

Mental Health Awareness Training (MHAT):
The Development and Evaluation of an Intervention for Leaders

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Abstract

A three-hour mental health awareness training (MHAT) intervention was designed to improve leaders' knowledge, self-efficacy, attitudes, and promotion intentions surrounding employee mental health. All participants ($N = 142$) were leaders at a large Canadian organization and were asked to respond to a baseline and two follow-up questionnaires. Participants were assigned to an intervention ($n = 88$) or wait-list control ($n = 54$) group. A mixed-model MANOVA resulted in a significant group-by-time interaction; univariate effects demonstrated that each of the four dependent variables was significantly affected by the training. Findings from a follow-up Roy-Bargmann stepdown demonstrate that when covariance between measures was controlled, the training only had a significant effect on knowledge and self-efficacy. The results of the stepdown, when combined with the univariate effects, may imply a pattern of direct and indirect effects among the training and outcome variables. Ultimately, findings suggest that the intervention successfully improved leaders' mental health literacy up to eight weeks post-training.

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Mental Health Awareness Training for Leaders:

Development and Evaluation

The World Health Organization (WHO) contends that “there is no health without mental health” (WHO, 2004, p. 14). Described as the “foundation for individual wellbeing and the effective functioning of a community” (WHO, 2004, p. 10), mental health is integral to the overall health and productivity of employees and their workplaces. Consequently, mental health problems result in abnormal psychological patterns and disabilities that affect how individuals feel, think, behave, and interact with their environment (U.S. Department of Human Services, 1999). According to a national study, mental health problems cost Canadian organizations approximately \$50 billion every year (Smetanin, Stiff, Briante, Adair, Ahmad, & Khan, 2011). As a result, many employers are beginning to recognize the psychosocial and financial burdens of poor employee mental health (Goetzel, Ozminkowski, Sederer, & Mark, 2002; Irvine, 2011).

In response to these rising financial burdens, numerous organizations have implemented mental health programs (e.g., Employee and Family Assistance Programs) in an effort to provide support for employees experiencing mental health issues (Mental Health Commission of Canada [MHCC], 2013a). Similarly, many Canadian employers have begun to implement the National Standard of Psychological Health and Safety—a voluntary national mental health standard created by the Canadian Standard Association (CSA Group) and the Bureau de normalisation du Québec (BNQ), in partnership with the Mental Health Commission of Canada (CSA Group & BNQ, 2013; MHCC, 2013a).

Despite these efforts, mental health problems are still considered to be the leading cause of workplace disability in Canada (Watson Wyatt Worldwide, 2007). Mental

health problems are often associated with low productivity (Goetzel et al., 2002; Karasek & Theorell, 1990), high rates of absenteeism (Baicker, Culter, & Song, 2010; Goetzel et al., 2002), poor interpersonal relationships (Caveen, Dewa, & Goering, 2006; Shain, Arnold, & GermAnn, 2012), and increased disability and insurance costs (Caveen et al., 2006; Karasek & Theorell, 1990). Yet, very little systematic research has examined how organizations can help to prevent mental health conditions among employees (Corbière & Shen, 2006; Goldenhar, LaMontagne, Katz, Heaney, & Landsbergis, 2001; Krupa, 2007; Schaufeli, 2004).

Although organizations are beginning to direct attention toward workplace mental health promotion (Goetzel et al., 2002; Irvine, 2011), most of these efforts focus exclusively on organizational and employee-level programs and strategies (Jane-Llope, Hosman, Jenkins, & Anderson, 2003; Kitchener & Jorm, 2002; Kitchener & Jorm, 2004; Kitchener & Jorm, 2008; Vuori, Toppinen-Tanner, & Mutanen, 2012). Although managers and supervisors are likely to play an important role in building and sustaining psychologically safe and healthy work environments (Goetzel et al., 2002; Nieuwenhuijsen, Verbeek, de Boer, Blonk, & van Dijk, 2004; Karasek & Theorell, 1990; Shain et al., 2012), very few mental health programs and strategies have focused on leaders as sources of social support, early recognition, and referral to these programs (Briner, Amati, & Lardner, 2003; De Lange, Taris, Kompier, Houtman, & Bongers, 2004; Nieuwenhuijsen et al., 2004).

Accordingly, the purpose of this study was to develop and deliver a Mental Health Awareness Training (MHAT) intervention designed to help leaders recognize and support employee mental health in the workplace.

Mental Health First Aid

Mental Health First Aid training is designed to teach the public to give initial help to a person who may be developing a mental health problem or experiencing a mental health crisis (Kitchener & Jorm, 2002). Recognizing that members of the general public had low mental health literacy, Kitchener and Jorm (2002) developed the training to help individuals recognize and provide appropriate support for individuals who may be suffering from a mental health condition. As described by Jorm et al., (1997), mental health literacy is an individual's knowledge of mental health, attitudes about mental disorders, intentions to promote and offer mental health support, and ability to recognize and help prevent mental health problems.

Over the past decade, Kitchener and Jorm (2002; 2004; 2008) have evaluated the effectiveness of Mental Health First Aid in public, government, and organizational settings. Using randomized controlled trials, Kitchener and Jorm's findings (2002; 2004; 2008) suggest that Mental Health First Aid training helps to increase individuals' mental health literacy and confidence with regard to providing help to others. Although Mental Health First Aid has been evaluated in an organizational context, research has yet to explore its ability to specifically improve mental health literacy among leaders, managers, and supervisors. Since people seem to be more likely to seek and receive appropriate mental health care if it is suggested by someone within their social network (Israel, Baker, Goldenhar, Heaney, & Schurman, 1996), it is important that workplace leaders develop a broader understanding of mental health, the confidence to facilitate early intervention, and the knowledge to make appropriate suggestions.

The Role of Leaders

Mounting evidence suggests that supervisors and front-line managers can build mental health awareness and promote overall wellness through frequent two-way communication with employees (Fleten & Johnson, 2006; Nieuwenhuijsen et al., 2004). A longitudinal study by De Lange and colleagues (2004) examined causal relationships between supervisor support and mental health. Findings suggest that better support from supervisors is associated with improvements in employee mental health (De Lange et al., 2004) and speedier returns to work for individuals on disability leave (Nieuwenhuijsen et al., 2004).

Given that supervisors typically communicate with employees on a relatively frequent basis and are familiar with the requirements of the employee's job (Nieuwenhuijsen et al., 2004), they have the unique capacity to provide social support and recognize changes in employees' wellbeing and mental health (Karasek & Theorell, 1990). According to Craig et al., (2004), the prognosis for mental health conditions can be improved through early detection and intervention. Consequently, by providing leaders with the training to recognize the signs of deteriorating employee mental health, employers may be able to prevent or lessen some of the consequences of poor employee mental health, such as prolonged disability leave, absenteeism, and reduced productivity (Nieuwenhuijsen et al., 2004).

Furthermore, Caveen and colleagues (2006) contend that the employee-supervisor relationship is important to the maintenance of positive employee health and wellbeing. Therefore, given that negative attitudes and low mental health literacy have the potential to create uncomfortable or strained relationships within the workplace (Albrecht, Walker,

& Levy, 1982), it is important that occupational mental health interventions consider the role of leaders in providing support for employees.

The Roles of Knowledge & Attitudes

Although workplace consequences related to employees' health and safety are receiving increased attention from researchers (Goetzel et al., 2002; Irvine, 2011), the majority of mental health intervention research has been conducted within the fields of clinical and child psychology (Durlak & Wells, 1997; Pinfold, Stuart, Thornicroft, & Arboleda-Florez, 2005). Given that mental health literacy is remarkably low throughout the world (WHO, 2001), Pinfold et al. (2005) developed a school-based intervention program designed to improve students' knowledge and understanding of mental health. The intervention successfully increased mental health literacy among middle school and high school students in the United Kingdom and Canada (Pinfold et al., 2005), suggesting that mental health awareness trainings can effectively improve individuals' knowledge and attitudes surrounding mental health and people with mental health problems.

These findings support the social psychology literature on stigma that suggests that education is one way to improve attitudes about mental health (Corrigan & Matthews, 2003; Corrigan et al., 2002). For instance, Corrigan et al. (2002) demonstrated that it is possible to discredit myths and false perceptions about mental health and people with mental health conditions through the implementation of educational mental health programs. By providing individuals with education about mental health, it seems that organizations may be able to improve leaders' and employees' knowledge and attitudes about mental health and people with mental health conditions (Corrigan et al., 2002; Pinfold et al., 2005).

Hypothesis 1: Leaders' knowledge about mental health will significantly improve for the intervention group that receives the mental health awareness training, but no significant change in leaders' knowledge about mental health will be observed for the control group that does not receive the training.

Hypothesis 2: Leaders' attitudes about mental health will significantly improve for the intervention group that receives the mental health awareness training, but no significant changes in leaders' attitudes about mental health will be observed for the control group that does not receive the training.

The Roles of Self-Efficacy & Promotion Intentions

Findings by Collins (1982; as cited in Bandura, 1993) suggest that knowledge alone does not determine whether or not, or the extent to which, an individual will engage in particular behaviours or activities. Even when knowledge levels are comparable, individuals with higher levels of self-efficacy are more likely to engage in learned behaviours (Bouffard-Bouchard, 1989; Bouffard-Bouchard, Parent, & Larivée, 1991; Collins, 1982) and perform more favourably than individuals with lower levels of self-efficacy (Luthans, 1998). Defined as the perceived ability to exert personal control (Bandura, 1997; Maibach & Murphy, 1995) over behaviours, self-efficacy is required for enacted behaviour (Ajzen, 1991; Bandura, 1986) and influences whether or not an individual is likely to engage in particular behaviours or activities.

Accordingly, it would seem likely that in order for leaders to promote mental health within their workplaces and effectively address the signs of an employee's deteriorating mental health, they must first feel confident about their abilities to engage

with the employee about mental health. Yet, in a recent report released by the Conference Board of Canada, nearly 45% of managers reported having no training on how to appropriately manage an employee with mental health issues (Thorpe & Chenier, 2011). Many of these ill-equipped leaders also expressed a desire and a need for more training about mental health from a workplace context (Thorpe & Chenier, 2011).

According to findings by Vuori et al. (2012), self-efficacy is predictive of whether or not an individual will engage in particular behaviours. For leaders to successfully promote mental health, engage with employees, and discuss mental health in the workplace, they must first develop self-efficacy surrounding their knowledge of mental health and their ability to offer appropriate support and resources to struggling employees. Furthermore, research findings from the field of mental health promotion suggest that group-based cognitive behavioural interventions that focus on self-efficacy seem to be the most effective in increasing individuals' likelihood of promoting mental health (Jané-Llope et al., 2003). Therefore, in the current research context, if leaders' self-efficacy with regard to employee mental health improves, it is likely that leaders' intentions to promote mental health in their workplace will also improve.

Hypothesis 3: Leaders' self-efficacy with regard to mental health at the workplace will significantly improve for those in the intervention group who receive the mental health awareness training, but not for those in the control group.

Hypothesis 4: Leaders' intentions to promote mental health in the workplace will significantly improve for those in the intervention group who receive the mental health awareness training, but not for those in the control group.

Development of the Mental Health Awareness Training (MHAT) Intervention

The primary objective of this study was to determine whether or not a three hour mental health awareness training (MHAT) intervention could significantly improve leaders' knowledge, attitudes, self-efficacy, and promotion intentions surrounding employee mental health. Given that the National Institute for Occupational Safety and Health (NIOSH, 1996) has identified intervention research as one of the top priority areas in occupational health and safety research, I took their suggested processes of intervention research into consideration when developing the MHAT.

Information Gathering & Background. Before developing the training, I was approached by a prominent leader at a large Canadian organization. Due to rising costs associated with short and long term mental health disability, the organization was interested in implementing a relatively non-invasive and cost-effective mental health intervention. To ensure that the content of the training was both accurate and relevant to the organization and its employees, I performed extensive literature reviews of the following areas: mental health first aid, mental health in North America, and interventions in the field of occupational health and safety. After gathering background information, I developed partnerships with organizational key stakeholders and performed a needs assessment related to the organization's mental health policies, resources, and deficiencies.

Based on the needs assessment and meetings with human resources experts, I determined that a leader-focused training would be most beneficial. In accordance with the Mental Health Commission of Canada's (2012) recommendations regarding effective mental health interventions, the training content was designed primarily around three

areas: a) early identification and recognition, b) early and appropriate engagement or action, and c) assessment, planning and monitoring.

Training Techniques. Before developing the training materials, I examined training literature to determine the types of training techniques that would be most beneficial (Bandura, 1986; Bandura et al., 1980; Corrigan et al., 2001; Pinfold et al., 2005; Saks & Haccoun, 2004; Vuori et al., 2012). Based on these findings, I incorporated training techniques designed to enhance knowledge and self-efficacy. In accordance with existing literature (Bandura, 1986; Corrigan et al., 2001; Pinfold et al., 2005), it is expected that by focusing on training techniques designed to improve knowledge and self-efficacy, the training will also help to facilitate improvements in attitudes and promotion intentions, respectively. To bolster knowledge and self-efficacy, training techniques primarily focused on education (Corrigan & Matthews, 2003; Pinfold et al., 2005), social support (Cohen & Willis, 1985; Frese, 1999), enactive mastery (Bandura et al., 1980), and vicarious experience (Bandura et al., 1980).

Lecture-based modules (Saks & Haccoun, 2004) were used to educate leaders about mental health, improve attitudes about mental health, and emphasize the role of leaders as sources of social support for employees struggling with mental health problems. Through the use of realistic and highly interactive case studies (Saks & Haccoun, 2004), participants were able to practice their newly developed skills, develop patterns of success, and observe their peers successfully recognize signs of common mental health problems (e.g., stress, burnout, depression, anxiety, substance abuse, and self-harm).

Participants' success was reinforced through social persuasion on behalf of the trainer, during which the trainer actively encouraged participants to engage with employees and reassured participants that they now had the appropriate skills to effectively engage with employees demonstrating signs of a mental health problem.

Method

Participants

Approximately 350 managers and supervisors from a large Canadian company were invited to participate in the mental health awareness training and its associated research study. To participate in the research component of the training, leaders had to be managing at least one employee at the time of the training. Employees' email addresses were provided by the human resources department at the organization. Invitations to participate in the training and the associated research study were sent out one month in advance of the first scheduled training session. In total, 183 leaders responded to the invitation and baseline questionnaire; 114 leaders were assigned to the training group and 69 were assigned to the wait-list control group. Due to practical considerations, group assignment was based on the geographic locations of the work facilities of the respondents. Of these participants, 54 from the control group and 88 from the training group responded to the questionnaire at all three time points: two weeks prior to training (T1), within 24 hours of training (T2), and eight weeks post-training (T3). Despite the moderate level of attrition, there were no significant differences on any variables between those who responded to the questionnaires at all three time points and those who only responded at T1 ($F(9, 174) = 0.78, ns.$).

Respondents from both the training group and the control group varied in age from 23 to 62. Leaders' tenure with the organization ranged from 1 year to 34 years. Of these respondents, 65 (45.78%) reported having worked with the organization between 1-10 years, 55 (38.73%) from 11-20 years, and 22 (15.49%) from 21-34 years. The vast majority of respondents from the control condition (i.e., 85%) and the training condition (i.e., 82%) had personal or family experience with mental health problems. Most respondents from the control condition (i.e., 57%) and the training condition (i.e., 55%) also reported having managed at least one employee with a known mental health condition at some point during their career. Table 1 reports additional demographic information for participants in both the control group and the intervention group.

Design & Follow-Ups

Training Materials. In total, 15 training sessions were conducted, with the size of the group varying between 10 and 20 leaders. Average group size was 12.4 leaders. Each of the training sessions was three-hours long and was delivered in person by me (i.e., the researcher). Each of the training sessions was held in a board room or similar site, and coffee, water, fruit, and donuts were served at each session.

The training incorporated two lecture-style presentation modules and two interactive case studies. The first lecture-style presentation outlined mental health facts relevant to the target population (e.g., working adults in North America) and was designed to improve leaders' knowledge and attitudes surrounding mental health. Six areas of mental health (e.g., stress, burnout, depression, anxiety, substance abuse, suicide) were covered in the first lecture-style module and an emphasis was placed on recognizing the risk factors and signs of a developing mental health problem (see Appendix A).

The second lecture-style presentation focused on leaders' existing skills and was designed to increase self-efficacy and promotion intentions surrounding the mental health of one's employees. Unlike the first, more fact-based lecture, the second lecture was more behaviour-based and illustrated the ways by which leaders should discuss mental health in the workplace, approach employees about mental health concerns, and assist an employee through a mental health problem (see Appendix B).

Between the first and second lecture modules, leaders were asked to read and engage in an interactive case study (see Appendix C) that described an employee who may have been demonstrating signs of a mental health problem. The first case study tested leaders' abilities to recognize signs of a mental health problem, engage with the employee who was demonstrating the signs of the mental health problem, and provide appropriate recommendations, resources, and assistance to the employee. According to Bilsker, Gilbert, Myette, and Stewart-Patterson (2005) and Caveen et al. (2006), these steps are critical to a leader's likelihood of correctly and appropriately recognizing and handling a mental health situation at the workplace.

After the second lecture module, leaders were asked to read and engage in a second case study (see Appendix D). Although different in content from the first case study, the second case also described an employee who may have been demonstrating signs of a mental health problem. Like the first case study, the second case study also tested leaders' abilities to recognize, engage with, and assist an employee experiencing a mental health problem. The intention of incorporating both teaching methods was to increase leaders' knowledge and self-efficacy with regard to mental health and the mental health of their employees. All training materials, including the lecture modules and case-

studies, were provided to participants in hard-copy binders for future reference (see Appendices A-D).

Experimental Design. To determine the causal impact of the training over time, a longitudinal design with a wait-list control group was used. All participants were asked to respond to the same questionnaire at three different time points. Participants assigned to the intervention group were invited to take part in the mental health awareness training approximately one week after receiving the first questionnaire (i.e., the baseline questionnaire at T1), while participants assigned to the wait-list control group did not take part in the training until after the conclusion of the study.

Participants in the training group were asked to respond to the first follow-up questionnaire 24 hours after attending the mental health awareness training (T2). At this time, participants in the control group were also asked to respond to the same follow-up questionnaire. In order to obtain long-term data on the effects of the intervention, participants in both the control group and the training group were asked to respond to the second follow-up questionnaire eight weeks after the training group received the mental health awareness training (T3). Figure 1 presents the experimental design.

Measures: Questionnaires

Four validated measurement scales and a standard demographic survey were administered to participants at all three time points. Table 2 reports the reliability coefficients (Cronbach's alpha) for each of the measurement scales and presents the inter-correlations between the scales.

Demographics. Demographic characteristics were assessed using standard survey questions that asked about participants' age, gender, occupation, and management

experience. Experience with mental health was assessed using two questions: one that asked about leaders' personal experiences with mental health ("Have you or a close friend or family member ever suffered from any type of mental health problem?"), and one that asked about leaders' professional or management-related experiences with mental health ("Have you ever managed an employee with a mental health condition or that has a diagnosed mental illness or mental health problem?").

Knowledge. Knowledge about mental health was assessed using the 12-item Mental Health Knowledge Schedule (MAKS; Evans-Lacko et al., 2010). The scale of the MAKS ranged from 1 ("Strongly Agree") to 5 ("Strongly Disagree"); an example item included in the scale was "If a friend had a mental health problem, I know what advice to give them to get professional help"¹.

Attitudes. Attitudes about mental health were measured using a modified version of the 9-item Personal Depression Stigma Scale (Griffiths, Christensen, Jorm, Evans, & Groves, 2004). The scale was modified by replacing the word "depression" with the term "mental health problem". The scale ranged from 1 ("Strongly Agree") to 5 ("Strongly Disagree") and included the item "I would not employ someone if I knew they had a mental health problem".

Self-Efficacy. Leaders' self-efficacy surrounding mental health was measured using an adapted version of the 9-item General Self-Efficacy Scale (Chen, Gully, & Eden, 2001). Items were adapted to reflect self-efficacy related to employee mental health. The

¹ For the sake of improved reliability, the last item of the knowledge measure was omitted from analyses. None of the effects of the analyses were affected by the deletion of the item.

scale ranged from 1 (“Strongly Disagree”) to 6 (“Strongly Agree”), and included the example item “I feel confident about promoting employee mental health”.

Promotion Intentions. Leaders’ intentions to promote mental health in the workplace were measured using an adapted version of a safety scale designed to assess leaders’ safety promotion intentions (Mullen & Kelloway, 2009). The measure consisted of three items: “It is very likely that I will promote mental health in my workplace”, “I intend to achieve the goals that I set for myself”, and “I want to apply what I learn about mental health to my work setting”. The scale ranged from 1 (“Strongly Disagree”) to 6 (“Strongly Agree”).

Analyses

Using SPSS, a multivariate analysis of variance (MANOVA) with Roy-Bargmann stepdown was used to test group differences on the four dependent variables over three time points. Consistent with the objectives of the training techniques, priority was assigned to the dependent variables in the following order: knowledge about mental health, attitudes about mental health, self-efficacy with regard to mental health, and intention to promote positive mental health in the workplace. The mixed MANOVA design allows the simultaneous analysis of each of these dependent variables.

According to the Roy-Bargmann stepdown process, knowledge about mental health will be tested by a univariate analysis of variance (ANOVA), while all subsequent dependent variables will be tested with a series of analyses of covariance (ANCOVAs) (Tabachnick & Fidell, 2006). By doing so, the analysis tests each successive dependent variable, with higher-priority dependent variables as covariates. This analysis will help to

identify what, if anything, each dependent variable adds to the combination of dependent variables that has already been tested.

Results

Given the importance of determining the causal effects of the training over time, scores were only maintained for individuals who responded to all measures at all three time points. As a result, no data were missing. There were no univariate or multivariate outliers (at $\alpha = .05$ level), and all assumptions of MANOVA were satisfied. There were no differences between the control and intervention groups on any of the variables measured at T1 ($F(4, 137) = 0.77, ns.$), nor were there any significant differences between the control and intervention groups on any of the demographic variables ($F(9, 132) = 0.77, ns.$).

A mixed model MANOVA resulted in a significant group by time interaction ($F(8, 554) = 11.73, p < .001$). As shown in Table 3, each of the four dependent variables was significantly affected by the training, providing support for all four hypotheses. To better understand these significant univariate effects, I plotted the cell means (see Figure 2) and conducted a series of post-hoc paired t-tests. Significant improvements in knowledge were observed for the intervention group from T1 ($M = 3.88, SD = 0.41$) to T2 ($M = 4.31, SD = 0.43; t(87) = -7.92, p < .001$), and from T1 to T3 ($M = 4.32, SD = 0.40; t(87) = -8.62, p < .001$), but not between T2 and T3. Significant improvements in attitudes were also observed for the intervention group from T1 ($M = 2.98, SD = 0.39$) to T2 ($M = 3.25, SD = 0.37; t(87) = -5.60, p < .001$) and from T1 to T3 ($M = 3.20, SD = 0.42;$

$t(87) = -4.06, p < .001$). No significant improvements in attitude were observed for the intervention group between T2 and T3.

Significant improvements in self-efficacy were also observed for the intervention group between T1 ($M = 4.17, SD = 0.66$) and T2 ($M = 4.98, SD = 0.57; t(87) = -9.94, p < .001$), and between T1 and T3 ($M = 4.94, SD = 0.53; t(87) = -9.66, p < .001$), but not between T2 and T3. Finally, significant improvements in promotion intentions were also observed for the intervention group between T1 ($M = 4.50, SD = 0.66$) and T2 ($M = 5.24, SD = 0.51; t(87) = -9.76, p < .001$) and between T1 and T3 ($M = 5.14, SD = 0.62; t(87) = -7.88, p < .001$). No significant improvements in promotion intentions were observed for the intervention group between T2 and T3. No significant changes in knowledge, attitudes, self-efficacy, or promotion intentions were observed for the control group at any time.

Findings from a follow-up Roy-Bargmann stepdown demonstrate that when covariance between measures is controlled, the training had a significant effect on leaders' knowledge ($F(2, 280) = 21.02, p < .01$) and self-efficacy ($F(2, 278) = 19.62, p < .01$), but not on attitudes ($F(2, 279) = 2.34, ns.$) or promotion intentions ($F(2, 277) = 3.37, ns.$). The results of the stepdown analysis, when combined with the significant results of the univariate ANOVAs, may imply a pattern of direct and indirect effects. For instance, when the covariance between knowledge and attitudes was taken into consideration in the stepdown analysis, the training no longer had a significant effect on attitudes. To the extent that the combined ANOVA and Roy-Bargmann stepdown may proxy the steps outlined by Baron and Kenny (1986) to test for mediation, the observed

pattern of results may imply that training has direct effects on some of the variables (e.g., knowledge and self-efficacy) in question and indirect effects on others (e.g., attitudes and promotion intentions).

Discussion

Previous quantitative research on mental health has focused heavily on employee-level intervention strategies (Jane-Llope et al., 2003; Kitchener & Jorm, 2002; Kitchener & Jorm, 2004; Kitchener & Jorm, 2008; Vuori et al., 2012). The current longitudinal study contributes to, and extends, this quantitative literature by replicating previous findings, by focusing on the role of leaders in the promotion of employee mental health, and by using empirical methods to develop a mental health training intervention that is appropriate for organizational settings.

In the current study, I replicated and extended findings from Kitchener and Jorm's (2002; 2004; 2008) mental health first aid studies. In particular, the findings are consistent with a model that assumes that mental health awareness training interventions result in improved knowledge, self-efficacy, promotion intentions, and attitudes surrounding mental health (Kitchener & Jorm, 2002; 2004; 2008). Yet, unlike Kitchener and Jorm's (2002; 2004; 2008) findings, the findings from the MANOVA and stepdown analysis performed in this study provide insight into the potentially mediating roles of knowledge and self-efficacy. The role of mediation has yet to be explored by previous studies and has the potential to draw attention to the process by which the training intervention impacts all outcome variables. Furthermore, my findings also extend Kitchener and Jorm's (2002; 2004; 2008) findings because the mental health awareness

training was designed specifically for leaders, managers, and supervisors, rather than for employees or members of the public.

Additionally, the training had a number of desired effects that emphasize the importance of a mental health awareness training intervention designed specifically for organizational leaders. Relative to the control group, the training group demonstrated improved literacy with regard to mental health and its potential impacts on employees. Not only this, but the training group also experienced greater confidence surrounding their abilities to discuss mental health at work and provide help to employees who may be experiencing mental health problems. Concurrently, those who received the training also demonstrated improvements in their attitudes regarding mental health and their likelihood of promoting positive mental health in the workplace. However, results from the stepdown analysis suggest that these improvements in attitudes and promotion intentions may be somewhat indirect. For instance, when the covariance between knowledge and attitudes was taken into consideration in the stepdown analysis, the training no longer had a significant effect on attitudes. This finding suggests that the training's impact on attitudes may be somewhat facilitated by the training's impact on leaders' knowledge about mental health.

According to the Mental Health Commission of Canada (2013b), stigma is a form of prejudice that manifests as a collection of negative attitudes and behaviours that are perpetuated by misinformation and fear. Thus, this study's results support the notion that leaders who have a greater knowledge about mental health will hold fewer negative attitudes and will support fewer stereotypes than leaders who have relatively low levels of knowledge about mental health. Specifically, the moderate correlations between leaders'

knowledge and attitudes suggest that improvements in leaders' knowledge about mental health facilitated improvements in attitudes about mental health. These findings are consistent with findings by Pinfold and colleagues (2005), who found that attitudes about mental health could be significantly influenced by improving mental health knowledge and awareness. Consequently, leaders who are more knowledgeable about mental health may be better able and more willing to provide support to employees struggling with mental health conditions—a consequence that could help reduce the psychosocial and financial burdens of poor employee mental health (Goetzel et al., 2002; Irvine, 2011).

Considering that 46% of Canadians believe that mental health problems are often used as excuses for poor behaviour (MHCC, 2012), it is likely that some leaders also hold these beliefs. These beliefs can lead to significant, but preventable workplace problems, such as absenteeism (Goetzel et al., 2002), interpersonal conflicts (Caveen et al., 2006; Goetzel et al., 2002; Shain et al., 2012), and even wrongful dismissal (Shain & Nassar, 2009). If leaders continue to have relatively poor levels of knowledge about mental health, it is likely that negative attitudes will continue to perpetuate and that these workplace issues will continue to be problematic.

Similarly, results suggest that leaders who are knowledgeable and confident about workplace mental health problems will be more likely to promote positive mental health in their workplaces. Specifically, the moderate to high correlations between promotion intentions and self-efficacy suggest that improvements in leaders' self-efficacy may facilitate improvements in leaders' intentions to promote mental health in their workplace. These findings are consistent with Bandura's (1982; 1992; 1993) findings

that indicate that increases in self-efficacy significantly contribute to motivation and performance.

According to a Canadian Medical Association study (2008), mental health promotion is essential to the recognition and prevention of mental health issues. Yet, mental health promotion research also suggests that in order for promotion to be successful, the promoter must be knowledgeable and feel confident about whatever it is that is being promoted (Jane-Llope et al., 2003). Findings from this study may imply a similar pattern of indirect effects on leaders' promotion intentions; for instance, leaders who are more knowledgeable and self-confident about mental health may be more likely to promote mental health in their workplaces. Well-informed, confident leaders may be more likely to help promote early recognition and may encourage employees to seek help from qualified professionals before their mental health problem escalates. According to Bilsker and colleagues (2005), early recognition is essential to effective and efficient treatment, and is also associated with lower rates of absenteeism and reduced durations of disability leave.

Based on these findings, it would seem that employees' mental health may be suffering because leaders do not possess the appropriate knowledge of mental health and do not feel confident in their abilities to engage with employees or discuss mental health issues at work. Ultimately, findings from this study suggest that leaders' knowledge about mental health is related to their attitudes, and that improvements in leaders' intentions to promote mental health in their workplaces may be facilitated by other variables, such as knowledge and self-efficacy. Therefore, leaders who attended the

mental health awareness training experienced improvements in knowledge and self-efficacy, and also experienced improvements in their attitudes and promotion intentions.

By providing leaders with the skills needed to recognize and assist employees with mental health concerns, organizations may be better able to help prevent costly mental health conditions from developing or escalating. Through early recognition of the signs and symptoms of mental health problems, leaders may be able to help put employees in touch with support and mental health resources, both within and beyond the organization. In doing so, employees may gain quicker access to appropriate treatment. Consequently, if employees gain early access to treatment, they may ultimately endure fewer productivity, performance, and attendance-related issues that are common for those suffering from untreated mental health conditions (WHO, 2005; MHCC, 2013a; MHCC, 2013b). Therefore, if leaders have the awareness, knowledge, and skills needed to successfully recognize the signs that an employee may be suffering from a mental health condition, they may be more likely to appropriately intervene and help the employee get additional support sooner and more effectively.

Perhaps most importantly, results suggest that a three-hour mental health awareness training session is capable of significantly increasing leaders' mental health literacy, both in the short-term and in the long-term. This is especially important given that the training is designed to be implemented in real organizational settings. For instance, for practical reasons it is often very difficult for organizations to remove their leaders from the workplace for more than a day at a time. Therefore, an effective, one-time-only, three-hour training program is likely to be both cost-effective and less

disruptive than most current trainings that require attendance on multiple days (Kitchener & Jorm, 2002; 2004; 2008).

Furthermore, this mental health awareness training intervention differs from existing mental health programs because both the training and the evaluation of the training have been empirically driven. The training design was developed from a foundation of both statistically-supported academic literature (Cooper & Cartwright, 1994; Gates, 1993; Krupa, 2007; Kitchener & Jorm, 2002; Kitchener & Jorm, 2004; Kitchener & Jorm, 2008; Nieuwenhuijsen et al., 2004), as well as industry-driven conceptualizations of mental health problems in the 21st century workplace (Attridge & Wallace, 2010; MHCC, 2012; MHCC, 2013a; MHCC, 2013b; MHCC, 2013c; Watson Wyatt Worldwide, 2007).

Limitations and Directions for Future Research

The development and evaluation of the leader-focused mental health awareness training intervention opens a host of potential research and application-based opportunities. The inclusion of objective and other-rated data would be of great benefit to the evaluation of the training and its impact on organizations and employees. For instance, it would be valuable for future research to collect objective data that compares the frequency and duration of mental health disability claims before and after the training. Such information would lend great practical insight into the relationship between leaders' mental health literacy and the financial impact that it may have on organizations.

Additionally, it would also be of great theoretical and practical value to collect data from other sources, namely from the employees of the leaders who attended the training and from the employees of the leaders who did not attend the training.

Employees' ratings of their leaders' behaviours would help to determine whether or not leaders' behaviours are changing as a result of the mental health awareness training intervention, and whether or not these changes in behaviours are impacting employees positively.

It would also theoretically valuable to explore the specific mediating roles of knowledge and self-efficacy on the relationships between the training and leaders' attitudes and promotion intentions. Although the univariate ANOVA and Roy-Bargmann stepdown results imply that the data are consistent with a model that claims that improvements in knowledge will facilitate improvements in attitudes and that improvements in self-efficacy will facilitate improvements in promotion intentions, this study did not test for mediation outright. Given the nature of the design and the relatively small sample size, it was not feasible to empirically test for mediation through more complex modeling and path analysis. Thus, it is recommended that future research further explore the mediating roles of knowledge and self-efficacy in a similar training context.

Of course, it is also important for future research to continue to explore the long-term effects of the mental health awareness training. Although this study demonstrated lasting effects up to eight weeks post-training, it would be valuable to understand the possible limits on the durability of the effects of the training. Finally, given the increasingly virtual environment of the 21st century workplace, it would also be valuable for future research to examine the effectiveness of the training when delivered in a virtual medium, such as an online webinar. Although the training is designed to involve highly

interactive components that are best facilitated in face-to-face group training scenarios, it would be valuable to determine whether or not the same types of effects can be observed for individual training and for training delivered in a virtual environment. Such research would further advance our understanding of applied interventions and would expand the breadth of intervention research in natural organizational settings.

Conclusion

The mental health awareness training intervention achieved several desired effects and demonstrated its ability to successfully increase leaders' long-term mental health literacy and self-efficacy. Not only did leaders who attended the training experience increased post-training knowledge and understanding of mental health, but leaders who participated in the mental health awareness training intervention also experienced significant improvements in self-efficacy surrounding their approach to employee mental health issues. Furthermore, leaders who attended the training also experienced improvements in their attitudes surrounding mental health and their likelihood of promoting positive mental health within their workplaces. Although subject to continued evaluation, the results of the current study suggest that beneficial outcomes will be obtained in organizations that implement empirically developed mental health awareness training interventions for organizational leaders.

References

- Albrecht, G., Walker, V., & Levy, J. (1982). Social distance from the stigmatized: A test of two theories. *Social Science and Medicine*, *16*, 1319-1327. doi: 10.1016/0277-9536(82)90027-2
- Attridge, M., & Wallace, S. (2010). Able minded: Return to work and accommodation for workers on disability leave for mental disorders. [Report for Human Solutions]. Retrieved from http://www.homewoodhumansolutions.com/docs/HSreport_10.pdf
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179 –211. doi: 10.1016/0749-5978(91)90020-T
- Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. *Health Affairs*, *29*, 1-8. doi: 10.1377/hlthaff.2009.0626
- Baker, E., Israel, B., & Schurman, S. (1996). The integrated model: Implications for worksite health promotion and occupational health and safety practice. *Health Education Quarterly*, *23*, 175-190. doi: 10.1177/109019819602300204
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191-215. doi:10.1037/0033-295X.84.2.191
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122-147. doi: 10.1037/0003-066X.37.2.122

- Bandura, A. (1986). *Social foundations of thought and action*. New York, NY: Prentice Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28*, 117-148. doi: 10.1207/s15326985ep2802_3
- Bandura, A. (1992). *Exercise of personal agency through the self-efficacy mechanism*. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 3-38). Washington, DC: Hemisphere.
- Baron, R. & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Bilsker, D., Gilbert, M., Myette, L., & Stewart-Patterson, C. (2005). *Depression and work function: Bridging the gap between mental health care and the workplace*. Vancouver, BC: University of British Columbia: Mental Health Evaluation and Community Consultation Unit. Retrieved from http://www.comh.ca/publications/resources/dwf/Work_Depression.pdf
- Bouffard-Bouchard, T. (1989). Influence of self-efficacy on performance in a cognitive task. *Journal of Social Psychology, 130*, 353-363.
doi:10.1080/00224545.1990.9924591

Bouffard-Bouchard, T., Parent, S., & Larivée, S. (1991). Influence of self-efficacy on self-regulation and performance among junior and senior high-school age students. *International Journal of Behavioral Development, 14*, 153-164.

Briner, R. B., Amati, C. & Lardner, R. (2003). *Development of internal company standards of good management practice and a task-based risk assessment tool for offshore work-related stressors*. Research Report RR107. HSE Books: Sudbury.

Canadian Medical Association (2008). *Mental health facts: Why workplace mental health matters*. Toronto, ON: Retrieved from http://www.mentalhealthworks.ca/facts/why_it_matters.asp

Canadian Standards Association (CSA Group) & Bureau de normalization du Quebec (BNQ). (2013). Psychological health and safety in the workplace: Prevention, promotion, and guidance to staged implementation. Commissioned by the Mental Health Commission of Canada, National Standard of Canada.

Caveen, M., Dewa, C., & Goering, P. (2006). The influence of organizational factors on return- to-work outcomes. *Canadian Journal of Community Mental Health, 25*, 121-142. Retrieved from <http://cjcmmh.metapress.com/app/home/>

Chen, G., Gully, S., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*, 62-83. doi: 10.1177/109442810141004

Cohen, S. & Wills, T. A. (1985). Stress, social support and the buffering hypothesis. *Psychological Bulletin, 98*, 310-57. doi: 10.1177/016502549101400203

- Conference Board of Canada (2011). *Building mentally healthy workplaces: Perspectives of Canadian workers and front-line managers*. Toronto, ON: Thorpe, K., & Chenier, L. Retrieved from <http://www.conferenceboard.ca/Libraries/>
- Cooper, C.L., & Cartwright, S. (1994). Healthy mind, healthy organization: A proactive approach to occupational stress. *Human Relations*, 47(4), 455-471. doi: 10.1177/001872679404700405
- Corbière, M., & Shen, J. (2006). A systematic review of psychological return-to-work interventions for people with mental health problems and/or physical injuries. *Canadian Journal of Community Mental Health*, 25, 261-288. Retrieve from <http://cjmh.metapress.com/app/home/>
- Corrigan, P. W. & Matthews, A. K. (2003). Stigma and disclosure: Implications for coming out of the closet. *Journal of Mental Health*, 12, 235-48. doi: 10.1080/0963823031000118221
- Corrigan, P. W., Rowan, D, Green, A. Lundin, R., River, P.,... Uphoff-Wasowski, K. et al. (2002). Challenging two mental illness stigmas: Personal responsibility and dangerousness. *Schizophrenia Bulletin*, 28, 296-310. Retrieved from <http://schizophreniabulletin.oxfordjournals.org>
- Craig, T., Garety, P., Power, P., Rahaman, N., Colbert, S., Fornells-Ambrojo, M., & Dunn, G. (2004). The Lambeth Early Onset (LEO) team: Randomized controlled trial of the effectiveness of specialized care for early psychosis. *British Medical Journal*, 329, 1-5. doi: 10.1136/bmj.38246.594873.7C

- De Lange, A., Taris, T., Kompier, M., Houtman, I., & Bongers, P. (2004). The relationships between work characteristics and mental health: Examining normal, reversed, and reciprocal relationships in a 4-wave study. *Work & Stress, 18*, 149-166. doi: 10.1080/02678370412331270860
- Durlak, J., & Wells, A., (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology, 25*, 115-152. doi:10.1023/A:1024654026646
- Evans-Lacko, S., Little, K., Meltzer, H., Rose, D., Rhydderch, D., Henderson, C., & Thornicroft, G. (2010). Development and psychometric properties of the mental health knowledge schedule. *Canadian Journal of Psychiatry, 55*, 440-448. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20704771>
- Fleten, N., & Johnsen, R. (2006). Reducing sick leave by minimal postal intervention: A randomised, controlled intervention study. *Occupational and Environmental Medicine, 63*, 676-682. doi: 10.1136/02m.2005.020438
- Frese, M. (1999). Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: A longitudinal study with objective measures. *Journal of Occupational Health Psychology, 4*, 179-192. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10431279>
- Gates, L. (1993). The role of the supervisor in successful adjustment to work with a disabling condition: Issues for disability policy and practice. *Journal of Occupational Rehabilitation, 3*, 179-190. doi: 10.1007/BF01097428

- Goetzl, R., Ozminkowski, R., Sederer, L., & Mark, T. (2002). The business case for quality mental health services: Why employers should care about the mental health and well-being of their employees. *Journal of Occupational and Environmental Medicine, 44*, 320-330. Retrieved from http://www.logisens.com/resourceFiles/HERO_Study_stress_costly.pdf
- Goldenhar, L., LaMontagne, A., Katz, T., Heaney, C., & Landsbergis, P. (2001). The intervention research process in occupational safety and health: An overview from the National Occupational Research Agenda Intervention Effectiveness Research Team. *Journal of Occupational Environmental Medicine, 43*, 616-622. Retrieved from http://www.epidemos.eu/niva_epi07/goldenhar2001.pdf
- Griffiths, K., Christensen, H., Jorm, A., Evans, K., Groves, C., (2004). Effect of web-based depression literacy and cognitive-behavioural therapy interventions on stigmatising attitudes to depression: Randomised controlled trial. *British Journal of Psychiatry 185*, 342–349. doi: 10.1192/bjp.185.4.342
- Irvine, A. (2011). Something to declare? The disclosure of common mental health problems at work. *Disability & Society, 26*, 179-192. doi: 10.1080/09687599.2011.544058
- Israel, B., Baker, E., Goldenhar, L., Heaney, C., & Schurman, S. (1996). Occupational stress, safety, and health: Conceptual framework and principles for effective prevention interventions. *Journal of Occupational Health Psychology, 1*, 261-286. doi: 10.1037/1076-8998.1.3.261

Jané-Llopis, E., Hosman, C., Jenkins, R., & Anderson, P. (2003). Predictors of efficacy in depression prevention programmes. *British Journal of Psychiatry*, *183*, 384–397. doi:10.1192/bjp.183.5.384

Jorm, A., Korten, A., Jacomb, P., Christensen, H., Rodgers, B. & Pollitt, P. (1997). Mental health literacy: a survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*, 182-186. doi:10.1192/bjp.177.5.396

Karasek, R., & Theorell, T. (1990). *Healthy work: Stress productivity and the reconstruction of working life*. New York: John Wiley & Sons.

Kessler, R., Heeringa S., Lakoma M., Petukhova M., Rupp A., Schoenbaum M.,... Zaslavsky, A. (2008). The individual-level and societal-level effects of mental disorders on earnings in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry*, *165*, 703-711. doi: 10.1176/appi.ajp.2008.08010126

Kitchener, B., & Jorm, A. (2002). Mental health first aid training for the public: Evaluation of effects on knowledge, attitudes, and helping behaviour. *BMC Psychiatry*, *2*, 1-6. doi: 10.1186/1471-244X-2-10

Kitchener, B., & Jorm, A. (2004). Mental health first aid training in a workplace setting: A randomized controlled trial. *BMC Psychiatry*, *4*, 1-8. doi: 10.1186/1471-244X-4-23

Kitchener, B., & Jorm, A. (2008). Mental health first aid: An international programme for early intervention. *Early Intervention in Psychiatry*, 2, 55-61. doi:10.1111/j.1751-7893.2007.00056.x

Krupa, T. (2007). Interventions to improve employment outcomes for workers who experience mental illness. *Canadian Journal of Psychiatry*, 52, 339-345.

Maibach, E., & Murphy, D. (1995). Self-efficacy in health promotion research and practice: Conceptualization and measurement. *Health Education Research*, 10, 37-50. doi:10.1093/her/10.1.37

Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada*. Calgary, AB. Retrieved from <http://strategy.mentalhealthcommission.ca/pdf/strategy-text-en.pdf>

Mental Health Commission of Canada (2013a). *Initiatives and projects: The mental health strategy for Canada*. Calgary, AB. Retrieved from <http://www.mentalhealthcommission.ca/English/initiatives-and-projects/mental-health-strategy-canada>

Mental Health Commission of Canada (2013b). *Issues: Stigma*. Calgary: AB. Retrieved from <http://www.mentalhealthcommission.ca/English/issues/stigma>

Mental Health Commission of Canada (2013c). *Issues: Workplace*. Calgary: AB. Retrieved from http://www.mentalhealthcommission.ca/English/Pages/workplace_guide/

- Mullen, J., & Kelloway, E. (2009). Safety leadership: A longitudinal study of the effects of transformational leadership on safety outcomes. *Journal of Occupational and Organizational Psychology*, 82, 253-272. doi: 10.1348/096317908X325313
- National Institute for Occupational Safety and Health (NIOSH). (1996). *National occupational research agenda*. Atlanta, GA: U.S. Public Health Service, Centers for Disease Control. Retrieved from <http://www.cdc.gov/niosh/nora/>
- Nieuwenhuijsen, K., Verbeek, J., de Boer, A., Blonk, R., & van Dijk, F. (2004). Supervisory behaviour as a predictor of return to work in employees absent from work due to mental health problems. *Journal of Occupational and Environmental Medicine*, 61, 817-823. doi: 10.1136/oem.2003.009688
- Pinfold, V., Stuart, H., Thornicroft, G., Arboleda-Florez, J. (2005). Working with young people: The impact of mental health awareness programmes in schools in the UK and Canada. *World Psychiatry*, 4, 48-52. Retrieved from http://post.queensu.ca/~hh11/assets/applets/Pinfold_et_al..pdf
- Saks, A., & Haccoun, R. (2004). *Managing performance through training and development*, 3rd ed. Scarborough, ON: Thompson & Nelson
- Schaufeli, W. (2004). The future of occupational health psychology. *Applied Psychology: An International Review*, 53(4), 502-517. doi:10.1111/j.1464-0597.2004.00184.x
- Shain, M., Arnold, I., & GermAnn, K. (2012). The road to psychological safety: Legal, scientific, and social foundations for a Canadian National Standard on

Psychological Safety in the Workplace. *Bulletin of Science, Technology, & Society*, 32(2), 142-162. doi: 10.1177/0270467612455737

Shain, M., & Nassar, C. (2009). *Stress at work, mental injury, and the law in Canada: A discussion paper for the Mental Health Commission of Canada*. Calgary: AB. Retrieved from <http://www.mentalhealthcommission.ca/English/node/488>

Smetanin, P., Stiff, D., Briante, C., Adair, C.E., Ahmad, S. & Khan, M. (2011). *The life and economic impact of major mental illnesses in Canada: 2011 to 2041*. RiskAnalytica on behalf of the Mental Health Commission of Canada. Retrieved from <http://www.mentalhealthcommission.ca>

Tabachnick, B., & Fidell, L. (2006). *Using multivariate statistics, 6th ed.* Needham Heights, MA: Allyn & Bacon.

U.S. Department of Health and Human Services. (1990). *Mental health: A report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services. Retrieved from <http://profiles.nlm.nih.gov/ps/access/NNBBHS.pdf>

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2012). Effects of resource-building group intervention on career management and mental health in work organizations: Randomized controlled field trial. *Journal of Applied Psychology*, 97, 273-286. doi: 10.1037/a0025584

Watson Wyatt Worldwide (2007). *Staying at work: Effective presence at work*. [Survey Report: Canada]. Retrieved from <http://www.easna.org/>

World Health Organization. (2001). *The World Health report 2001: Mental health—new understanding, new hope*. Geneva, Switzerland. Retrieved from <http://www.who.org>

World Health Organization (2004). *The summary report on promoting mental health: Concepts, emerging evidence, and practice*. Geneva, Switzerland: World Health Organization. Retrieved from http://www.who.int/mental_health/evidence/en/promoting_mhh.pdf

World Health Organization. (2005). *Mental health policies and programmes in the workplace (Mental Health Policy and Service Guidance Package)*. Geneva, Switzerland. Retrieved from http://www.who.int/mental_health/policy/services/

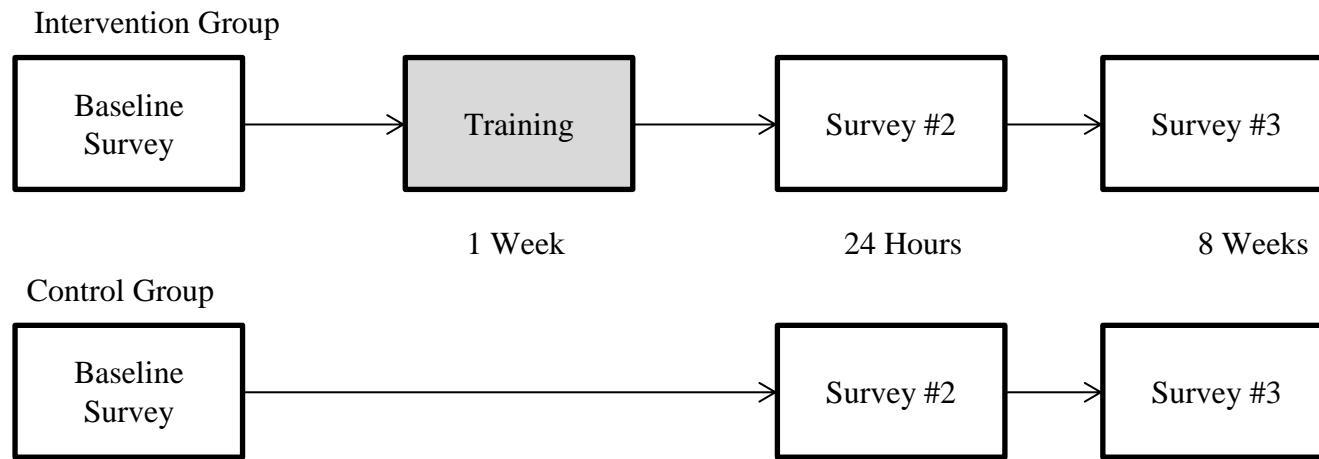


Figure 1. Study design for intervention and control groups at all three time periods.

Table 1
Baseline Demographics of Control and Intervention Groups

Study Variable	Condition							
	Control (N=54)				Intervention (N = 88)			
	<i>n</i>	%	<i>M</i>	<i>SD</i>	<i>n</i>	%	<i>M</i>	<i>SD</i>
Demographic data								
Age	54		45.24	7.44	88		44.32	7.589
Tenure	54		13.22	7.99	88		11.42	7.509
Sex								
Male	28	51.90			37	42.00		
Female	26	48.10			51	58.00		
Experience with mental health								
Professional Experience								
Yes	46	85.2			72	81.8		
No	5	9.3			9	10.2		
Don't Know	3	5.6			7	8.0		
Personal Experience								
Yes	31	57.4			48	54.5		
No	20	37.0			30	34.1		
Don't Know	3	5.6			10	11.4		

Table 2
Correlations of the Study Variables

Variables	1	2	3	4	5	6	7	8	9
1. Sex	—	-.120	-.174	-.013	.168	.131	.105	.154	.070
2. Age	-.001	—	.614 ^{**}	-.130	-.230 [*]	-.032	-.073	-.009	-.073
3. Tenure	.001	.588 ^{**}	—	-.081	-.299 ^{**}	-.020	-.083	-.007	-.061
4. Personal Experience	-.163	-.056	-.083	—	.360 ^{**}	-.221 [*]	-.050	-.060	-.044
5. Professional Experience	.091	-.026	-.085	.159	—	-.002	-.039	-.080	.045
6. Knowledge, T1	-.124	-.008	.087	-.172	-.161	(.70)	.141	.148	.378 ^{**}
7. Knowledge, T2	-.110	.021	.144	-.218	-.178	.841 ^{**}	(.81)	.601 ^{**}	.162
8. Knowledge, T3	-.097	-.065	-.005	.045	-.217	.576 ^{**}	.641 ^{**}	(.80)	.163
9. Attitudes, T1	.119	-.097	-.225	.034	.146	.226	.200	.113	(.75)
10. Attitudes, T2	-.047	-.061	.049	-.103	.206	.328 [*]	.328 [*]	.201	.326 [*]
11. Attitudes, T3	-.037	-.099	-.030	-.161	-.209	.028	.094	.131	.250
12. Self-Efficacy, T1	.080	-.409 ^{**}	-.278 [*]	-.046	-.273 [*]	.195	.114	.165	.157
13. Self-Efficacy, T2	.025	-.245	-.300 [*]	-.149	-.254	.251	.163	.229	.197
14. Self-Efficacy, T3	.041	.044	.028	-.139	-.144	.071	.116	.196	.000
15. Intentions, T1	.193	-.305 [*]	-.365 ^{**}	-.094	-.256	.352 ^{**}	.301 [*]	.225	.318 [*]
16. Intentions, T2	.060	-.434 ^{**}	-.372 ^{**}	-.050	-.318 [*]	.219	.203	.227	.198
17. Intentions, T3	.077	-.087	-.130	-.162	-.157	.247	.326 [*]	.286 [*]	.050

Note. Correlations between variables for the control group are presented below the reliability coefficients presented on the diagonal, and correlations between variables for the intervention group are presented above the reliability coefficients on the diagonal. Cronbach's alpha (α) scores are shown in parentheses on the diagonal; T1 = Time 1,

baseline; T2 = Time 2, immediate effects; T3 = Time 3, 8 week follow-up. *p < .05; ** p < .01

Variables	10	11	12	13	14	15	16	17
1. Sex	.034	.141	.111	.160	.114	.098	.120	.167
2. Age	-.120	.097	-.350**	.076	-.041	-.145	.035	.119
3. Tenure	-.158	.075	-.324**	-.019	-.129	-.028	-.139	.014
4. Personal Experience	.055	.095	-.131	-.213*	-.090	-.078	-.186	-.043
5. Professional Experience	-.075	.101	.201	-.026	.056	.066	.127	.034
6. Knowledge, T1	.268*	.072	.220*	.124	.017	.426**	.172	.261*
7. Knowledge, T2	.398**	.265*	.078	.585**	.557**	.040	.430**	.363**
8. Knowledge, T3	.404**	.279**	.021	.428**	.604**	-.052	.240*	.266*
9. Attitudes, T1	.310**	.213*	.246*	.267*	.124	.329**	.253*	.187
10. Attitudes, T2	(.83)	.179	.056	.350**	.244*	.144	.161	.083
11. Attitudes, T3	.043	(.77)	-.059	.392**	.307**	-.050	.241*	.349**
12. Self-Efficacy, T1	-.186	.246	(.86)	.218*	.218*	.478**	.217*	.224*
13. Self-Efficacy, T2	-.125	.221	.845**	(.91)	.696**	.334**	.577**	.497**
14. Self-Efficacy, T3	-.089	.053	.301*	.343*	(.88)	.143	.507**	.419**
15. Intentions, T1	.078	.210	.572**	.542**	.201	(.71)	.289**	.292**
16. Intentions, T2	-.050	.230	.656**	.563**	.099	.775**	(.75)	.566**
17. Intentions, T3	.059	.055	.153	.211	.659**	.203	.217	(.74)

Note: Table 2 continued from previous page.

Table 3
Univariate Effects for Mixed Model MANOVA

Study Variable	Control Group Mean (SD)			Intervention Group Mean (SD)			F	η^2
	Time 1	Time 2	Time 3	Time 1	Time 2	Time 3		
Knowledge	3.78 (.33)	3.81 (.33)	3.85 (.37)	3.88 (.41)	4.31 (.43)	4.32 (.40)	21.01**	0.13
Attitudes	2.97 (.44)	2.97 (.42)	3.00 (.33)	2.98 (.39)	3.25 (.37)	3.20 (.42)	5.24**	0.04
Self-Efficacy	4.14 (.61)	4.11 (.58)	4.17 (.56)	4.17 (.66)	4.98(.57)	4.94 (.53)	35.35**	0.20
Intentions	4.54 (.62)	4.53 (.65)	4.63(.70)	4.51 (.66)	5.24 (.51)	5.14 (.62)	20.59**	0.13

Note : All F's with 2, 280 degrees of freedom. ** = $p < .01$

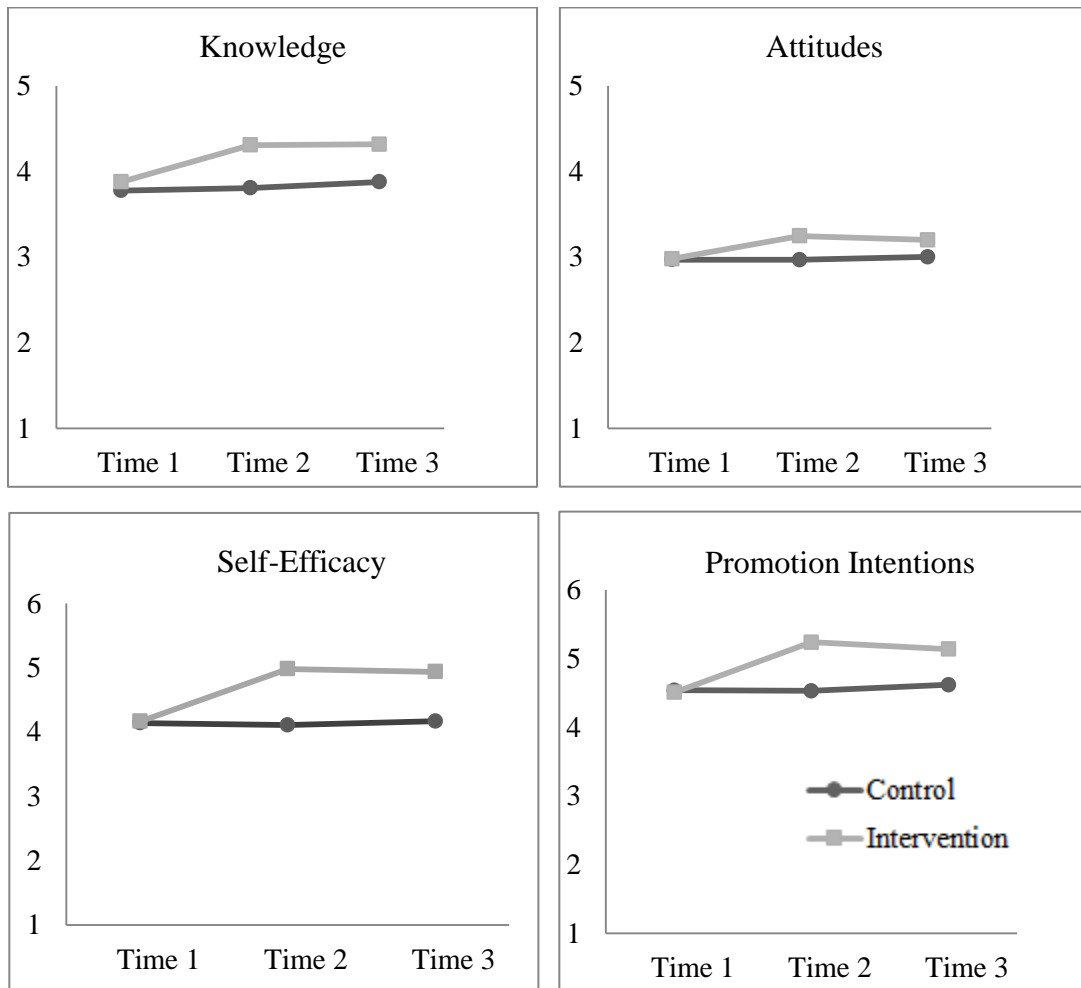



Figure 2. Plots for univariate effects using cell means for each group.

Appendix A

Training Materials: Module #1 Power Point Presentation



One University. One World. Yours.


Mental Health Awareness Training (MHAT)

Module #1: What Do You Know?

Developed & Delivered by:
Jennifer K. Dimoff
Graduate Student

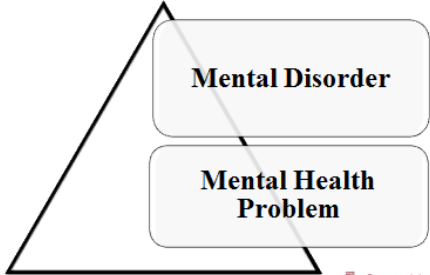
Mental Health: The Facts

- 1 in 5 Canadians will experience a mental disorder.
- \$52 billion in costs every year.
- 3rd biggest health problem in North America.
- Most people who are treated for mental health problems will fully recover.




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Mental Health: What is it?



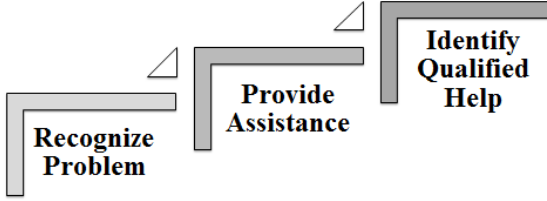
Mental Disorder

Mental Health Problem



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Mental Health First Aid: The 3 Steps




Recognize Problem

Provide Assistance

Identify Qualified Help



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Mental Health Problems in the Workplace

Stress: Just Part of the Job?



Top 3 Causes of Work Stress:

- High Demand + Low Control Jobs
- High Effort + Low Reward Jobs
- Role or Task Conflict



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Stress: The Symptoms

Stage 1: Resistance → Anger & Irritability

Stage 2: Exhaustion → Hopeless & Avoidant

Stage 3: Crisis → Illness & Disability

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Burnout: The Symptoms

Things to Look For <ul style="list-style-type: none"> <input type="checkbox"/> Cynicism <input type="checkbox"/> Reduced Performance <input type="checkbox"/> "Presenteeism" 	People at Greatest Risk <ul style="list-style-type: none"> <input type="checkbox"/> High-Achievers <input type="checkbox"/> Perfectionists <input type="checkbox"/> Leaders
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Depression: The Facts

Common <ul style="list-style-type: none"> 7-12% Men 20-25% Women 	Many Causes <ul style="list-style-type: none"> Social Psychological Biological 	Treatable <ul style="list-style-type: none"> Support Counselling Medication
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Depression: The Symptoms

Observable <ul style="list-style-type: none"> <input type="checkbox"/> Reduced Work Quality <input type="checkbox"/> Reduced Work Quantity <input type="checkbox"/> Deterioration in Appearance <input type="checkbox"/> Weight Gain/Loss <input type="checkbox"/> Tearfulness <input type="checkbox"/> Fatigue 	Less Observable <ul style="list-style-type: none"> <input type="checkbox"/> Loss of Interest/Motivation <input type="checkbox"/> Difficulty Concentrating <input type="checkbox"/> Insomnia <input type="checkbox"/> Low Self-Esteem <input type="checkbox"/> Suicidal Thoughts <input type="checkbox"/> Persistent Sadness
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Anxiety: The Facts

Common <ul style="list-style-type: none"> 1 in 10 Multiple Symptoms 	Varies <ul style="list-style-type: none"> Severity Duration Types 	Treatable <ul style="list-style-type: none"> Support Counselling Medication
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Anxiety: The Symptoms

Physical <ul style="list-style-type: none"> • Chest Pain • Rapid Heartbeat • Shortness of Breath • Dizziness & Sweating • Numbness & Tingling • Nausea & Vomiting 	Psychological <ul style="list-style-type: none"> • Excessive Fear • Racing Thoughts • Poor Concentration • Irritability • Impatience • Sleep Disturbances
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Adjustment Disorders: The Facts

Triggered by Stressor	• Sudden Onset
Symptoms Resolve	• Associated with Grief Reactions
Escalation Prevention	• Depression and Anxiety

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Substance Use & Abuse: The Facts

Moderately Common	Alcohol Dependence	Co-Morbidity
<ul style="list-style-type: none"> • 8% Canadians • Males vs. Females 	<ul style="list-style-type: none"> • Drug Dependence 	<ul style="list-style-type: none"> • Anxiety • Depression

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Substance Abuse: The Symptoms

Observable	Less Observable
<ul style="list-style-type: none"> ○ Problems at Work ○ Safety Issues ○ Behavioural Changes 	<ul style="list-style-type: none"> ○ Dependence ○ High Tolerance ○ Fatigue

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Suicide: The Warning Signs: "IS PATH WARM?"

I=Ideation	W=Withdrawal
S=Substance Abuse	A=Anger
P=Purposelessness	R=Recklessness
A=Anxiety	M= Mood changes
T=Trapped	
H=Hopelessness	


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Closing Remarks & Questions

Appendix B

Training Materials: Module #2 Power Point Presentation



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Mental Health Awareness Training (MHAT)


Module #2: Where Do You Go & What Do You Do?

Developed & Delivered by:
Jennifer K. Dimoff
Graduate Student

Mental Health Awareness: Preventing Mental Health Problems

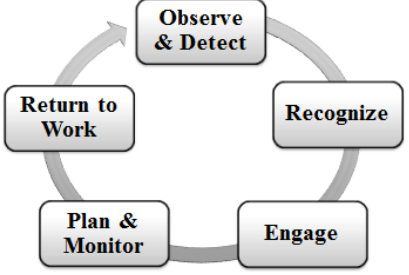

Leaders

- Openly Communicate
- Build Awareness
- Promote Wellness



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Mental Health Awareness: The Process for Getting Involved


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Mental Health Awareness: Workplace Suicide Prevention

Agreement

Assistance

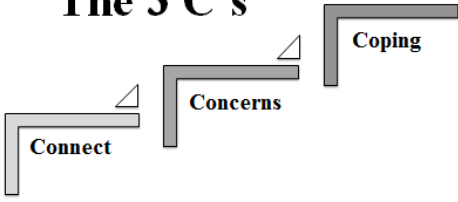

Arrangements



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Early Intervention: Take Action, Don't Take Over

The 3 C's

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Early Intervention: Managing Someone Who is Tearful or Upset


“Stay Calm & Don't Carry On”

Be Patient

- Wait & Listen
- Offer Water/Kleenex

Provide Reassurance


- No Discrimination
- OK to be Upset



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Early Intervention: What **NOT** to Do


DO NOT	DO
<ul style="list-style-type: none"> • Offer a Pep Talk • Be Accusatory • Say “I understand” • Diagnose the Issue 	<ul style="list-style-type: none"> • Focus on Behaviour • Offer Support • Provide Reassurance • Offer Resources

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During Absence: Keeping in Touch with Employees


Communicate Openly	Offer Support
<ul style="list-style-type: none"> <input type="checkbox"/> Limits Misunderstandings <input type="checkbox"/> Prevents Barriers <input type="checkbox"/> Social Events <input type="checkbox"/> Job Security 	<ul style="list-style-type: none"> <input type="checkbox"/> Know Your Limits <input type="checkbox"/> Don't Rush the Return <input type="checkbox"/> Coordinated Approach <input type="checkbox"/> Patience

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During Absence: Communicating & Taking Care of Your Team


Employee Wishes	• Two Options
Appropriate Communication	• Workload Distributions
Team Member Feelings	• Resentment & Empathy

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Returning to Work: Planning & Monitoring


Time Matters	• Return to Work Plan
Needs & Accommodations	• Human Resources
Other Staff Members	• Prepare Employee for Questions

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Returning to Work: Initiation & Integration


The Vacation Effect <ul style="list-style-type: none"> • Work Developments • Social Life 	Be a Role Model <ul style="list-style-type: none"> • Welcome Employee • Monitor for Stigma
Set Realistic Goals <ul style="list-style-type: none"> • Employee Involvement • Revisit Frequently 	Accommodations <ul style="list-style-type: none"> • Flexible Work Schedule • Task Restructuring

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“Just getting supervisors to say ‘I’m pleased you’re back’ and making people feel welcome made a big difference. This seems like a small thing, but often people are unaware of how difficult it can be to walk back into the workplace”

—Stephen Williams, HR Consultant, Resources Systems

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Closing Remarks & Questions

Appendix C

Training Materials: Case Studies

Case Study #1MHAT Case Study #1: Joseph

Joseph has been working at [INSET ORGANIZATION'S NAME] for five years. You have been managing Joseph since he was hired.

For the most part, Joseph is a good employee who does his job well. When Joseph is absent from work, he usually only misses one or two days, a couple of times a year.

Over the past few weeks, you have noticed that Joseph is taking more sick days than usual. Last month, he gave you a sick note that cited back pain, and a few weeks ago, he gave you another sick note that cited a bad headache. This week, Joseph has been away sick due to stomach problems.

This morning you overheard some of Joseph's colleagues talking about how closed-off Joseph has become since "the incident".

You do not know anything about "the incident" to which they are referring, and Joseph never approached you about any work related or non-work related incident.

Guided Discussion Questions

1. Detect & Observe
 - a) What behavioural changes have you observed?
2. Recognize
 - a) Are there any signs or symptoms that indicate Joseph may be experiencing a mental health issue? If so, what are they? If not, what else might be going on?
3. Engage
 - a) How will you set up a meeting to talk with Joseph?
 - b) What will you say during the meeting with Joseph?
 - c) What questions will you ask?
4. Plan & Monitor
 - a) What kind of help will/can you offer Joseph?
 - b) What solutions might you discuss with Joseph?
5. Follow-Up
 - a) How and when might you follow up?

Appendix D

Training Materials: Case Studies

Case Study #2MHAT Case Study #2: Andrea

Andrea has been working for you for about 15 years. Since being hired, Andrea has demonstrated an exceedingly high work ethic and desire to achieve. She is devoted to her work and has a tendency toward perfectionism.

In your experiences managing Andrea, you have found her to be a stable, committed employee who is friendly and professional with her coworkers, other staff members, and customers at [INSERT ORGANIZATION'S NAME].

Yet, over the past few months, you have noticed that Andrea is irritable and impatient when communicating with others. In fact, yesterday you overheard Andrea angrily telling one of her coworkers to “Just stop caring about the customers! They don’t care how hard we work for them! They just want discounts that we can’t give them, so why should you care about helping them? I know I sure don’t!”

Guided Discussion Questions

1. Detect & Observe
 - a) What behavioural changes have you observed?
2. Recognize
 - a) Are there any signs or symptoms that indicate Andrea may be experiencing a mental health issue? If so, what are they? If not, what else might be going on?
3. Engage
 - a) How will you set up a meeting to talk with Andrea?
 - b) What will you say during the meeting with Andrea?
 - c) What questions will you ask?
4. Plan & Monitor
 - a) What kind of help will/can you offer Andrea?
 - b) What solutions might you discuss with Andrea?
5. Follow-Up
 - a) How and when might you follow up?