following comment illustrates how respondents described these cultural impacts working together to facilitate organizational change:

An example of how putting in place the R2MR was beneficial—a lieutenant with 30 plus years experience. When he gave the course, I don’t think a day went by that he didn’t come by after the course and say this person came up in tears asking for help. When it created dialogue, it created an opportunity for people to get help. He was seen as the godfather or mentor . . . sharing his experience. Giving not just the PowerPoint, but making it human—saying “here’s what I went through, here’s what a buddy went through.” This helped people share their experience, either during the course or afterward. Not sure if we saved lives, but I’m sure we made a difference in somebody’s life. That’s something really positive that came out of the R2MR. (Interview 7)

**Creating momentum.** While respondents observed varying degrees of positive organizational impacts, they also cautioned that these organizational impacts would not continue without a commitment to maintain the momentum of cultural change. Similar to the theme of seeing R2MR as only “one piece of the puzzle,” a number of key informants described how successful cultural uptake of the R2MR program could help to create additional momentum. In particular, R2MR was viewed as a stepping stone for further development of workplace mental health initiatives, whether by identifying existing gaps and/or by introducing additional supports and structures:

We could stand to improve [our policies], and this has come out because of discussions in R2MR. For example, policies not being applied the same in different areas. . . . It has really identified to us an area that we have some work to do—looking at policies/procedures and making sure they’re consistent. (Interview 11)

**Discussion**

It has been well established that organizational characteristics need to be considered when implementing and evaluating workplace training. Indeed, context presents both constraints and opportunities for change and has the potential to shape the very meaning underlying various organizational behaviors and attitudes. However, organizational context tends to be insufficiently appreciated in research, even though context is almost always implicated in the organizational features needed to properly explain how individual activity translates into larger organizational outcomes. This study addressed these issues by examining the potential processes, practices, and cultural factors that may help or hinder the implementation of a mental health program.

The current results reveal the importance of distinguishing between implementation and uptake when considering the impact of training programs such as R2MR and their potential to help facilitate cultural change within policing organizations. Key informants in this study revealed that both organizational structure and culture affect a program’s success and ability to facilitate broader culture change. More specifically, while the organizational structure of policing facilitates implementation of a training program such as R2MR, it is the successful cultural uptake of R2MR that enables cultural change within the organization. Achieving successful cultural uptake was revealed to be facilitated or hindered according to a number of key factors. These factors included organizational readiness, strong leadership support and support from organizational champions, ensuring good group dynamics, credibility of the trainers, implementing widely and thoroughly, and implementing R2MR as one piece of a larger puzzle.

The achievement of successful cultural uptake, in turn, was what informants identified as the pathway through
which larger cultural change could be realized. In the case of R2MR program impacts, these changes included more dialogue about mental health and the introduction of a common language, a more supportive workplace culture, increased help seeking, and organizational momentum for additional mental health programming and policy initiatives.

The current results were based on qualitative data from the implementation of the R2MR program in different police organizations across Canada. As such, the current findings and the visual model may function as tools or a roadmap to help guide other organizations in the process of implementing R2MR or a similar intervention. However, in as much as the model was generated from a limited number of program implementations and examined only the organizational context of policing in Canada, it remains unclear whether this model may translate to other first responder organizations where R2MR has been implemented. Indeed, different factors, strategies, and considerations may be needed in other organizational contexts such as paramedics, firefighters, 911 call centres, and corrections officers that are not reflected in the current model.

That said, positive results from extensive quantitative evaluation of R2MR regarding stigma reduction, intentions toward help seeking, and willingness to discuss and provide support to colleagues regarding mental health (see Szeto et al.,10 this issue) provide additional confidence about the connection between successful uptake and positive cultural change. The descriptions of the perceived organizational impacts of R2MR were also consistent with findings from another related qualitative study, which focused on the experiences of those who attended the R2MR program.21 This consistency in findings from multiple studies thus lends confidence to the current results.22 Future research should focus on the continued refinement of the current model and the investigation of contextual factors and considerations in other first responder organizations, as well as with police organizations in other jurisdictions.

The theoretical model derived from this research suggests that workplace mental health interventions have the potential to realize larger shifts in organizational culture, through the process of achieving successful cultural uptake. It is unclear from this research the extent to which the perceived cultural impacts were caused by the uptake of the R2MR program itself or the extent to which R2MR was implemented as a result of already occurring extant culture change. This does not change the value of the theoretical model, however, as the implementation model presented through these findings illustrates key factors that are believed to be necessary if a training program is to have potential as an agent of culture change, regardless of where on the spectrum of change the organization may be at the time. It would be beneficial for future research to examine the extent to which the main implementation and organizational factors that facilitate successful uptake may be more or less important in different contexts and situations.

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References
The Working Mind: A Meta-Analysis of a Workplace Mental Health and Stigma Reduction Program

L'esprit au travail : une méta-analyse d'un programme de santé mentale en milieu de travail et de réduction de la stigmatisation

Keith S. Dobson, PhD¹, Andrew Szeto, PhD¹, and Stephanie Knaak, PhD²

Abstract
Objectives: This article describes a meta-analysis of The Working Mind, a program that was developed to address workplace mental health. The basic program addresses issues related to stigma in the workplace, the use of a mental health continuum model to evaluate signs and indicators of mental illness, and the development of coping skills. A manager version further addresses issues such as how to work with an employee who struggles with mental health issues, workplace accommodations, and overall management issues.

Methods: A total of 8 replications evaluated program effects on stigma, self-reported resilience, and coping abilities.

Results: The implementation of the program was associated with moderate reductions in stigma and increased self-reported resilience and coping abilities. These results were generally consistent across settings and showed nonsignificant differences when various potential moderators of the program were evaluated (e.g., employees versus managers, public versus private sector, gender, age). Qualitative comments collected at the end of the program suggested that many program participants found the program to be helpful and that the skills were being employed.

Conclusions: Directions for future research, including the need for a randomized trial of The Working Mind, are discussed. Overall, the results suggest that the program is successful in its aims, but further inquiry is encouraged.

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Recent data demonstrate that the mental health of employees significantly affects their ability to work productively and to maximize both their own satisfaction in the workplace, as well as the economic activity of the employment setting itself. Furthermore, it is recognized that many workplaces have inherent stressors built into them, including normal stresses associated with workplace performance, interpersonal relationships, conflicts, and systemic pressures, which can all contribute to potential mental health problems. It is also clear that significant mental health challenges in the workplace create additional costs to disability programs and that mental health problems themselves are one of the greater contributors to overhaul costs of health care employee benefits. In light of these facts, the promotion and maintenance of workplace mental health have become national imperatives in many countries and are supported by a variety of agencies and policies, including the National Standard for Psychological Health and Safety in the Workplace developed by the Mental Health Commission of Canada, the Equity Act in the United Kingdom, and the 2001 Americans with Disabilities Act in the United States.

There is little doubt that an effective mental health strategy is needed for the contemporary workplace. This overall strategy is likely to include mental health promotion, policies, and practices that foster a healthy workplace environment; stigma reduction to improve employee help seeking and to foster the creation of a supportive workplace culture; early intervention for appropriate care; policies to support employees who are struggling; and employee and family wellness benefits. These elements of a workplace mental health strategy also require support from a general health care system that can effectively treat mental health problems and assist employees to return to work as efficiently as possible. A review of workplace antistigma and mental health promotion programs unfortunately revealed that there are few evidence-based mental health workplace programs. Indeed, many programs that purport to reduce stigma and enhance mental health in the workplace are not evaluated, are evaluated using acceptability ratings (which is only weak evidence), or are proprietary and so the evidence is unavailable for public use.

The Opening Minds initiative of the Mental Health Commission of Canada was established to promote stigma reduction. Within its scope of work, Opening Minds targeted the workplace, as it was recognized that this is a critical location where stigma can impede access to timely and appropriate care, reduce employee satisfaction and performance, and ultimately increase losses and thereby reduce the profitability of employment settings. As part of its work, Opening Minds became aware of the work of the Canadian Department of National Defence, which had developed a program for mental health resiliency training in the military, entitled the Road to Mental Readiness (R2MR). As described elsewhere in this volume, the R2MR program was adapted for use in first responder groups. This adaptation included a demilitarization of the content, enhanced efforts to reduce stigma through videotaped contact, and explicit discussion about stigma and its negative effects within first responder groups. As a further adaptation of the R2MR program, The Working Mind was created as a general workplace program. The current study is a meta-analysis of The Working Mind program, as applied in a variety of workplace settings across Canada.

The core elements of The Working Mind reflect its genesis, and both its structure and content resemble those seen in the R2MR program. The program is intended to reduce stigma, improve awareness of various signs and indicators of mental health using the mental health continuum model, promote coping skills, and provide information about policies and practices related to the workplace that promote mental health and assist employees who experience mental health challenges. Details of the program are available elsewhere (see Szeto et al.).

There are 2 versions of the program. One is intended for frontline workers and is a 4-hour group program. The other is an 8-hour program intended for managers, which not only examines their own mental health and coping resources but also highlights their obligations in the workplace to those who report to them. For example, there is an extended discussion of how to talk with employees about their mental health challenges, how to manage mental health accommodations in the workplace, and how to facilitate the successful return to work for employees who have been off work on medical leave. Both versions of the program use trained facilitators, workshop manuals, contact-based videos that present actual employees and managers dealing with issues related to the program’s content, discussion exercises, and personal goal setting to begin to enact the coping skills within the program.
The Working Mind program is delivered in 1 of 2 ways, as selected by the workplace that wishes to engage the program. The preferred method for delivery is a “train-the-trainer” model, wherein employers send their prospective workshop leaders to an intensive training week. These leaders experience the program, learn the manuals and other materials, and then practice delivery, before being evaluated and (hopefully) approved to deliver the program. This method is preferred primarily as this training results in group facilitators from within the same organization that is going to receive the program and so builds internal experts and the capacity to discuss and train mental health in the workplace. This said, if an employer prefers, trained group facilitators can be sent to directly deliver The Working Mind program.

The Working Mind went into development in late 2012. This article reports the results from 8 replications of the program in numerous Canadian jurisdictions between December 2013 and May 2015. Ethics approval for these evaluation studies was granted by the University of Calgary Conjoint Faculties Research Ethics Board (ID: REB14-1611).

Methods
All of the replications reported in this study used a comparable design, which was an open trial methodology, in which The Working Mind program was delivered, and outcomes were assessed before the program, immediately at its conclusion, and at a 3-month follow-up period. While participation in the evaluation of the program was not compelled by most organizations, their employees were encouraged to complete all 3 assessments. Each employee generated an anonymous but unique identifier, so that his or her data could be matched across time periods. A pooled analysis was used to examine the outcomes of the program, and study-level meta-analysis with moderators was used to interpret the data.

Primary Outcomes
The 2 primary outcomes identified for the program were stigma reduction and improvement in resiliency skills. Stigma was expected to reduce as a result of the program, whereas coping skills were expected to increase. Stigma was measured using the Opening Minds Scale for Workplace Attitudes (OMS-WA). The OMS-WA is a 22-item scale designed specifically for workplace environments to assess attitudes, stereotypes, and behavioural intentions toward persons with mental illnesses. Examples of scale items include “Most employees with a mental illness are too disabled to work,” “Employees with a mental illness often become violent if not treated,” “I would help a co-worker who got behind in their work because of a mental illness,” “You can’t rely on an employee with a mental illness,” and “I would try to avoid an employee with a mental illness.” Five main dimensions of stigma are captured in the scale, including the desire to avoid, perceptions of dangerousness and unpredictability, negative attitudes about mental illness in the workplace, negative attitudes toward helping people with a mental illness, and beliefs about responsibility for having a mental illness. All items are scored on an agreement scale from 1 to 5, where lower scores indicate less stigma. Mean scores were used for the full scale as well for each of the 5 factors.

Improvement in resiliency skills was assessed with a 5-item scale that was developed for the evaluations. The scale captures participants’ perceptions of their level of skill and ability to recover from adverse or traumatic situations. Scale items include “I have the skills to cope with traumatic events or adverse situations,” and “I believe I can recover quickly if I am negatively affected by traumatic events or adverse situations.” Responses are scored on an agreement scale from 1 to 5. Higher scores indicate greater perceived resiliency.

Analytic Strategy
The analysis approach was 2-fold. First, the “metan” command was used to show change in scores from pre- to posttest by study, using a forest plot. The $Q$ test was used to assess the homogeneity of study results in this meta-analysis, but a random-effect meta-analysis was chosen a priori since this approximates the fixed-effect model when heterogeneity is low. Then, to explore determinants of the 2 primary program outcomes, a pooled data set was produced. A random intercept linear mixed-model approach was used to conduct a study-level meta-analysis for changes in stigma and resiliency skills before and after the intervention. Site was modeled as a random effect, and to examine possible moderators of treatment outcomes, participant characteristics were examined as independent variables using this approach. Individual tests included pre- to postchange by participant type (frontline staff or supervisor) and by work sector, as well as by gender, age, education, marital status, and self-rated mental health at baseline. These participant factors were captured as part of the pretest questionnaire. Analyses were completed using version 12 of Stata.

Additional Outcomes
Three additional outcomes were of interest to this study. These outcomes were all related to effects of the program over time. This included the retention of stigma and resiliency skill improvements over time; the extent to which participants improved their understanding, willingness to discuss, and willingness to seek help or provide support to colleagues regarding mental health in the workplace; and the extent to which participants were using the program’s skills and knowledge. While the primary outcomes may be viewed as a direct assessment of program impacts, the additional outcomes were identified to assess changes over the longer term, which may be one way to glimpse whether broader organizational or cultural shifts regarding workplace mental health might be taking place.
Assessment of change from post to follow-up for the OMS-WA and the resiliency skills scale was undertaken using the same method as for the primary pre-to post-outcome described above, that of a random intercept linear mixed-model analysis. This same method was also employed for the 4 measures related to understanding and intentions regarding mental health in the workplace. These measures each contain a 5-item agreement scale and were asked at pretest and 3-month follow-up. Usability of the skills and knowledge enhancement were assessed by asking participants at follow-up if they had used any of what they learned in the program at home or at work (a yes/no response) and asking them also to describe their response in more detail. Open-ended responses were then coded for themes and analyzed with frequency tables. Other measures were used to evaluate the program but are not discussed here.19

Data Sources

Details about the various program implementations is provided in Table 1, including number of participants and survey completions across the various program replications. All implementations were evaluated using a nonrandomized pre-post design, and all studies included a 3-month follow-up survey. Surveys were linked across time points through a process whereby participants provided the last digit of their year of birth, the last digit of their day of the month in which they were born, the last 2 digits of their home phone number, and the last letter of their last name on their survey forms. Due to participant errors in the generation of these unique codes and the nonresponse of some participants at some time points, the sample sizes vary across the various replications and time intervals.

Results

The data set for the pooled analysis included 1292 participants across the 8 replications and a total of 1155 of completed and matched pre- and postsurveys. Participant characteristics for the pooled sample can be seen in Table 2. The number of matched surveys at the follow-up assessment period was 415. Internal reliabilities of the scales, as assessed by Cronbach’s alphas, were .91 at pretest, .92 at posttest, and .90 at follow-up for the OMS-WA total score.

Table 1. The Working Mind Individual Evaluation Details: Setting, Industry Type, Total Participants, and Pre-Post Completed Surveys.

<table>
<thead>
<tr>
<th>Study/Site</th>
<th>Province</th>
<th>Public or Private Industry</th>
<th>Audience</th>
<th>n</th>
<th>No. of Matched Pre-Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nova Scotia</td>
<td>Public</td>
<td>Supervisors and frontline staff</td>
<td>277</td>
<td>272</td>
</tr>
<tr>
<td>2</td>
<td>Nova Scotia</td>
<td>Public</td>
<td>Supervisors and frontline staff</td>
<td>181</td>
<td>141</td>
</tr>
<tr>
<td>3</td>
<td>Alberta</td>
<td>Private</td>
<td>Supervisors and frontline staff</td>
<td>273</td>
<td>241</td>
</tr>
<tr>
<td>4</td>
<td>Alberta</td>
<td>Public</td>
<td>Supervisors and frontline staff</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Alberta</td>
<td>Public</td>
<td>Supervisors and frontline staff</td>
<td>72</td>
<td>55</td>
</tr>
<tr>
<td>6</td>
<td>Nova Scotia</td>
<td>Public</td>
<td>Supervisors and frontline staff</td>
<td>436</td>
<td>406</td>
</tr>
<tr>
<td>7</td>
<td>Ontario</td>
<td>Public</td>
<td>Supervisors</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>New Brunswick</td>
<td>Public</td>
<td>Frontline staff</td>
<td>20</td>
<td>20</td>
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</table>

Table 2. Summary of Participant Characteristics (n = 1155).

<table>
<thead>
<tr>
<th>Variable</th>
<th>% (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant type</td>
<td></td>
</tr>
<tr>
<td>Primary (frontline staff)</td>
<td>47.6 (550)</td>
</tr>
<tr>
<td>Leadership (supervisory staff)</td>
<td>52.4 (605)</td>
</tr>
<tr>
<td>Organization type/industry</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>35.2 (406)</td>
</tr>
<tr>
<td>Education</td>
<td>17.9 (206)</td>
</tr>
<tr>
<td>Health</td>
<td>23.5 (272)</td>
</tr>
<tr>
<td>Energy</td>
<td>20.9 (241)</td>
</tr>
<tr>
<td>Other</td>
<td>2.6 (30)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>36.3 (419)</td>
</tr>
<tr>
<td>Female</td>
<td>62.3 (719)</td>
</tr>
<tr>
<td>Missing</td>
<td>1.5 (17)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>0.1 (1)</td>
</tr>
<tr>
<td>High school</td>
<td>6.5 (75)</td>
</tr>
<tr>
<td>Some postsecondary/nonuniversity certificate</td>
<td>12.0 (139)</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>35.8 (413)</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>18.8 (217)</td>
</tr>
<tr>
<td>Missing</td>
<td>1.2 (14)</td>
</tr>
<tr>
<td>Age group, y</td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>7.8 (90)</td>
</tr>
<tr>
<td>30-39</td>
<td>19.8 (229)</td>
</tr>
<tr>
<td>40-49</td>
<td>30.8 (356)</td>
</tr>
<tr>
<td>50-59</td>
<td>32.0 (370)</td>
</tr>
<tr>
<td>60+</td>
<td>6.9 (80)</td>
</tr>
<tr>
<td>Missing</td>
<td>2.6 (30)</td>
</tr>
<tr>
<td>Marital status&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>17.9 (61)</td>
</tr>
<tr>
<td>Married</td>
<td>66.5 (226)</td>
</tr>
<tr>
<td>Divorced or separated</td>
<td>7.4 (25)</td>
</tr>
<tr>
<td>Common law</td>
<td>7.6 (26)</td>
</tr>
<tr>
<td>Widowed</td>
<td>0.6 (2)</td>
</tr>
<tr>
<td>Self-rated mental health&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>1.0 (9)</td>
</tr>
<tr>
<td>Fair</td>
<td>10.7 (95)</td>
</tr>
<tr>
<td>Good</td>
<td>30.7 (272)</td>
</tr>
<tr>
<td>Very good</td>
<td>43.5 (385)</td>
</tr>
<tr>
<td>Excellent</td>
<td>14.0 (124)</td>
</tr>
</tbody>
</table>

<sup>a</sup>Marital status, n = 340; self-rated mental health, n = 885.

For the OMS-WA subscales, Cronbach’s alphas were acceptable at all time points with the exception of the “helping behaviour” subscale, which was slightly under the generally
acceptable minimum of .70 (social avoidance: .87, .90, .85; danger/unpredictability: .75, .80, .79; work-related beliefs: .81, .80, .78; helping behaviour: .58, .68, .63; responsibility for one’s illness: .72, .77, .74). The subscale for helping behaviour contained only 4 items, which may contribute to lower Cronbach’s alphas at 1 or more time points.

Cronbach’s alphas for the resiliency skills scale were .81 at pretest, .86 at posttest, and .84 at follow-up, indicating a high level of internal consistency at all 3 time points for both primary outcome measures. An examination of a histogram and QQ plot showed normal distribution of change scores for both primary outcome measures.

Primary Outcomes

Figure 1 shows the forest plot of the individual program effects for the OMS-WA measure (\(I^2 \sim 0.0\); heterogeneity \(\chi^2 = 1.20, df = 7, P = 0.99\)). Despite this strong degree of homogeneity, a random-effects model was used in the meta-analysis. Program effect sizes ranged from .15 to .52 (standard mean difference [SMD]), with an overall combined effect size of .38. The test of SMD = 0 revealed a \(z\) score of 9.13 and was significant at the 95\% confidence interval \((P < 0.001)\).

For the pooled sample data set, OMS-WA mean (SD) score at pretest was 1.77 (.47). At posttest, the mean (SD) score was 1.61 (.45), representing an overall mean improvement of .17 scale points. The results of the mixed-model analysis for the pre- to postchange on the OMS-WA revealed statistically significant reductions in stigma for the total scale, coefficient \(\beta = .167, SE = .08, z = 20.72, P < 0.001,\) and all subscales (all \(Ps < 0.001\)). Analysis of participant factors found no differences in outcomes by participant type (frontline staff vs. supervisor), work sector (public vs. private), gender, age, education, marital status, or self-rated mental health.

For the outcome of improvement in resiliency skills, the mean (SD) score was 3.50 (.64) at pretest and 3.81 (.61) at posttest, representing an overall mean improvement of .31 scale points. The mixed-model analysis for the pre- to postchange on the resiliency skills scale revealed statistically significant improvement at the 95\% level of confidence \((P < 0.001)\).

![Figure 1](image-url)
significant predictor of this effect, coefficient = −.308, SE = .015, z = −2.39, P < 0.001, but none of the participant factors was associated with significant prediction.

Additional Outcomes

A total of 564 follow-up surveys were completed, 414 of which could be matched to corresponding pre- and postsurveys. An analysis of sample characteristics found that participants who completed all 3 surveys had lower (i.e., more positive) baseline stigma scores than did participants who did not complete all 3 surveys (1.72 and 1.81 respectively, P = 0.002). Women were also more likely than men to complete all 3 surveys (noncompleters: male [42.0%], female [58.0%]; completers: male [28.7%], female [71.3%], P < 0.001), as were managers/supervisors (noncompleters: frontline staff [52.1%], supervisors/managers [47.9%]; completers: frontline staff [42.9%], supervisors/managers [57.1%], P = 0.002). No significant differences were observed in age, marital status, education level, self-rated mental health at baseline, or baseline resiliency skills score between those who completed all 3 surveys and those who did not.

Table 3 shows the results of the post to follow-up analysis for the OMS-WA total scale and subscales, the resiliency skills scale, and the pre to follow-up change for the 4 statements pertaining to mental health knowledge and intentions in the workplace. As shown, reductions in stigma were maintained to the time of follow-up for the subscales of avoid ance/social distance, work-related beliefs/competency, and responsibility for illness. A significant loss in gains was observed for the subscales of danger/unpredictability and helping behaviour. A repeat of the analysis from pretest to follow-up on these 2 subscales showed that scores were still significantly improved from baseline for the danger/unpredictability subscale (coefficient = .201; SE = .025; z = 7.90; P < 0.001) but not for the helping subscale (coefficient = −.023; SE = .035; z = −0.66; P = 0.510). Mean (SD) scores for the total OMS-WA scale at the 3 time points were as follows: baseline = 1.72 (.43), posttest = 1.53 (.41), and follow-up = 1.62 (.42) (n = 415 matched). No differences were observed across any of the participant factors measured.

For the resiliency skills scale, a loss in gain was also observed from post to follow-up (Table 3). Again, a repeat
of the analysis from pretest to follow-up showed that scores were still significantly improved over those at baseline (coefficient = −0.186; SE = 0.026; z = −7.21; P < 0.001). Mean (SD) scores for the resiliency skills scale at the 3 time points were as follows: baseline = 3.52 (0.65), posttest = 3.84 (0.64), and follow-up = 3.70 (0.63) (n = 398 matched). An analysis of participant characteristics showed private-sector participants had better retention of resiliency skills scores compared to public-sector employees (coefficient = −0.154; SE = 0.063; z = −2.43; P = 0.015; constant = 0.165). No other differences from post to follow-up were observed.

For the 4 measures pertaining to participants’ understanding of mental health in the workplace, intentions toward seeking help, and behaviours related to openness and supporting fellow colleagues, significant improvements from pretest to follow-up were observed on 3 of the 4 statements: “I understand how mental health problems present in the workplace,” “I plan to seek help for my mental health problems, when needed,” and “When I am concerned, I ask my colleagues how they are doing” (Table 3). Mean (SD) scores were as follows: question 1: baseline = 3.32 (1.71), follow-up = 4.07 (0.91); question 2: baseline = 3.15 (1.65), follow-up = 3.75 (1.08); question 3: baseline = 3.09 (1.64), follow-up = 3.79 (1.16); and question 4: baseline = 3.23 (1.57), follow-up = 3.46 (1.20).

Most (69.4%, n = 268) respondents responded positively to the follow-up question, “Have you used any of what you learned in TWM [The Working Mind] at work or at home?” (see Table 4). Many of these participants mentioned actively using the tools taught in the program, particularly the mental health continuum model (35.4%), and, to a lesser extent, the “Big 4” skills (19.3%). Many also indicated they used the empathy skills learned in the program to provide support and/or reach out to colleagues regarding their mental health (29.2%). Talking more about mental health in the workplace and being more open with colleagues was also commonly mentioned as a way program learnings were being used at follow-up (20.5%). Additionally, 5.0% indicated that the program led them to seek professional help for their own mental health and/or enabled them to get friends or colleagues to seek professional help for their mental health.

Most respondents who replied “no” (n = 101) did not provide further details. Those who did typically indicated...
that they had not used the skills because they had not had the need/opportunity (5.1%), because they had forgotten what they had learned (2.6%), or because the course had not taught them anything new (4.3%).

Discussion

This study provided a meta-analysis of the effects of a workplace mental health awareness and stigma reduction program, entitled The Working Mind. The outcomes of this program were evaluated in 8 diverse workplace settings across Canada, with a focus on the primary outcomes of stigma in the workplace and perceived resiliency. The results of the program revealed improvement in both primary measures. The observed effect sizes were comparable to, if not a bit higher, than successful stigma reduction interventions with other target groups. We also note that the effect sizes observed in the current study were somewhat stronger than for the results of the R2MR program also recently conducted in Canada and reported in this issue despite the fact that The Working Mind program is in fact derived from the R2MR program. We also note that these results were obtained, even though the baseline scores on the stigma scale were already quite low at the outset of the program, which could have limited the results that might have been seen otherwise.

The low variability seen in the results across the various sites (see Figure 1) suggests that consistent program results can be obtained from a program that is delivered in a fairly standardized manner and, as such, likely has a high level of fidelity. The current results also demonstrated minimal outcome variability across different participant factors, which further suggest that the program is applicable to diverse workplace audiences.

Follow-up scores revealed that positive outcomes were maintained on many dimensions of stigma reduction. One exception to this general pattern was for the helping subscale of the stigma scale. This factor includes items that ask to what extent the respondent is willing to help others with mental health problems. It is at present unclear why these subscale scores were not maintained. It is possible that dimensions of stigma may not all respond equivalently to such a program or that the program itself did not address this dimension sufficiently. It is also worth reiterating that less than acceptable Cronbach’s alphas were observed on the helping subscale of the OMS-WA at pre, post, and follow-up (see above). Supplementary materials or booster sessions in this domain may be indicated. Further research that distinguishes among the various dimensions of stigma will also help to discern if cultural change is not a linear process.

Many of the respondents who provided comments at the follow-up assessment indicated that the program had benefits and that they were using the skills that had been learned. Many also indicated that they had either personally sought professional help or encouraged others to do so. It has been suggested that in the short term, these incremental assessment and treatment costs may be associated with higher costs, but in the long term, this process likely yields more psychological healthy, effective, and productive workers and workplace cultures. It was also observed that the more formally evaluated self-reported resiliency skills were not fully maintained between the end of the program and the 3-month follow-up assessment, but they were still significantly improved relative to the observed baseline skills. It was also observed that the self-reported use of the program’s skills was modest, which suggests that perhaps other elements were in play (e.g., general culture change), that participants were functioning well and simply did not need to use the program’s skills, or that some form of refresher may be necessary to remind participants about these skills. This pattern is not unusual in many intervention programs, and it also supports the potential value of booster sessions or refresher modules.

Study Strengths and Limitations

This study benefitted from a number of strengths. It employed a well-conceived program with strong attention to professionally developed materials and concern about training and fidelity of the delivery of the program. The program was delivered in multiple sites, which yielded a large sample, with diverse characteristics that enabled a preliminary assessment of potential modifiers of the program’s outcomes. The evaluation captured both immediate and longer term changes on a range of primary and secondary outcomes, which included both quantitative and qualitative measures.

Despite the above set of study strengths, it also had several limitations. None of the assessments included a control group, and so although it seems unlikely that the observed pattern of results was the result of regression toward the mean, natural change, or some common third variable that influenced change across the set of workplaces included in the current study, such possibilities cannot be definitively ruled out. Further research employing a control group, or potentially with a randomized trial methodology, will help to discern the program’s true efficacy. A second study limitation is that, while all of the sites included a follow-up assessment period, the participants in this study were neither incentivized nor compelled to complete these assessments. As a consequence, there was a relatively large attrition at the naturalistic follow-up period, and an examination of participant characteristics did reveal some differences between participants who completed all 3 surveys compared to those who completed the survey at only pre and post. Future studies should consider strategies to retain a higher proportion of respondents at all assessment periods and might also wish to study longer follow-up intervals, to establish the program’s effects more definitively.

Summary and Directions for Future Research

In summary, the current study provides a compelling set of results for The Working Mind in a diverse set of workplace
settings in Canada. The replicability of these results in other comparable workplace settings and their generalizability to other cultures, workplaces, and populations remain topics for future study. Such research should ideally employ a comprehensive set of evaluation outcomes, as was the case in the current study, to discern both the dimensions wherein the program had benefit and might be enhanced. We also strongly recommend alternative methods to track participants over time and, if possible, some method to incentivize follow-up assessments over a longer time interval, to minimize the issue of attrition observed in the above analyses. For example, the current results suggest the need to enhance or reinforce the helping dimension of stigma reduction, so it will be important to evaluate such considerations in future research. At a broader level, we also encourage the assessment of program and organizational outcomes that may be more indirectly affected by a program such as The Working Mind. Such outcomes could include the use of employee health benefits but also improved corporate culture and overall respect for employees in the workplace.

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Data Access
Request for access to the data can be addressed to the first author at ksdobson@ucalgary.ca.

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