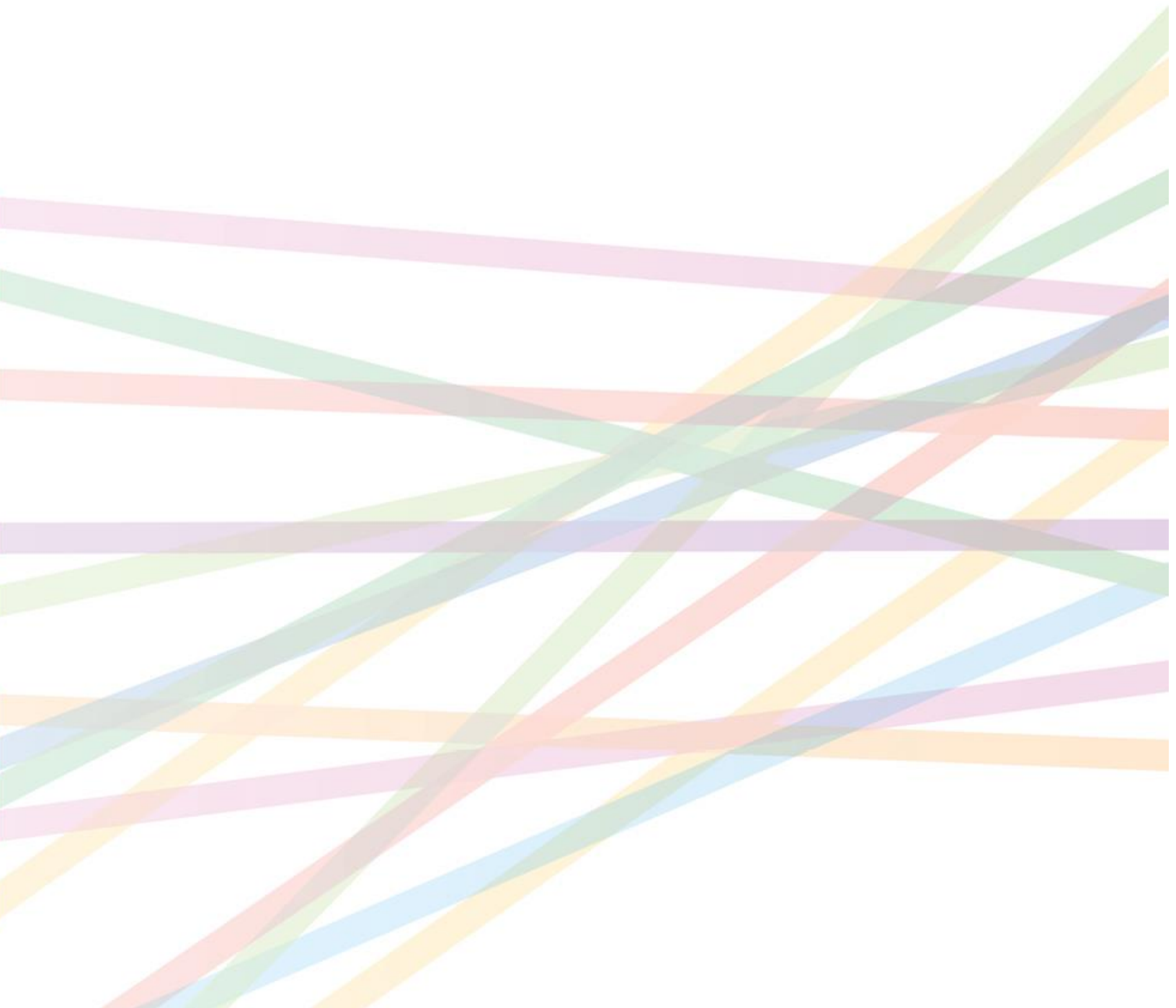




BLENDED GUIDE AND GO-TO TRAINING PROGRAM: TRAINING THE TRAINERS

REPORT FOR EDUCATORS – ST. JOHN'S, NFLD





Evaluation of the Blended Guide and Go-To Training Program in St. John's, NFLD

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Background

The Mental Health & High School Curriculum Guide (the Guide), was developed in 2007 by Dr. Stan Kutcher, Sun Life Chair in Adolescent Mental Health in collaboration with the Canadian Mental Health Association. The current edition was revised with national and international input in 2017. This resource was designed to support Provincial/Territorial curriculum frameworks in Canada, and was developed to be integrated into grade eight, nine, or ten classrooms nationally by the regular classroom teachers who have been trained in its application during a day-long professional development session.

In contrast to stand-alone mental health or anti-stigma programs, this novel approach strives to improve mental health literacy (understanding how to optimize and maintain good mental health; understanding mental disorders and their treatments; decreasing stigma; enhancing help-seeking efficacy) in students and teachers alike. By utilizing educator-familiar, education system-compatible, sustainable, and frugal pedagogic processes, this approach facilitates the integration of Canada's only evidence-based mental health literacy resource into existing school curricula, sustainably strengthening human resource capacity in education systems to effectively address the mental health needs of students and teachers alike. Both nationally and internationally, substantive research has demonstrated highly positive impacts of this approach on all aspects of mental health literacy.

The Go-To Educator training program was designed by Dr. Kutcher and Dr. Yifeng Wei to address the need for informed, teacher-led identification, support, triage and referral (through student services providers) of students in-school who are likely to have a mental disorder or need mental health care. Taught to teachers and student services providers concurrently (and whenever possible, to local health and mental health care providers), this intervention has been

robustly demonstrated to improve the ability of “Go-To Educators” to assist and support students with mental health needs. To maintain its sustainability, the Go-To Educator program encompasses a ‘train the trainer’ model. This model prepares teachers, student health service providers and health providers to lead trainer teams within their school boards. These trainer teams then help identify “go-to” educators within their schools and implement the training program. Thus, this method will ensure future continuation of this intervention.

Previously provided as separate training sessions, the Guide training and Go-To training were combined into one three-day Blended Guide and Go-To Training Program. Here, trainers from school boards or other education/health jurisdictions learn how to apply both training programs simultaneously. This approach was designed to be easily integrated into existing education and health systems, and its effective global application attests to the value of this delivery method (for recent publications in scientific journals related to these interventions, see the reference list at the end of this report. Evaluations of previous training programs can be found at: http://teenmentalhealth.org/toolbox/?filter_category-filter=school-mental-health-reports).

This report is an evaluation of the Blended Guide and Go-To Training Program following the ‘train the trainer’ model described above undertaken in St. John’s, NFLD. This professional development session for student services providers was facilitated by Dr. Kutcher in November 2017. It was the final of a number of similar interventions provided during that year. The report of the previous interventions is found in Appendix 1.

Participants

A total of 39 student services providers (31 females, 8 males) participated in the Program. Of these, 27 completed both pre- and post-session knowledge surveys and 32 completed both pre- and post-session attitudes surveys. Paired-samples t-tests were conducted on these 27 knowledge and 32 attitude surveys. Participants were primarily registered psychologists/ counselors (n=15, 38.46%), educators/ itinerant teachers (n=7, 17.95%), and program specialists (n=4, 10.26%).

The participants were from St. John’s, Newfoundland and had between one and 29 years of experience in a school setting. Participants were asked whether they had previously received

mental health training and, if yes, to specify the type of training provided. Twenty-five participants (64.1%) reported that they had received prior mental health training, including programs such as Mental Health First Aid, suicide prevention/intervention (ASIST), and counselor education.

Procedure

Participants completed anonymous mental health knowledge and attitudes toward mental illness surveys before, and directly after the professional development session. Mental health knowledge was measured with 30 questions, where educators chose either ‘true’, ‘false’ or ‘do not know’. Each correct answer received one point, for a total score out of 30. Participants were encouraged to choose ‘do not know’ to reduce the likelihood of false-correct results due to guessing. These choices were scored as incorrect.

Twelve questions were included to assess participants’ attitudes toward mental illness based on a 7-point Likert-scale. Item choices ranged from ‘Strongly Disagree’ to ‘Strongly Agree’, and answers were combined to return a score out of a maximum of 84, higher scores corresponded to more positive attitudes toward mental illness. Completed surveys were entered into a secure database by a researcher blind to participant identities and naïve to the workshop materials and delivery. To assure anonymity, participants were asked not to provide any personal identifying information (names, addresses, etc.). To link responses between the pre-session and post-session evaluations, anonymous linking questions were asked, including participants’ birth month, postal code, shoe size, and first pet’s name.

Just under two thirds of participants reported receiving prior mental health training. Therefore, an additional point of interest was whether participation in previous mental health training programs influenced educators’ knowledge or attitudes pertaining to mental health and mental illness prior to completing the Blended Guide and Go-To Educator training program, and if previous training might have affected how participants learned from the Guide. The majority of participants who reported having prior mental health training, attended the Mental Health First Aid workshop (n=16, 64% of those who reported previous training). Therefore, further analyses were conducted on these participants independently to assess the long-term effects of this

particular intervention, as well as any affect it may have on how participants responded to the Blended Go-To training program.

Data were analyzed using the Statistical Package for the Social Sciences (SPSS). Scores for mental health knowledge and attitudes toward mental illness were compared between pre- and post-session surveys, and the differences quantified using paired sample t-tests. Independent-samples t-tests were used to compare mean knowledge and attitude scores for individuals who had completed previous mental health training and for those who reported no prior training, for both pre- and post-session. All p-values were compared to a statistical significance alpha of .05, and d-values were compared to Cohen's d effects scale (small= .2, medium= .5, large= .8, and very large= 1.2).

Outcomes

Two paired-samples t-tests were conducted to study the difference between educators' pre- and post-test knowledge and attitudes on mental health. Prior to attending the workshop, participants correctly answered an average of 15.59 (51.97% correct, $SD=4.61$) out of 30 mental health knowledge questions. After training, the scores significantly increased to an average of 24.37 (81.23% correct, $SD=2.29$) out of 30 knowledge questions, demonstrating a significant and substantial increase in mental health knowledge $t(26) = -7.90, p < .001, d = 2.41$ (see Figure 1). This result is statistically significant and robust (very large effect size).

Additionally, there was a significant increase in participants' attitudes toward mental health (decreased stigma) from pre-test to post-test. In pre-training surveys, the average attitude score was 80.06 ($SD=3.78$) out of 84 compared to an average

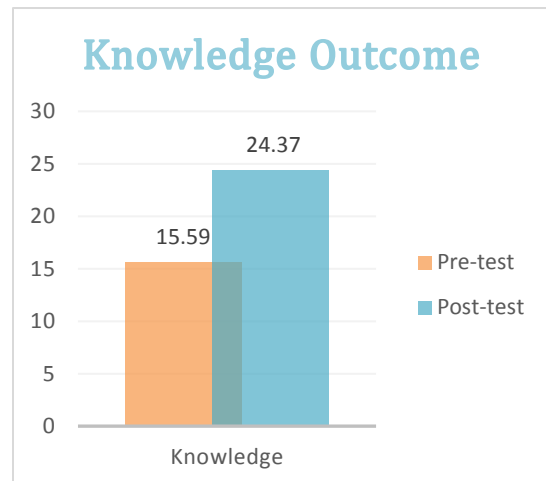


Figure 1

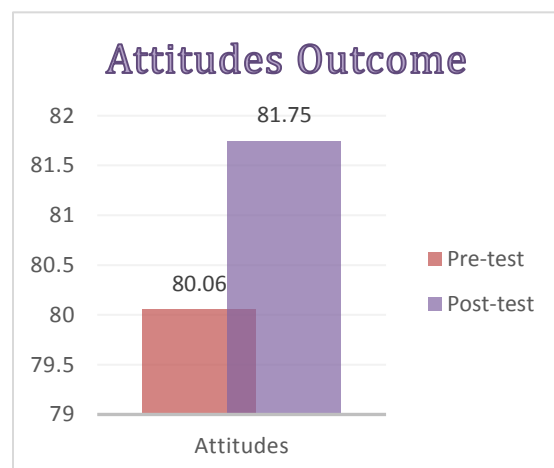


Figure 2

of 81.75 ($SD=3.30$) in post-training surveys out of 84 $t(31) = -2.85, p=.01, d=.48$ (see Figure 2). This result is statistically significant and robust (medium effect size).

Analyses revealed no significant differences in pre-session mental health knowledge scores $t(30) = .27, p=.79, d=.1$ (see Figure 3) or attitudes toward mental illness $t(36) = -0.29, p=.77, d=.1$ (see Figure 4) between participants with and without previous mental health training. Furthermore, independent t-tests revealed no significant differences in mean scores for post-test mental health knowledge $t(29) = 0.69, p=.50$ (see Figure 3), as well as for attitudes toward mental illness $t(31) = 0.67, p=.51$ (see Figure 4) between participants with and without previous mental health training.

Since the majority of participants with previous mental health training attended the Mental Health First Aid workshop, further analyses were completed to assess the impact of specifically receiving Mental Health First Aid prior to completion of the To-Go training on participants' baseline and post-session knowledge and attitudes scores compared to those who did not receive Mental Health First Aid training.

Independent-samples t-tests were used to compare these means. Results were similar across all variables. Knowledge pre-session score differences were statistically insignificant $t(30)=.33, p=.75$ (See figure 5) as well as pre-session attitude

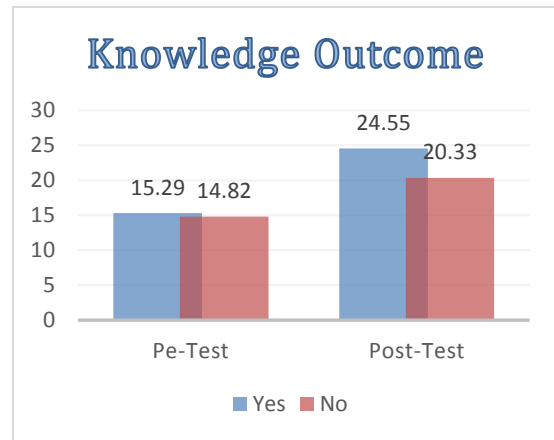


Figure 3 Knowledge outcome for level of previous mental health training.

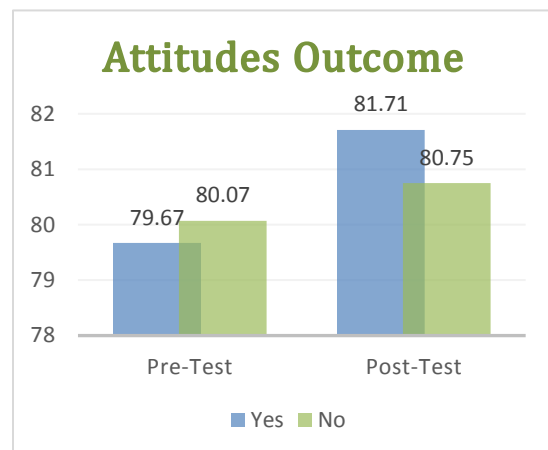


Figure 4 Attitudes outcome for level of previous mental health training.

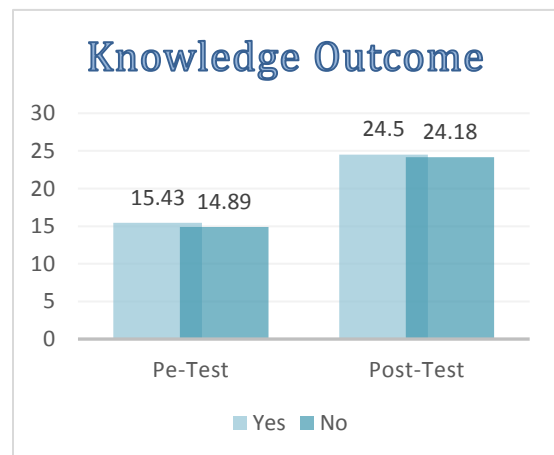


Figure 5 Knowledge outcome for participants with prior Mental Health First Aid training, compared to those without such training.

scores $t(36) = -.02, p = .99$ (See figure 6). Additionally, tests revealed no significant differences in post-session knowledge scores between Mental Health First Aid attendees $t(29) = .36, p = .72$ (See figure 5), nor were there significant differences in post-session attitude scores $t(31) = .70, p = .49$ (See figure 6).

Discussion

The results from this assessment clearly demonstrate the benefits of the Blended Training Program on significantly and substantially improving student services provider's general knowledge and attitudes toward mental illness. Both knowledge and attitude scores showed statistically significant and robust (very large and medium effects sizes, respectively) improvements following the intervention.

Of further interest, previous participation in prior mental health training did not differentiate baseline knowledge or attitude scores between those who had received a previous training program from those who had not. Additionally, post-test knowledge and attitude scores were not affected by previous mental health training either. This implies that participants, regardless of their previous mental health training, improve their outcomes in the same manner. This finding however also raises questions about the lasting impact and cost-effectiveness of other mental health interventions on educators' mental health literacy. This result indicates that prior mental health training may not have a significant effect on participants' knowledge and attitudes on mental health. Nor does previous training have a significant effect on how well participants learn from the Guide (post-test results).

Furthering the interest in previous training, tests were conducted to assess whether or not previously attending Mental Health First Aid had a significant impact on participants' scores. Results showed that there were no statistically significant differences in knowledge and attitude mean scores between those who previously attended Mental Health First Aid training and those who did not, for both pre- and post-intervention. With regards to the impact of the most

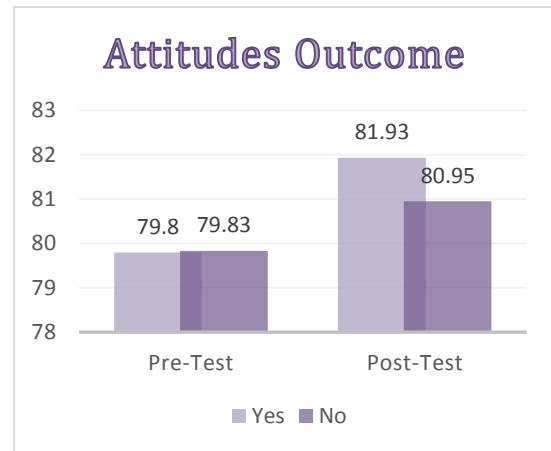


Figure 6 Attitudes outcome for participants with prior Mental Health First Aid training, compared to those without such training.

commonly endorsed program, those participants who had previously taken Mental Health First Aid did not demonstrate any positive impact from that experience.

This assessment illustrates significant positive short-term changes in the improvement of St. John's educators' knowledge and attitudes pertaining to mental health and mental illness achieved using an educationally appropriate and inexpensive classroom-ready, student- and teacher-focused mental health literacy enhancement intervention that draws on participants' existing pedagogical expertise. This result is consistent with evaluations conducted in many Canadian provinces (Kutcher, Wei, & Morgan, 2015; McLuckie, Kutcher, Wei, & Weaver, 2014; Kutcher, Wei, McLuckie, & Bullock, 2013; Kutcher & Wei, 2013; Kutcher, Bagnell, & Wei, 2015; Wei, Kutcher, Hine, & Mackay, 2014, see http://teenmentalhealth.org/toolbox/?filter_category-filter=school-mental-health-reports for School of Mental Health reports from Nova Scotia, Ontario, and Calgary, Alberta) and further demonstrates the suitability of this approach as an effective intervention that can be used in Newfoundland to improve mental health literacy of student services providers and enhance their competencies to identify and support students in need of mental health care.

A concern arising from this evaluation is the low baseline mental health knowledge found in this cohort of educators. The participants were student services providers and would be expected to have substantial mental health related knowledge, but this was not confirmed in the data. These results are similar to those found in a large sample of Canadian educators (see Appendix 2) and suggest that ongoing professional development for student services providers should be strongly encouraged.

Educator Evaluation Summary

Following the training, 17 participants completed Go-To Educator Training Workshop Evaluation Forms. The evaluation comprised of six five-point Likert-scale questions pertaining to the workshop's content, relevance, and delivery (0 = poor; 5 = Excellent), and one text-based question stating, 'Compared to similar programs I have taken, I would rate this workshop:', with possible answers ranging from 'much worse' to 'much better' on a five-point Likert scale. The evaluation also included two text fields for comments and suggestions for improvement.

Participants returned an overall mean score of 33.88 (96.8% positive, $SD=3.48$) out of a possible 35 points. When asked “Overall, I found the workshop useful and informative” participants’ average score was 4.88 out of 5. The participants gave an average rating of 4.82 when asked “Overall, I enjoyed the workshop”. In response to the question “Overall I found the speaker(s) to be of high quality”, the average participant score was 4.88 out of 5. In response to the question “Overall I learned information and concepts that will be helpful to me in my work”, the participants’ average score was 4.88 out of 5. When asked “I would recommend this workshop to my colleagues”, the participants’ average score was 4.88 out of 5. When asked to provide an overall rating for the workshop, participants’ average score was 4.88 out of 5. Finally, participants were asked to rate this workshop compared to other similar workshops they have taken. Twelve participants rated the program as much better (70.6%) compared to other similar programs, three participants rated the program as better (17.6%) compared to other similar programs, one participant rated the program as the same (5.9%) as other programs, and one participant did not complete this question (5.9%).

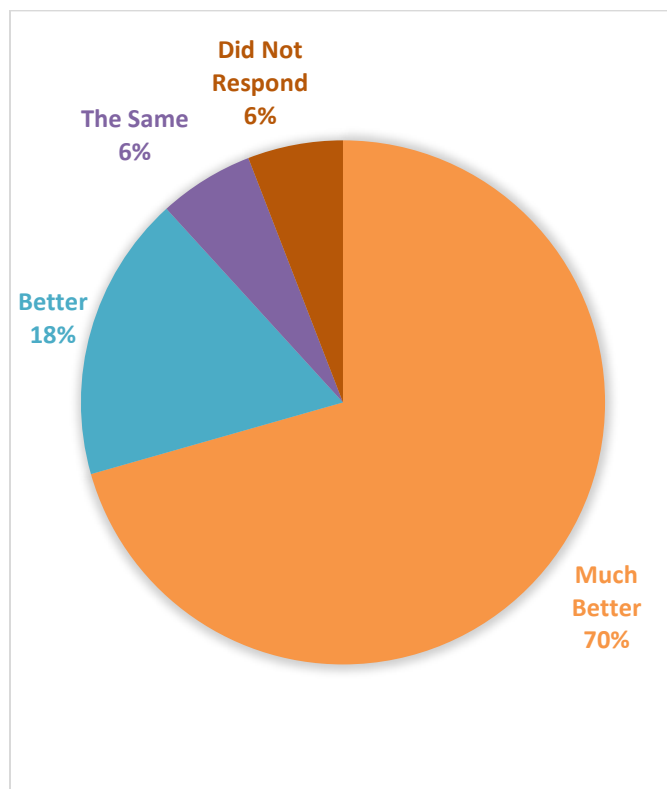


Figure 7 Workshop ratings compared to other, similar programs.

Participants expressed enthusiasm for the workshop, and feedback was positive with some participants suggesting having more discussion time. One participant stated, “More active movement” under “Suggestions for Improvement”. Some feedback highlights include:

“Wonderful!”

“Very informative 3 days! Even though I had attended a 2-day conference before, it was still very useful. Repetition is key!”

“Very informative, practical information that can benefit students. Excellent overview of mental disorders and how this may present in our student populations.”

“This was an excellent training and I can't wait to bring it back to my staff. Thank you.”

“It's nice to receive PD that is applicable to my work; and taking away something I can actually use is invaluable.”

“Best in-service I've ever attended.”

“Speaker obviously has a wealth of experience and brings that to the presentation. Very knowledgeable and is willing to share in a very real way.”

“It was an honor to work with and learn from this speaker. I have not taken in many workshops, as a novice counsellor to the field. Information was extensive and program user friendly.”

“Loved it! Made me think about my current practice and what I can do to help support my students.”

Overall, the evaluations indicated a predominantly positive experience with the program in addition to the previously detailed increases in mental health knowledge and attitudes toward mental illness. These results offer further support for the implementation of this training program in Newfoundland.

Based on the results outlined in this report and a previous similar intervention in Newfoundland (Appendix 1) the Blended Go-To Educator training program would indeed be a

useful intervention that should be considered for ongoing application into all Newfoundland schools.

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Appendix 1

Mental health literacy in educators: knowledge, stigma, and help-seeking in a student services providers sample

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Abstract:

In a provincial sample of junior high and secondary school student services providers, a baseline mental health literacy evaluation identified highly positive attitudes (low stigma) towards mental illness; low mental health knowledge, stable health status and relatively low levels of perceived stress. Previous exposure to a generic mental health workshop (Mental Health First Aid) was not associated with significantly better knowledge or lower stigma. About 1/5 of the sample reported they would not disclose to friends if they had a mental disorder and about ½ of those who reported experiencing a mental health problem in the preceding 3 months said they had sought help, mostly non-professional. More positive attitudes to seeking help for one's self mental health care use were associated with having personal experience of mental health care but not with level of stigma or level of knowledge.

These results demonstrate that the knowledge component of mental health literacy for school based student services providers needs to be enhanced and that interventions designed to do so should be contextually based and consistent with existing school ecologies.

Background

In Canada, about one fifth of adolescents are reported to have a mental disorder, and approximately 70% of mental disorders can be diagnosed before age 25 years. (Government of Canada, 2006; Patel, 2007; Pearson, Janz, & Ali 2013). Since most young people spend substantial time in schools, it is essential that effective address of both the identification of youth with mental disorders and facilitation to rapid access for effective care, plus the promotion of mental health be available in school settings. This need has been well noted in Canada (Canadian Teachers' Federation, 2012; Mental Health Commission of Canada, 2013; Marcus & Westra, 2012) and as a result, the importance of mental health literacy applied into the school setting and the important role that schools can play in the pathway to mental health care for young people is being more widely recognized (Wei, Kutcher, & Szumilas, 2011; Kutcher, Wei, McLuckie & Bullock, 2013; Kutcher, Bagnell, & Wei, 2015; Kutcher, Wei, & Coniglio, 2016; <http://teenmentalhealth.org/pathwaythroughcare/>). We have helped to address this need through the development, application and research into effectiveness and impact of two related interventions, the classroom mental health literacy resource Mental Health & High School Curriculum Guide (the Guide) (Wei et al., 2011) and "Go-To" Educator training (Wei & Kutcher, 2014).

The Guide strives to improve mental health literacy (understanding how to optimize and maintain good mental health; understanding mental disorders and their treatments; decreasing stigma; enhancing help-seeking efficacy) in students and teachers alike (Kutcher et al., 2015; Kutcher et al., 2016), while the Go-To Educator training program addresses the need for informed, teacher-led identification, support, triage and referral (through student services mental health providers) of students who are likely to have a mental disorder or need mental health care (Wei et al., 2011; Wei & Kutcher, 2014). Both programs have demonstrated strong positive impact in improving mental health knowledge, reducing stigma against mental illness, and enhancing help-seeking behaviors for both students and teachers alike (Milin et al., 2016; McLuckie, Kutcher, Wei, & Weaver, 2014; Kutcher et al., 2015; Wei & Kutcher, 2014).

Despite the application of mental health literacy interventions, little is known about baseline mental health literacy (MHL) of Canadian educators. Such information is needed to be able to determine if changes in MHL occur over time and to provide additional information that can be used to inform education policies, research and the tailoring of MHL interventions for educators. Since educators are a heterogeneous group, (e.g., teachers; administrators, student services providers) information about the mental health literacy of specific types of educators is needed. This report provides baseline mental health literacy information about one specific group of educators, student services providers (such as school counselors, school psychologists, social workers and others), obtained as part of the evaluation of a training program designed to upgrade mental health related competencies for student services providers working in a Canadian province. Evaluation of baseline mental health literacy in this group was determined in three discrete assessment periods undertaken in three different locations in that province between March and May, 2017.

No published data on baseline mental health literacy for educators in Canada is available. Previous reports from the United States (Walter, Gouze, & Kim, 2006) showed low mean mental health knowledge scores in elementary school teachers and similar results for teachers at other grades have been reported elsewhere (Masillo et al., 2012; Langeveld et al., 2010; Whitley, Smith, & Vaillancort, 2012; Soares, Estanislau, Brietzke, Lefèvre, & Bressan, 2014). However, we could find no data about baseline mental health literacy in student services providers published worldwide. To our knowledge, this is the first study to report on mental health literacy in student services providers working in Canadian Junior High and Secondary schools, and perhaps globally.

Methods

Design

This study used an anonymous survey designed to determine baseline mental health literacy (knowledge, attitudes toward mental health and help-seeking efficacy) for educators (student services providers) who were identified by senior school administration to participate in the “Go-To” Educator program training in a Canadian province. The purpose of this survey was to capture existing levels of mental health literacy so that this information could be used by the Ministry of Education and other policy makers to help develop a mental health literacy training plan that could include other groups of educators and could be applied province wide in the future. This data was also collected for use as a pre-mental health literacy (MHL) intervention measure to allow for determination of changes in MHL arising as a result of the exposure of this cohort to the “Go-To Educator” intervention described above.

Participants

Participants were 124 educators (99 females, 24 males, one undisclosed) who were invited to participate in one of three “Go-To” Educator training sessions held in various C cities in one Canadian province. This cohort comprises the majority of the student services providers in this jurisdiction. The reason that three different sessions were held was for logistic and travel considerations only. All three sessions were delivered by the same trainer over similar periods of time. Educators included guidance counselors (n = 108, 87%), school psychologists (n = 8, 6%), classroom teachers and itinerant educators (n = 7, 6%), and other professions (n = 1, 1%). Experience in their role as student services providers ranged from 1 to 32 years. Eighty-eight participants reported receiving prior mental health training. Mental Health First Aid (MHFA) was the most common training program with 53 educators reporting completion of the program within the year prior (see Table 1).

Table 1: Demographics

	St. John's	Gander	Deer Lake	Combined
Gender				
Male	9	6	9	24
Female	34	37	28	99
Not specified		1		1
Mean years practice	13.81	11.18	15.67	13.45
Prior mental health Training				
Yes	28	31	29	88
No	14	9	9	32
Not specified	1	3		4
Type of mental health training				

MHFA	15	18	11	44
MHFA + other	2	2	5	9
other	7	10	8	25
Prior mental health treatment (participant or family member)				
Yes	31	34	23	88
No	9	9	11	29
Unsure	3		4	7
Mental health problem(s) (last 3 months)				
Yes	23	17	19	59
No	19	26	17	62
Not specified	1		2	3
Stressful life event (last 3 months)				
Yes	20	22	20	62
No	22	19	17	58
Not specified	1	2	1	4

Note: MHFA=Mental Health First Aid

Procedure

Data were collected using an anonymous survey consisting of four sections capturing mental health knowledge, attitudes toward mental illness, attitudes toward and frequency of help-seeking, and self-reported competency in the identification of mental health problems or disorders.

Mental health knowledge was captured using a questionnaire of 30 true-false statements ($\alpha = .72$). Participants selected 'true', 'false', or 'do not know' for a maximum score of 30. 'Do not know' answers were coded as incorrect, and participants were encouraged to select 'do not know' to avoid falsely high scores due to guessing.

Twelve seven-point Likert-scale questions ($\alpha = .69$) were included to assess participants' attitudes toward mental illness. Likert-scale answers ranged from 'Strongly Disagree' to 'Strongly Agree', and six items were reverse-coded. Answers were combined to return an individual score out of a maximum total score of 84 with higher scores corresponding to more positive attitudes (less stigma) toward mental illness.

Frequency of help-seeking was measured using a six-item multiple-choice survey asking participants about recent physical and/or mental health appointments, stressful life events, and instances of encouraging others to seek professional help. Participants also completed a questionnaire addressing who, if anyone, they spoke to or solicited for help in the past three months. Person/group choices included parents, siblings, relatives, spiritual leaders, etc., and participants chose between 'asked for help', 'did not feel the need to ask for help', or 'wanted to but did not ask for help' for each person or group.

Attitudes toward personal help seeking related to mental health were captured using a three-item ($\alpha = .60$) and a 10-item ($\alpha = .73$) Likert-scale questionnaire. The three-item measure

asked participants to respond to the statement; 'In general, asking for help for a mental health problem...' with three questions ranging from 'will make things worse/is a bad thing to do/is NOT going to be helpful' to 'will make things better/is a good thing to do/will be helpful'. Items were scored out of a maximum 9 points (+3 to -3 for each item). The second measure featured 10 statements regarding attitudes towards help-seeking, and participants responded on a seven-point scale between 'strongly disagree' and 'strongly agree' to return a score out of 70. In both cases, higher scores corresponded to more positive attitudes toward help seeking.

Self-reported mental health competency was measured using three items; a Likert-scale question asking for participants' comfort in identifying a student who may have a mental disorder (very uncomfortable to very comfortable, range = -2 to +2), a free-text field for the number of students the person had identified in the past three months because of a concern they may have a mental disorder, and a checklist of actions following the identification of a student (e.g. discussed with the student, discussed with your principal, etc.).

Statistical analysis

Completed surveys were entered into a secure database by a researcher blind to participant identities and naïve to the workshop materials and delivery. To assure anonymity, participants were asked to not provide any personal identifying information (names, addresses, etc.). Mean scores of each identified outcome were calculated for all participants and for participants in each region individually. Differences of mean scores region were compared using one-way analyses of variance (ANOVA). Independent t-tests were applied to compare group differences by demographic characteristics. Pearson correlation coefficient and multiple regression analysis were applied to investigate the relationships between knowledge, stigma of mental illness and help-seeking attitudes. Data entry and analysis were conducted using SPSS software.

Results

Participant Information and Aggregate Data

Participants were all the student services providers working across an entire province in Canada. We tested the assumption that no unique differences in participants were expected in relation to where the assessment was completed. No significant differences were found by site of assessment on all related outcomes, and thus data were combined into one province-wide dataset for further analysis (Table 2).

Table 2: Survey results by site

	Site 1 M; SD	Site 2 M; SD	Site 3 M; SD	Aggregate M; SD	ANOVA
Knowledge	14.30 (3.94)	14.33 (4.05)	14.42 (3.75)	14.35 (3.90)	$F(2,121) = 0.1$, $p = .99$
Attitudes Toward Mental Illness	76.05 (6.86)	77.40 (5.34)	78.45 (5.44)	77.25 (5.97)	$F(2,121) = 1.67$, $p = .19$
Attitudes Toward Help-seeking (1)	4.30 (3.82)	5.91 (4.33)	4.81 (5.30)	5.02 (4.50)	$F(2,120) = 1.43$, $p = .24$
Attitudes Toward Help-seeking (2)	60.14 (7.45)	61.14 (6.60)	59.31 (7.72)	60.25 (7.22)	$F(2,119) = 0.64$, $p = .53$
Competency	0.91 (0.87)	0.69 (0.95)	0.54 (1.17)	0.72 (1.0)	$F(2,119) = 1.38$, $p = .26$

Note: M=mean; SD=standard deviation

Knowledge

Participants returned an average score of 14.35 ($SD=3.90$) out of a possible 30 on the 30-item knowledge survey (about 48% correct scores). The lowest scores (<25% correct answers) were on questions related to basic knowledge about brain function, epidemiology of certain mental disorders, such as schizophrenia, and the effects of some widely-applied school mental health interventions, such as critical incident stress debriefing. Participants also scored low (<50% correct answers) in areas relating to the causes of mental disorders and suicide, knowledge about substance use, psychosis, and treatment. Conversely, participants presented a better understanding of Depression, Anxiety Disorders, ADHD, and everyday stress.

Stigma against Mental Illness and Attitudes towards Help-Seeking

Participants averaged a score of 77.25 ($SD=5.97$) out of a possible 84 for attitudes toward mental illness. For help seeking, participants' average score on the three-item general help-seeking attitude measure was 5.02 ($SD=4.50$) out of a possible 9 (possible minimum -9), and 60.25 ($SD=7.22$) out of a possible 70 on the ten-item help-seeking attitude measure. Responses were divided into 'positive', 'negative', and 'neutral' categories for all attitude measures. Participants'

expressed broadly positive attitudes (>75% positive responses) toward mental illness and help seeking, with lower scores related to disclosing mental illness. For example, when asked whether they would not admit to having a mental illness to friends for fear of being treated differently, 25 (20.2%) reported that they would not disclose while 78 (62.9%) said they would and 21 (16.9%) were neutral.

Help-Seeking Frequency

Responses to the multiple-choice questionnaire on participant help-seeking during a period of three months prior to the survey were collected. Fifty-nine (48.8%) participants disclosed having a mental health problem in the past three months, and almost half of these participants didn't feel the need to ask for help from any of the listed resources (e.g., family, friends, health professionals, clergy). Fewer than 40% of participants who reported mental health problems claimed they did seek help, with friends selected as the most common person (35.5%), followed by a work colleague (32.9%), a health professional (30%), a mental health professional (20.8%), and a family member (18.8% - 21.7%).

Competency

When asked how comfortable they would be with identifying a student who may have a mental disorder, participants (n=122) returned a mean score of 0.72 out of a possible maximum score of 2, corresponding to the answer 'somewhat comfortable'.

Demographic Factors

No demographic characteristics (gender, previous mental health care or medical care, previous mental health training, reported mental health problems or stressful events) influenced participants' mental health knowledge level or attitudes towards mental illness. However, mean comparisons based on previous mental health care (of the participant or a family member) resulted in significant mean differences in attitudes toward help seeking, but not mental health knowledge and stigma against mental illness (Table 3). More specifically, 88 participants reported to have previously received mental health care, or have family member(s) previously receive mental health care. This group was found to have significantly more positive attitudes to help-seeking on the ten-item measure ($t(114)=2.14, p<.05$), compared to participants who had not received mental health care (of the participant or a family member; $n=29$). Similarly, previous medical care did impact participants attitudes positively towards the usefulness of help-seeking ($t(119)=-4.55, p=.000$).

Table 3: Survey results by demographics

Groups	Knowledge	Attitudes	Help-seeking 1	Help-Seeking 2	Competency
Gender (M=24, F=99)	$t(121)=.72$, $p=.47$	$t(121)=1.24$, $p=.22$	$t(120)=-0.29$, $p=.77$	$t(119)=-1.01$, $p=.32$	$t(119)=-0.85$, $p=.40$
Pre MH Care (Y=88, N=29)	$t(115)=.91$, $p=.37$	$t(115)=.76$, $p=.45$	$t(114)=-0.33$, $p=.74$	$t(114)=2.14$, $p=.04^*$	$t(113)=-0.35$, $p=.73$
Pre Medical Care (Y=111, N=11)	$t(120)=.29$, $p=.78$	$t(120)=.94$, $p=.35$	$t(119)=-4.55$, $p=.000^{**}$	$t(118)=.15$, $p=.88$	$t(118)=-0.92$, $p=.36$
Pre MH Training (Y=88, N=32)	$t(118)=-.78$, $p=.44$	$t(118)=1.41$, $p=.16$	$t(117)=-0.03$, $p=.98$	$t(116)=1.74$, $p=.09$	$t(117)=2.21$, $p=.03^*$
Pre MH Training (MHFA=44, Other=34)	$F(5,114)=1.11$, $p=.36$	$F(5,114)=.78$, $p=.57$	$F(5,113)=0.56$, $p=.73$	$F(5,112)=1.82$, $p=.12$	$F(3,83)=0.50$, $p=.69$
Reported MH Problems (N=62, Y=59)	$t(119)=-1.52$, $p=.13$	$t(119)=-1.51$, $p=.14$	$t(118)=-0.08$, $p=.94$	$t(117)=0.77$, $p=.45$	$t(117)=-0.21$, $p=.83$
Reported Stressful Event (N=58, Y=62)	$t(118)=0.67$, $p=.51$	$t(118)=-0.95$, $p=.34$	$t(117)=-1.47$, $p=.15$	$t(116)=-0.02$, $p=.99$	$t(116)=-0.86$, $p=.39$

Note: *: M=male; F=female; Y=yes; N=no; Pre MH= previous mental health; $p<.05$; **: $p<.01$

Knowledge and Stigma

Of interest was the relationship between knowledge and attitudes. Correlation analysis revealed a positive association between participants' mental health knowledge and attitudes towards mental illness ($r=.20$, $p<.05$), indicating better knowledge was related to more positive attitudes towards mental illness, and vice versa. However, previous exposure to Mental Health First Aid training was not found to significantly affect either knowledge ($t(118)=-.78$, $p=.44$) or attitude scores ($t(118)=1.41$, $p=.16$).

Stigma against mental illness and Help-Seeking

Multiple regression analysis was used to establish participants' attitudes toward help-seeking (using the ten-item measure) as predicted by stigma against mental illness. Pre-existing attitudes toward mental illness scores were shown to significantly predict attitudes toward help-seeking scores, ($\beta=.41$, $t(121)=3.87$, $p<.01$), and also accounted for a significant proportion of the variance ($R^2=.11$, $F(1,120)=14.98$, $p<.01$).

For participants who reported having a mental health problem, almost half didn't feel the need to ask for help from the listed resources (e.g., family, friends, health professionals, clergy). Less than 40% claimed they did seek help, out of whom they tended to ask for help from a friend the most

(n=27, 35.5%), a work colleague (n=24, 32.9%), a health professional (n=21, 30%), a mental health professional (n=15, 20.8%), followed by a relative/close family friend (n=15, 21.7%), a parent (n=13, 19.1%), or sibling (n=13,

Competency

Individuals who reported receiving mental health training prior to the present session (n=88) were found to have significantly higher self-reported competency scores than individuals who reported no prior training (n=32; $t(117) = 2.21, p < .05$). When participants were divided by prior training type (MHFA, MHFA and other(s), and other), the results became non-significant ($F(3,83) = 0.50, p = .69$).

Discussion

This report is, to our knowledge, the first of its kind investigating Canadian school based student services providers' mental health literacy. Such information is necessary to help policy makers, administrators and educators better understand what interventions may be needed to help address the mental health related concerns in schools. Unfortunately, we could not find any published data regarding mental health literacy of Canadian educators for purposes of comparison, highlighting a need for future research in this area, as this study did not include other educators, such as teachers, administrators, etc. Globally, there is a similar lack of data on educators' baseline mental health literacy levels, making it difficult to determine what kinds of mental health related interventions should be considered for application in the school setting. Without such knowledge, interventions that are needed may not be applied and interventions that may not be needed could be applied.

Consistent with concerns identified by the Canadian Teachers Federation, our findings clearly demonstrated that participant educators had low mental health literacy knowledge levels despite the fact that most participants had received some previous mental health education training before completing the survey. Of particular concern was the finding that previous exposure to MHFA, an expensive and widely disseminated generic mental health awareness program, did not differentiate participants on either baseline knowledge or attitudes, raising questions about the value of applying this intervention in the school setting. If this finding is confirmed in other studies, school administrators applying the MHFA program should consider the return on investment obtained.

In contrast to the low levels of knowledge reported, we found generally positive attitudes towards mental health and mental illness among participants. This may be due to the fact this cohort of participants were student services providers, many with previous mental health related clinical

training and therefore, on professional grounds, may have had less stigma against mental illness. Alternatively, it may be a reflection of low stigma in the wider population of educators compared to the general Canadian population. Unfortunately, we could not find any studies of baseline stigma in the general Canadian population to which we could compare these results, so reasons for this finding must remain speculative. It does suggest however that specific stigma reduction programs presented to school based student services providers may not be necessary, and might bring a low return on investment, but further research addressing that issue in other samples of Canadian educators has to be undertaken before any conclusions can be drawn.

However, despite the generally positive attitudes, we identified relatively lower scores related to self-stigma. For example, when participants were asked “If I had a mental illness, I would not admit this to any of my friends for fear of being treated differently” 20.2% endorsed this statement while 16.9% responded neutrally (“not sure”). The reluctance to disclose mental illness to others suggests the presence of self-stigma related to seeking mental health care and should this finding hold up when the mental health literacy of other types of educators is assessed, this sub-component of stigma reduction may be considered for targeted anti-stigma interventions, instead of universal anti-stigma interventions.

Of note is that we found an inverse co-relation between mental health knowledge and stigma. As knowledge improved, so did attitudes (stigma reduced). This finding is consistent with previous mental health stigma research, albeit not conducted in similar populations (Naylor, Cowie, Walters, Talamelli, & Dawkins, 2009; Pinfold et al, 2005; Wright, McGorry, Harris, Jorm, & Pennell, 2006; Kidger et al., 2016); and further is consistent with the relationship noticed between knowledge and stigma in other health related fields (e.g. AIDS, see Brown, Macintyre, & Trujillo, 2003). This suggests that implementing mental health literacy interventions as a route to stigma reduction may be an effective way to enhance knowledge while concurrently decreasing stigma. Comparison of MHL interventions with traditional stigma reduction social marketing campaigns on the impact of each in stigma reduction may be the focus of future research in this population.

In addition, we noticed that experience of previous mental health care affected attitudes towards help-seeking positively. This is consistent with previous research that contact (direct or indirect) with mental health services or people with mental illness is a predictor to not only reduce stigma against mental illness (Griffiths, Carron-Arthur, Parsons, & Reid, 2014) but also to improve help-seeking attitudes (Corrigan, Druss, & Perlick, 2014; Rickwood, Deane, & Wilson, 2007). This further supports the framework of mental health literacy (Kutcher et al., 2015; Kutcher et al., 2016) that proposes the integration of mental health help-seeking resources as an essential component in the development and delivery of mental health literacy interventions in schools.

Limitations:

This survey was conducted in only one Province in Canada and thus its findings may not be representative of other provinces or territories. However, there is no “a priori” reason to expect that these educators, who have similar professional qualifications and provide similar professional interventions, would be significantly different than elsewhere in the country. Further, because this study only targeted one sub-category of educators (student services providers), the results may not be similar to those found with other groups of educators, such as teachers and school administrators. Study of the mental health literacy of these groups of educators is currently ongoing, using a framework that includes a number of different provinces. Once that work is completed, a better picture of the baseline mental health literacy of Canadian educators overall will be available.

Conclusions:

In this sample of a sub-group of educators (student services providers) we found low levels of mental health literacy knowledge but high levels of positive mental health related attitudes (low stigma). This information further underscores the need for providing educators with demonstrated effective mental health literacy interventions, based on knowledge about existing MHL status as an important component of addressing mental health in the school setting.

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Declaration of Conflicting Interests

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Appendix 2

The Impact of “Go-To Educator Training” on Educator’s Knowledge About and Stigma Towards Youth Mental Illness in Four Canadian Provinces: findings from an initial application of a novel intervention.

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Abstract

Schools are well positioned to help early identification of youth who are experiencing a mental illness and assist them in access to care. However, educators are generally unprepared for this undertaking. The current study utilized a gate-keeper/mental health literacy program, the Go-To Educator Training program (GTET), targeting educators that students naturally gravitate to for support, to improve their mental health knowledge, early identification skills, decrease stigma, enhance within school relationships between teachers and student support workers and establish connections to local mental health providers. Pre- and post- mental health knowledge, mental illness identification skills, and stigma evaluation surveys were completed by program participants. Four Canadian provinces (Ontario, Nova Scotia, Alberta and Manitoba) held GTET programs from 2012 – 2014, training 434 secondary school educators. Paired t-tests assessed change in knowledge and stigma. ANOVA's compared knowledge and stigma change scores between provinces. Correlation measured the relationship between knowledge and stigma. Knowledge significantly improved $t(423) = 38.37, p < .001$. Stigma significantly decreased $t(402) = 3.44, p < .001$. There was no significant difference between provincial scores of knowledge ($F(3,419) = 1.59, p = .19$) nor stigma ($F(3,399) = 2.25, p = .08$). Knowledge and stigma were significant correlated before ($n = 414, r = .19, p < .001$) and after ($n = 412, r = .18, p < .001$) training. This demonstrates the GTET may be an effective secondary school educator gate-keeper training program. Further study is needed to measure the impact of the training on the ability of the "Go To Educators" to identify and support youth with mental disorders and to link with mental health care providers outside school settings.

Key Words: Mental health; gate-keeper; adolescents; youth; teachers; go-to educator

Introduction

Young people, ages 15 – 24 years, are the highest risk group for the diagnosis of mental illness, and mental illnesses make up the single largest burden of illness in this age cohort (Kirby & Keon, 2004; Kessler et al., 2005; Smetanin, et al., 2011). Undiagnosed and untreated mental illness in adolescents leads to numerous negative outcomes including poor academic achievement, interpersonal difficulties, increased risk of physical illnesses such as heart diseases and Type II diabetes, and increased risk of early mortality including death by suicide (Smetanin, et al., 2011; Institute of Medicine, 2006).

Currently, there are numerous effective evidence-based treatments available for young people who have mental disorders (World Health Organization [WHO], 2001; WHO, 2008; Kieling et al., 2011). However, early identification and access to care for youth who have a mental disorder is vastly under developed globally (WHO, 2008; Kessler et al, 2007). Since most young people attend school, it is reasonable to consider the potential role that schools can have in enhancing mental health literacy for both educators and students; while supporting the early identification, triage and linking to mental health care for young people identified to be at risk of having a mental illness (Kutcher & Wei, 2014; Kutcher & Wei, 2013; Wei & Kutcher, 2014; Whitley, Smith & Vaillancourt, 2012; Kirby & Keon, 2006). Unfortunately, despite increasing global awareness of this issue (WHO, 2001; Kutcher, Wei and Weist, 2015; Kessler, et al, 2007; Wei & Kutcher, 2012; Kieling et al, 2011), educators generally report feeling unprepared to identify or help students who have a mental illness (Mental Health Commission of Canada [MHCC], 2013; Froese-Germain & Reil, 2012; Reinke, Stormont, Herman, Puri, & Goel, 2011; Walter, Gouze, & Lim, 2006).

This globally identified perspective of educator unpreparedness is similar in Canada. In 2012, the Canadian Teacher Federation surveyed over 3900 elementary and secondary school teachers and reported that 87% of teachers agreed that insufficient educator knowledge regarding mental illness in children was a barrier to access for mental health services for young people and that 77% agreed that an additional barrier to providing support for students was educators' inability to identify mental illness in students (Froese-Germain & Reil, 2012). This absence of educator preparedness may be a significant barrier to early identification and improved access to mental health care for students with mental illnesses. Similar concerns have been raised by others who have addressed the issue of mental health in Canadian school settings (MHCC, 2013; Whitley et al., 2012; Kutcher, 2011; Kirby & Keon, 2006). In addition, stigma has been considered to be a significant barrier for mental health help-seeking (Gulliver, Griffiths, & Christensen, 2010) and educators can potentially play a significant role in helping to decrease stigma and promote help-seeking behaviors among students in need of mental health care. Embedding such capacity into educational systems could possibly enhance the ability of youth to earlier and better access needed mental health care and lead to improved horizontal integration between education and health systems in meeting mental health care needs of young people (Wei, Kutcher, & Szumilas, 2011; Kutcher, 2015)

One approach to addressing these needs is the application of a gate-keeper/mental health literacy intervention into the school setting, designed to: enhance capacity for identification of students at risk for mental disorders; reinforce on-site assessment and triage for youth with mental health problems/mental disorders; improve referrals to community based mental health care; integrate ongoing school based support for students living with a mental disorder, and

decrease stigma of mental illness (Wei, Kutcher, Hine, & Mackay, 2014; Wei & Kutcher, 2014; Wei et al. book chapter).

In order to address this issue, we created an educational intervention delivered in seminar format designed to enhance capacity of schools to identify, triage, refer and support students who may be in need of mental health care. Teachers who students naturally “go-to” for help are identified by schools and offered an opportunity to participate in a one day training program designed to enhance their knowledge of mental health and mental disorders and their treatments and to decrease stigma related to mental disorders. This one day training intervention can be applied during existing professional development days and thus enhances existing capacity within schools without additional and expensive added on programs. It is part of the pathway to mental health care for young people (Wei et al, 2011; Kutcher & Wei, 2013; Wei & Kutcher, 2014) and is a component of building school capacity for identification, triage, referral and support of students who may have a mental disorder.

This paper reports on the implementation of the “Go-To” Educator Training (GTET) program that trains educators on early identification skills and competencies in referral of youth at high risk of mental disorder; as well as decrease of stigma of mental illness in four Canadian provinces between 2012 and 2014. We hypothesized that the Go-To Educators enrolled in these GTET programs will demonstrate significantly and substantially improved mental health knowledge and decreased stigma as a result of the intervention. Additionally, we hypothesized that there would be a positive correlation between changes in mental health knowledge and decreased stigma in participants.

Methods

Study design

This is a pre and posttest design applied to assess participants' knowledge and stigma change before and after the implementation of GTET. Correlations were further assessed between knowledge and stigma among participants.

Intervention

Building on evidence that supports the use of educator gatekeepers who are known to and respected by students (Wyman et al., 2008; Martinez et al., 2015), the GTET program was developed to help train educators in junior high and secondary schools to identify, triage, refer and support students at risk for mental disorders (Wei et al, 2011; Kutcher & Wei, 2013; Wei & Kutcher, 2014). The GTET was designed to be part of a horizontally integrated pathway to mental health care model that can seamlessly link schools with mental health care providers in the community (Wei et al, 2011; Kutcher & Wei, 2013; Wei & Kutcher, 2014). The purpose of the GTET is to build and enhance educators' mental health knowledge and competencies to identify students who may experience common mental illnesses during the adolescent years, as well as reduce stigma of mental illness. Additionally, GTET further teaches educators how to provide school based support for students living with a mental illness; clarifies and improves referral processes for mental health care between schools and local health and mental health care providers and promotes horizontal integration through the development of personal and professional networks between schools and community based health care providers (Wei et al., 2011; Kutcher & Wei 2013). GTET is not a program placed into schools, rather it is an

enhancement of existing school capacity, designed to strengthen existing systems that link pedagogy to health care.

In the initial evaluation of GTET applied during its development, Kutcher and Wei (2013) demonstrated that the one-day training, , resulted in significant and substantial improvements in knowledge and decrease in stigma of “Go To” educators and that these improvements were maintained over time. Student referrals to the community mental health care facility increased slightly and the quality of the referrals (the proportion of those referred who were deemed to be at high need for mental health care by receiving clinicians) improved. Additional investigations with other educators using this intervention demonstrated similar positive results (Wei & Kutcher, 2014; Wei et al., 2014; Wei et al., 2014; Kutcher, Wei, & Hashish, 2016).

Participants and Procedures

A power analysis based on previous study of this intervention, indicated that given the significance level of $\alpha=0.05$, power $1-\beta=0.80$, and estimated effect size based on past experience, Cohen’s $d=0.3$, a sample size of $n=90$ is need to achieve statistical significance.

The recruitment of participants for GTET occurred in the Canadian provinces of Nova Scotia, Ontario, Manitoba (Winnipeg) and Alberta (Calgary), and was led by local school boards or health authorities. A total of 434 educators (334 females, 94 males and 6 who did not identify) were selected by their local school principal as individuals whom students were known to gravitate towards for support and who accepted the opportunity to participate in the training program. Participant demographics are displayed in Table 1 by province. The GTET was delivered during professional development days by the knowledge translation team who

developed GTET. The one day GTET intervention focuses on tools and knowledge necessary for the early identification of mental illness, student support, triage and referral competencies contextualized to the junior high and secondary school setting. An integral aspect of the program is establishing referral pathways through personal/professional networks from the school into the community through the inclusion in the training of school based student support staff (such as counselors, psychologists, social workers, mental health clinicians, etc.) and local health/mental health care providers (such as community mental health clinicians). Further information about details of the GTET intervention can be found in Wei & Kutcher (2014). The GTET intervention and evaluation were approved by all schools involved.

Measurement and data collection.

Pre-training and post-training surveys were obtained regarding knowledge about and attitudes towards mental illness in young people before and directly after the training sessions. The pre- and post-training surveys were identical in each site. The knowledge portion included 30 questions developed by mental health and education professionals addressing a wide range of mental health information including signs, symptoms, onset and causes of common mental disorders in youth; epidemiology of adolescence mental illness; different youth appropriate diagnostic tools/assessments and methods of referral and parental support. Each question required participants to answer by choosing one of three answers ‘true’, ‘false’ and ‘do not know’. Participants were encouraged to choose ‘do not know’ if they did not know the answer to minimize the likelihood of guessing. A correct response was worth 1-point, and incorrect and do not know answers received no points. The total knowledge score possible was 30. The internal consistency of the pre-training mental illness knowledge survey was $\alpha = .76$ (30 items) and the post-training survey was $\alpha = .66$ (30 items).

The attitudes towards mental illness survey included eight questions based on frameworks addressing the stigma of mental illness (Thornicroft, 2006; Jones, Farina, Hastorf, Marcus, Miller, Scott, 1984) such as willingness to interact with individuals who have a mental illness, perceived cognitive and behavioural functioning of individuals with mental illness and apparent causes of mental illnesses. The questions required participants to choose an answer from a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. For each question, answers considered positive attitudes were given higher scores with the highest score of 7, and negative attitudes were given lower scores with the lowest score of 1, amounting to a total positive attitude score out of 56. The internal consistency for both the pre-training and post-training attitudes questions towards mental health was $\alpha = .67$.

The surveys were all anonymous. To link pre- and post- training surveys, participants were asked five questions: birth month; first pets' name; postal code; shoe size; the last two digits of their phone number. As a result, 423 knowledge surveys and 403 attitude surveys were able to be matched for further analysis.

Upon the completion of the training session participants were also asked to complete a feedback evaluation survey regarding the content and the presenters of the session. The survey included seven questions requiring participants to answer using a 6-point Likert scale ranging from 'poor' (0 points) to 'excellent' (5 points). They were also given the opportunity to provide written comments and suggestions for improvement.

Data analysis.

To determine the impact of the training, two separate paired-sample t-tests were used to compare pre- and post-training knowledge scores and attitude scores. The magnitude of training

effect was determined with the effect size Cohen's d (Cohen, 1988). Eight additional paired-sample t -test were used to compared intra-provincial pre- and post-training knowledge scores and attitude scores. Two one-way ANOVA's were used to compare change scores for knowledge (post-training minus pre-training) and attitude scores (post-training minus pre-training) across provinces.

Two Pearson's product moment correlations were used to investigate the relationship between the knowledge and attitudes scores on the pre- and post- surveys. All data analysis was performed using SPSS 17 (SPSS Inc., Chicago, IL, USA). P-values for the t -test were compared to the significance level of $\alpha = .05$. The alpha for the one-way ANOVA's were corrected using Bonferroni correction and set to $\alpha = .03$.

Results

Table 1 shows demographics of all participants across the 4 provinces. Table 2 demonstrates that both knowledge and attitudes improved significantly ($p < .001$) among participants when combining all 4 provinces together. Similarly, the survey outcomes on knowledge and attitudes in each individual province showed significant improvements following the training ($p < .001$) (Table 3 and 4; Figure 1 and 2). The one-way ANOVA comparing changes in knowledge among the 4 provinces did not show any significant differences among provinces, $F(3,419) = 1.59, p = .19$. Similarly, the one-way ANOVA used to investigate the differences in change of attitude scores did not show any significant differences amongst the provinces, $F(3,399) = 2.25, p = .08$.

The Pearson correlation analysis between knowledge and attitudes scores demonstrated a significant positive correlation between knowledge scores and attitude scores on the pre-training survey ($N = 414$, $r = .19$, $p < .001$) and the post-training survey ($N = 412$, $r = .18$, $p < .001$).

Of the 423 participants, 215 provided feedback regarding their satisfaction with the GTET. Participants provided consistently positive rating for all items on the survey ($\geq 4.5/5$, Table 5). When asked to compare the GTET with similar professional development they had received 49% responded that it was much better, 33% rated it better and 10% rated it as similar.

Discussion

Results of this study indicate that the educators receiving this professional development day intervention, significantly and substantially improved their mental health knowledge and decreased stigma within and across 4 Canadian provinces. Further, there were no significant differences in outcomes in these measures across provinces, indicating a consistent magnitude of change, not geographically dependent. Further, the decrease in stigma scores was significantly inversely related to the increase in mental health knowledge scores, suggesting that for educators, increasing knowledge may be an effective way to reduce stigma.

The baseline knowledge scores were low, with a mean value of about 30%. This finding was consistent across all provinces. Such a low mental health knowledge level in educators who were pre-selected as being already involved in mental health related supports for students is concerning and demonstrates the need to provide enhancement of mental health literacy in Canadian teachers. However, this finding is also consistent with the previous evidence on the unpreparedness of Canadian educators to address student mental health needs (MHCC, 2013; Whitley et al., 2012; Kirby & Keon, 2006; Froese-Germain & Reil, 2012). It further highlights

the importance of providing effective, school based training such as GTET to promote educator competency and confidence in helping students with mental health problems or mental illness.

The knowledge increase showed a very robust effect size, while the attitudes effect size changes were more muted albeit still positive. This finding may have been the result of the highly positive baseline attitude scores found in the sample (and individually within each province), reflecting a ceiling effect for the intervention. Since educator participants were pre-selected by school principals as individuals who were already engaged in helping students they may have been a group of individuals who already were more likely to hold less stigmatizing attitudes towards people with mental illness than a group of randomly selected educators. An ongoing study of this intervention in a more representative sample of teachers is currently underway and may shed light on this issue.

As there were no significant inter-provincial differences identified in this evaluation we have reasonable comfort that the GTET outcomes on educator knowledge and attitudes will also be similar when applied in other Canadian jurisdictions and beyond. This finding supports the potential use of GTET as a national intervention that may be useful in enhancing the role of schools in addressing mental health care of students and in potentially enhancing access to needed mental health care through early identification of youth at risk for a mental disorder

Very few, if any, mental health interventions in the school setting have assessed the relationship between improvements in educators' mental health knowledge and decreases in stigma. The results presented herein demonstrate a significant positive correlation between mental health knowledge and attitudes in educators. The determined correlation coefficient between pre-training knowledge and attitude scores is relatively low ($r = .19, p < .001$) however

the large sample size strongly influences the correlations coefficient and this value is considered significant and not likely to have arisen due to chance for the given population (Bryman & Cramer, 2011). This relationship between knowledge improvement and stigma reduction, demonstrates that individuals' attitudes towards mental illness is reflective of their knowledge about mental illness, even in a pre-selected population with highly positive baseline attitudes towards mental illness, who received a one-day professional development intervention. This relationship between mental health knowledge and stigma reduction was maintained after training ($r = .18, p < .001$), despite significant improvements in both knowledge and attitudes after the completion of the GTET.

Education about mental illness may be an important factor in leading to reduced stigma related to mental illness but this relationship has not been well studied (Rüsch, Angermeyer, & Corrigan, 2005; Kutcher, Wei & Coniglio, 2016). The nationwide aggregated outcomes presented here support the notion that in the school setting at least, gatekeeper educators will demonstrate decreased stigmatizing after mental health education. This finding is consistent with a recent study (Milin, Kutcher, Lewis, et al., 2016) on the effectiveness of a mental health literacy resource for high school students that demonstrated significant reduced stigma as a result of mental health curriculum resource. Should this finding be replicated, it may provide instructive direction on how future professional development interventions can be used to decrease stigma in not only Canadian settings but also in other cultural settings.

Further, as some current research indicates (Gulliver et al., 2010), improved knowledge and stigma are known to be predictors of help-seeking behaviors. Thus, teachers participating in the GTET may have the capacity to improve their own help-seeking behaviors and enable them

to help others including their students. This possibility is currently the focus of developing research by the authors.

The aggregated nationwide GTET program outcomes presented here support previous evaluations demonstrating targeting go-to educators as a successful means of improving their knowledge of adolescent mental health, enhancing their competencies for early identification of mental illness, and promoting skills on how to triage and facilitate referrals for students requiring mental health care (Kutcher & Wei, 2013; Wei & Kutcher 2014; Wyman et al., 2008). These results are also consistent with previously published findings that have demonstrated that targeting educators with gatekeeper training programs improves their knowledge and abilities to assist adolescents to access mental health care if needed (Wyman et al., 2008; Hussein & Vostanis, 2013). Taken together, these data suggest that wide-spread application of the educator gatekeeper approach in the context of the GTET intervention may be a useful component of a comprehensive, integrated and horizontal pathway to mental health care for young people that links schools with health care providers to improve early access to care for those youth who require it (Wei et al, 2011; Kutcher, 2011; Kutcher, Wei & Hashish, in press).

The overall findings from the aggregated GTET program reported here support the success of a school based mental health early identification program for educators. The implementation of the training is currently delivered by the developer of the program. To achieve widespread implementation of this intervention, the use of a train-the-trainer model with trainers embedded in each school board so that yearly upgrading and training provided to new educators would be available. Evaluations of this approach have begun and data to date have demonstrated similarly positive results (<http://teenmentalhealth.org/toolbox/go-teacher-training-interim-report-nova-scotia/>). Additionally, using this water-fall model the GTET program can be effectively

implemented in concert with classroom teacher training on the Mental Health and High School Curriculum Guide (the Guide), which has been shown to improve the mental health literacy of secondary school students and teachers alike (McLuckie et al., 2014; Wei, et al., 2014; Kutcher, Wei, & Morgan, 2015, MINA _ PLEASE ADD THE RECENT MILIN PAPER HERE AS WELL). Through this approach, go-to educators in junior high and secondary schools may be able to work with classroom teachers more efficiently to help them identify students at risk of mental health problems and mental disorders and help them to access mental health care and support needed.

Limitations

This study was an open cross-sectional intervention without a control group. Thus it suffers from the limitations of such an approach. While a controlled evaluation of this intervention is needed, the reproducibility of these results in four different geographic locations and the similarities of both baseline and final evaluation results in all settings provide some degree of comfort as to the validity of the findings. A further limitation is that “Go-To Educators” are pre-selected by each school’s administration, which may introduce a certain degree of bias and may or may not be individuals that would similarly be chosen by students themselves. Additionally, it is essential to be able to demonstrate that this type of training also has positive impact on identification and referral of youth who have mental health care needs. A controlled trial addressing this important issue is currently underway with positive initial results that will be reported when the study is completed and full data analysis has been conducted. None-the-less, the results on the impact of this intervention on enhancing knowledge and decreasing stigma are significant in their own right and begin to address the mental health related challenges reported by Canadian teachers. (Froese-Germain and Riel, 2012).

Conclusions

In conclusion the findings presented support the GTET as a promising educator gatekeeper/mental health literacy training program in Canadian schools that promotes competencies and skills of selected educators in the early identification of adolescents with mental illness, support for these youth in the context of the school, improved triage and referral to most appropriate health/mental health care providers in the community. This approach not only increases educator knowledge, decreases stigma and enhances the possibility that young people with mental disorders may be more readily identified, supported and referred for care but also has the potential to be adapted and applied widely across different settings that may be readily easily and inexpensively integrated into existing provincial and territorial school systems. Further research addressing this application of GTET, using controlled studies in various locations, with different demographics, and in different school systems in a manner cognizant of the identified limitations in this report will help policy makers, administrators and human services providers better determine the impact of this approach on enhancing access of young people to needed mental health care. A number of studies addressing these domains are currently underway.

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Table 1

Demographics for participants by province, including sample size, and frequency of gender and profession

Variables		Nova Scotia	Ontario	Alberta	Manitoba
Provincial Sample size		120*	244	28	31
Gender	Females	85	196	23	22
	Males	34	43	5	9
	Did not identify	1	5	-	-
Profession	Teachers	84	108	-	16
	Guidance and Family Counselors	20	43	7	8
	Social Workers	1	28	6	2
	School administrators	7	17	-	3
	Psychological services	-	19	10	1
	Schools Plus Mental Health Clinicians	4	-	-	-
	Other	2	29	5	1
	Did not list	2	-	-	-

* The 120 participants from Nova Scotia included in the current sample population were previously included in the sample population in Wei & Kutcher (2014).

Table 2

Knowledge and attitude scores at pre- and post-training among 4 provinces

Outcomes	Pre-training*	Post-training*	<i>t</i> -test	Cohen's <i>d</i> statistic
Knowledge	12.16 (4.67)	20.97 (3.73)	$t(423) = 38.37, p < .001$	2.08
Attitudes	50.93 (4.47)	51.70 (4.54)	$t(402) = 3.44, p < .001$	0.17

* Mean scores presented with standard deviation in ().

Table 3

*Knowledge scores descriptive statistics and *t*-tests for each province*

Province	Pre-training*	Post-training*	Mean Difference	<i>t</i> -test	Cohen's <i>d</i>
Ontario	12.43 (4.88)	20.91 (4.00)	8.48 (5.13)	$t(243) = 25.83^{**}$	1.90
Nova Scotia	11.57 (4.34)	21.08 (3.28)	9.51 (4.07)	$t(119) = 25.56^{**}$	2.48
Alberta	14.00 (2.93)	22.14 (3.06)	8.14 (3.23)	$t(27) = 13.35^{**}$	2.72
Manitoba	10.61 (4.89)	19.94 (3.54)	8.81 (4.72)	$t(30) = 11.07^{**}$	2.19

* Mean scores presented with standard deviation in ().

** Significant, $p < .001$

Table 4

Attitude scores descriptive statistics and t-tests for each province

Province	Pre-training*	Post-training*	Mean Difference	t-test
Ontario	51.43 (4.48)	51.75 (4.49)	0.33 (4.66)	$t(235) = 1.08, p = .28$
Nova Scotia	49.90 (4.59)	51.52 (4.22)	1.62 (4.11)	$t(115) = 4.25, p < .001^{**}$
Alberta	50.20 (4.13)	50.80 (5.47)	0.60 (4.40)	$t(24) = 0.68, p = .50$
Manitoba	51.77 (3.41)	52.92 (5.48)	1.15 (4.32)	$t(25) = 1.36, p = .19$

* Mean scores presented with standard deviation in ().

** The Cohen's $d = .37$ for the significant different in change of attitudes scores for Nova Scotia.

Table 5

Participant satisfaction with GTET

Variable	Mean	SD
I found the workshop useful and informative	4.63	.61
I enjoyed the workshop	4.52	.68
I found the speaker(s) to be of high quality	4.78	.49
I learned information and concepts that will be helpful to me in my work	4.63	.62
I would recommend this workshop to my colleagues	4.63	.65
I would rate this workshop	4.58	.63

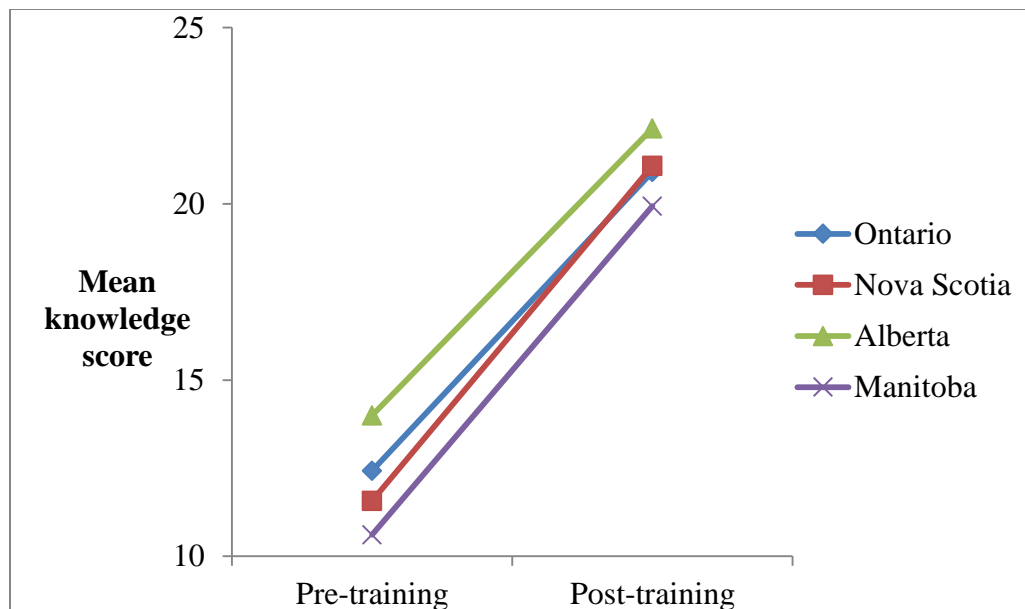


Figure 1. Mean scores by province on the pre- and post-training knowledge surveys.

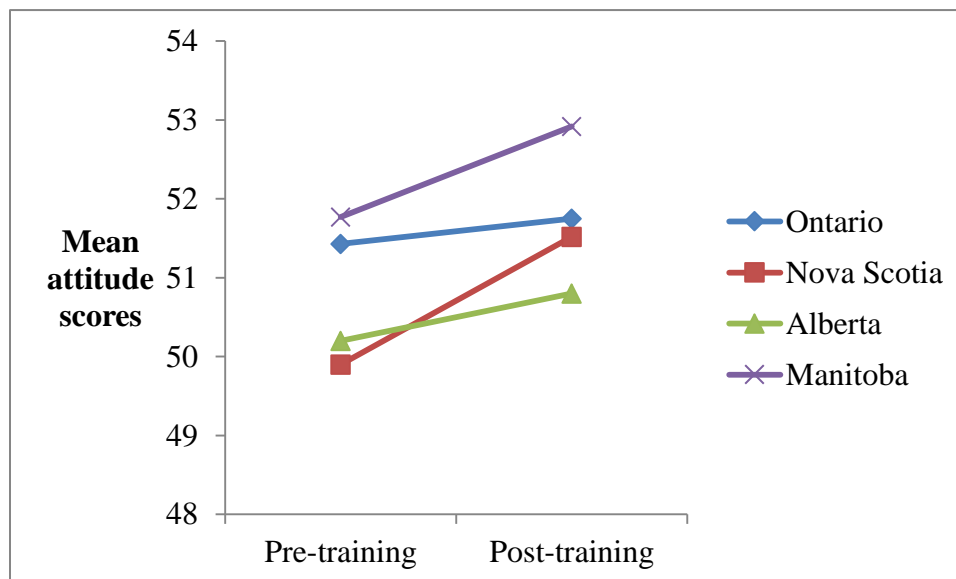


Figure 2. Comparison of the mean pre- and post-training attitude survey scores for each province.