Mental Health Commission of Canada

Commission de la santé mentale du Canada

CBIS Program: Final Evaluation Report

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www.mentalhealthcommission.ca

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2 OPENING MINDS: CHANGING HOW WE SEE MENTAL ILLNESS

Stigma is a significant concern for those living with a mental illness. Stigma is a primary vehicle for the entrenchment of discriminatory behaviours, and has been identified as a major barrier to timely and accessible care, recovery, and quality of life for persons living with mental illnesses (1-2). As such, reducing the stigma and discrimination associated with mental illness is becoming an increasingly important focus. One particular area of focus is that of the health care sector.

As part of its 10-year mandate, The Mental Health Commission of Canada (MHCC) has embarked on an anti-stigma initiative called Opening Minds (OM) to change the attitudes and behaviours of Canadians towards people with a mental illness. OM is the largest systematic effort undertaken in Canadian history to reduce the stigma and discrimination associated with mental illness. OM is taking a targeted approach, with healthcare providers being one of its main target groups. OM's philosophy is not to reinvent the wheel, but rather to build on the strengths of existing programs from across the county. As such, OM is conducting evaluations of various programs to determine their success at reducing stigma. OM's goal is to replicate effective programs nationally. (3)

A key component of these program evaluations is contact-based educational sessions, where target audiences hear personal stories from, and interact with, individuals who have recovered or are successfully managing their mental illness. The success of contact-based anti-stigma interventions is generally supported by international studies as a promising practice to reduce stigma. OM is partnering with programs in Canada who are reaching out to its initial target groups: youth, healthcare providers, the workforce and news media. Over time, OM will add other target groups.

For more information, go to: www.mentalhealthcommission.ca/English/Pages/OpeningMinds.aspx

3 BACKGROUND

Cognitive Behavioural Interpersonal Skills (CBIS) training is an award-winning educational component of the Practice Support Program (PSP) Adult Mental Health Module. This training provides physicians, general practitioners, and other front line staff with the skills and knowledge to support stable, severe and persistent mentally ill (SPMI) clients within primary care.

The CBIS training program is a four-hour workshop designed to increase practitioners' skills in diagnosis and care planning, decrease stigma, and improve patient engagement and experience. As part of the evaluation of the CBIS program, OM partnered with Vancouver Island Health Authority Mental Health and Addictions Services (VIHA MHAS) to examine the impact of the CBIS program on healthcare provider stigma. The results will help determine the most effective strategies for reducing stigma among healthcare providers toward mental illness.

The CBIS training module was delivered at three sites (Comox, Campbell River, Port Alberni) on Vancouver Island between January 2013 and March 2013 to approximately 190 physicians, nurses and other front line health providers.

4 EVALUATION METHODS

In order to assess attitude change toward mental illness, program participants were given a questionnaire package at four different time-points. The first survey was completed before the initial training (pre-test survey). The second questionnaire was given to participants immediately following the completion of the four-hour CBIS training session (post-test survey). The final two surveys were administered electronically, at three and six months following attendance at the training session (follow-up surveys).

All surveys contain the 20-item Opening Minds Scale for Health Care Providers (OMS-HC) so that changes over time can be assessed. The pre- and post-test surveys also contain questions pertaining to experiences with mental illness, and demographic questions (age, gender, training, and professional status). The follow-up surveys contain questions pertaining to participants' satisfaction with the CBIS training program.

The OMS-HC is a 20-item validated scale that measures healthcare providers' attitudes and behavioural intentions toward people with a mental illness. (4) To complete the scale, participants are asked the extent to which they agree or disagree with each item. Items are rated on a 5-point scale: *strongly agree, agree, neither agree nor disagree, disagree,* or *strongly disagree*.

To create a total scale score for the OMS-HC, all 20 items are summed for each participant. Total scores can range from 20 to 100, with lower scores indicating less stigma. For this particular evaluation, Cronbach's alphas for the scale were .82 at pre-workshop, .81 at post-workshop, .85 for the first follow-up survey and .83 for the final follow-up survey This indicates an acceptable level of internal consistency for the OMS-HC scale.

Paired t-tests were used to analyze total scale scores. Also, by grouping certain questions from the scale together, the OMS-HC can be used to examine three main dimensions of stigma: attitudes toward people with mental illness; healthcare professionals' attitudes about disclosure of a mental illness, and social distance. A threshold was also created to measure success, defined as the proportion of respondents who obtained 80% or more correct (non-stigmatizing) answers on the post-test.

5 RESULTS

In all, 187 of the 204 participants who attended the CBIS training program completed one or more surveys. A total of 164 participants completed both the pre and post surveys, allowing for paired analysis to be performed for score changes over time. Fourteen participants completed only the pre-test, and nine participants completed only the post-test. The results described below are based on the 164 paired survey completions. Follow-up survey results are described in Section 6 of this report.

5.1 Participant Demographics

Table 1 highlights the breakdown of program participants by training site, age, gender and occupation. As shown in the table, the Comox session was the largest training session, with 61.6% of participants attending this site for training.

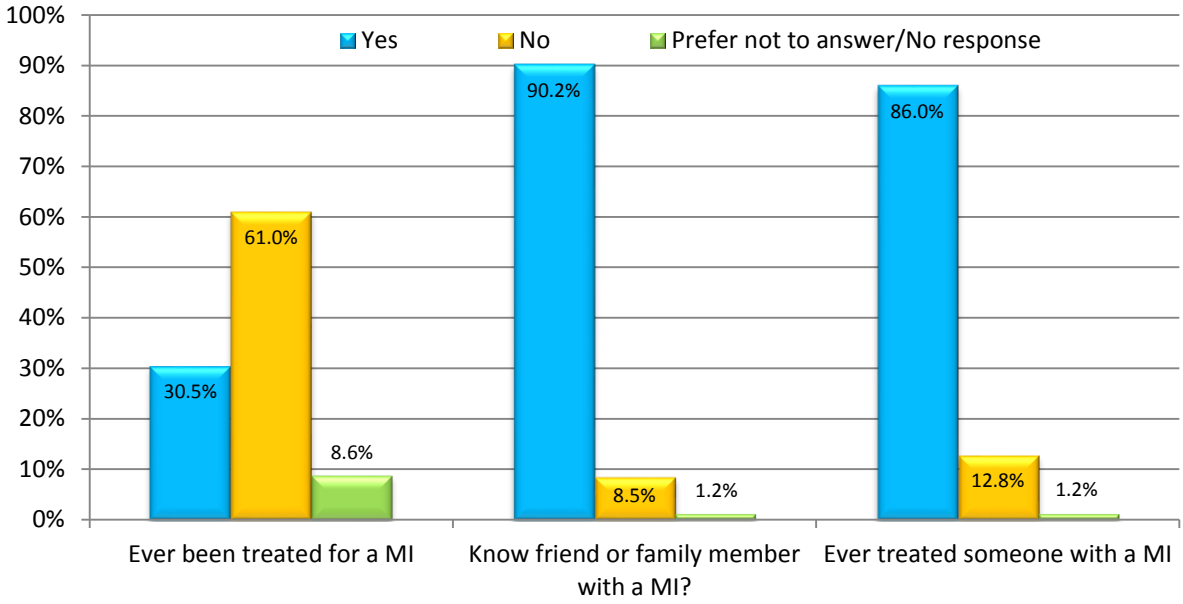
Table 1. Demographic Characteristics of CBIS Training Participants

	n (=164)	%
Training Site		
Comox	101	61.6%
Campbell River	44	26.8%
Port Alberni	19	11.6%
Gender		
Female	123	75.0%
Male	39	23.8%
No response	2	1.2%
Age (mean age=45.7)		
18-29	10	6.1%
30-39	37	22.6%
40-49	49	29.9%
50-59	56	34.1%
60+	11	6.7%
No response	1	0.6%
Occupation		
Physician	20	12.2%
Nurse	54	32.9%
Social worker/OT	29	17.7%
Psychologist	1	0.6%
Allied mental health and addictions	55	33.5%
No response	5	3.0%
Years of work experience (mean=14.1)		
5 years or less	38	23.2%
6-10 years	37	22.6%
11-15 years	25	15.2%
16-20 years	24	14.6%
21-25 years	15	9.1%
> 25 years	25	15.2%
No response	0	0.0%

Three quarters of the CBIS training participants were female (75.0%). The mean age of program participants was 45.7 years and mean years in practice was just over 14 years. Just under one third of participants identified themselves as nurses (32.9%). Just under two in ten were social workers or occupational therapists (17.7%), and 12. 2% were physicians. A number of other allied mental health and addictions staff were also represented at the CBIS training session (33.5%).

The demographic section of the survey also asked respondents about their personal experience with mental illness. These results are highlighted in **Figure 1**. As shown, most participants had previous experience treating persons with mental illness (86.0%). As well, the vast majority of participants said they personally knew a close friend or family member with a mental illness (90.2%). Approximately three in ten participants indicated that they had been treated for a mental illness at some point in their lives (30.5%).

Figure 1. Participant Experience with a Mental Illness (MI) (n=164)



5.2 OMS-HC Total Score Change from Pre to Post Training

To create scale scores for the OMS-HC, items were summed across all surveys having complete data. Scores can range from 20 to 100, with lower scores indicating less stigma.

For the pre-test, total scores ranged from 26 to 66, with an average of 43.04 (SD = 7.72), indicating a relatively low level of stigma at baseline.

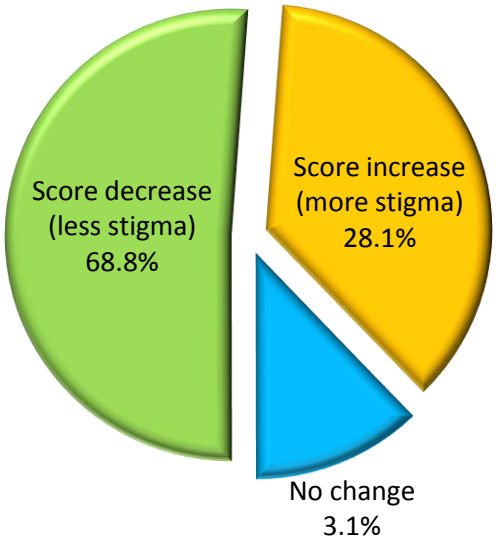
For the post-test, total scores ranged from 23 to 67, with an average of 42.11 (SD = 7.97). This represents a decrease in score of 2.16% from pre to post and a standardized mean difference (SMD) of .12, which may be considered a weak effect. As highlighted in **Table 2**, results of a paired t-test showed this change to be statistically significant.

Table 2. OMS-HC Average Total Scores: Pre-test, Post-test and Mean Change (n=164)

	Pre-test mean (95%CI)	Post-test mean (95%CI)	Mean Change (95%CI)	Paired t-test
OMS-HC	43.04 (41.86-44.22)	42.11 (40.90-43.33)	0.93 (0.16-1.70)	t(163)=2.38 *p*=.018

Figure 2 shows the number and percent of participants who had a total score increase (i.e., more stigma), total score decrease (i.e., less stigma) or a score that had no change. As highlighted in the figure, just over half of participants had scores that improved from pre to post training (51.2%). Just over one in ten participants had no change in score on the OMS-HC from pre to post training (12.2%), and just over one third of participants had an increase in score from pre to post CBIS training (36.6%).

Figure 3. Direction of Change from Pre to Post: OMS-HC scale (n=164)

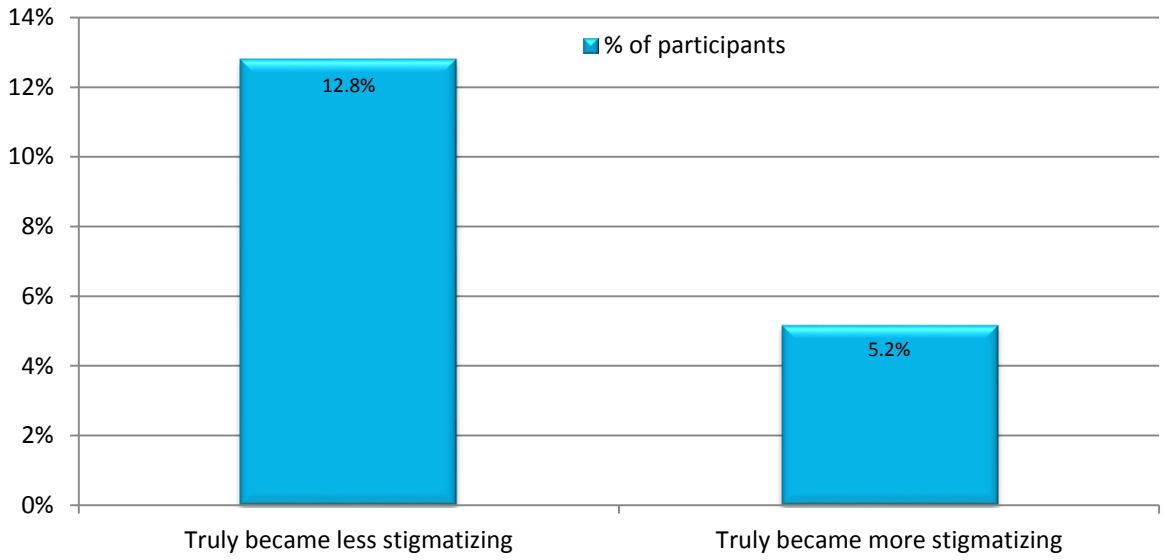


The minimum delectable change (MDC) statistic is another method for examining changes in scores from pre- to post-workshop. The calculated MDC for the OMS-HC scale is 6.51.[1] This suggests that a score increase or decrease of 6.5 points or more on the OMS-HC scale reflects a true change in attitude – one that cannot be attributed to measurement error.

[1] The MDC for the OMS-HC scale was calculated based on a standard error of measurement (SEM) of 2.80 80 (from test-retest results as described in (4)) and a z score of 1.65 (90% confidence level). The formula for calculating this statistic is as follows: MDC=SEM*v2*z score associated with confidence level of interest.

As highlighted in **Figure 3**, when the MDC is applied to participants' score changes from pre to post workshop, the number of participants who actually became more stigmatizing is much reduced – to only 5.2%. On a similar note, when the MDC is applied to the scores that improved, the number of participants that truly became less stigmatizing as a result of the training is 12.8%

Figure 3. Pre to Post Score Change using the MDC Statistic (n=164)



Further analysis [2] of participants who became more or less stigmatizing according to this measure led to two main findings. First of all, participants whose scores worsened by 6.5 points or more from pre to post workshop were much more likely to indicate that they have been treated for a mental illness (62.5%) compared to those whose scores did not (29.3%). Secondly, participants whose scores improved by 6.5 points or more from pre to post workshop had notably higher baseline scores than other participants (M=48.2 for participants whose scores improved by 6.5 points or more; M=42.3 for other participants). There were no other notable differences observed with respect to the demographic characteristics or baseline scores for participants who became more or less stigmatizing according to the MDC measure.

5.3 Dimensions of Stigma

The OMS-HC scale contains within it three main content areas, each measuring a specific dimension of stigma. While original scale testing (4) suggested two main subscales – attitudes toward mental illness

[2] Demographic characteristics and average OMS-HC scores at baseline were examined for participants whose scores that worsened by 6.5 points or more compared to whose scores did not; as well for those whose scores improved by 6.5 points or more compared to those whose scores did not.

and attitudes toward disclosure of a mental illness – subsequent analyses have identified three subscales within the OMS-HC (paper in progress).

The first subscale or dimension is healthcare providers' inclinations toward disclosure of a mental illness. This dimension can be used to provide an indication of the stigma healthcare providers believe exists due to having a mental illness and how this would impact help-seeking. The specific scale items used to measure this dimension of stigma are as follows:

Q4. If I were under treatment for a mental illness, I would not disclose this to any of my colleagues

Q6. I would see myself as weak if I had a mental illness and could not fix it myself

Q7 I would be reluctant to seek help if I had a mental illness

Q10. If I had a mental illness, I would tell my friends

The second dimension is that of 'attitudes towards people with mental illness' and includes the following statements:

Q1. I am more comfortable helping a person who had a physical illness than I am helping a person who has a mental illness

Q12. Despite my professional beliefs, I have negative reactions towards people with a mental illness

Q13. There is little I can do to help people with mental illness

Q14. More than half of people with mental illness don't try hard enough to get better

Q18. Healthcare providers do not need to be advocates for people with mental illness

Q20. I struggle to feel compassion for a person with a mental illness

The third dimension is that of social distance. It includes the following statements:

Q3. If a colleague with whom I work told me they had a managed mental illness, I would be as willing to work with him/her

Q8. Employers should hire a person with a managed mental illness if he/she is the best person for the job

Q9. I would still go to a physician if I knew that the physician had been treated for a mental illness

Q17. I would not want a person with a mental illness, even if it were appropriately managed, to work with children

Q19.I would not mind if a person with a mental illness lived next door to me

Total scores for these three dimensions were created by summing the score for each item in the content area. A summary of changes in attitude for these three content areas is provided in **Table 3**. As highlighted in the table, two of the three content areas -- attitudes toward people with a mental illness and social distance -- had very low baseline mean scores, at 1.83 and 1.88 respectively. As further highlighted in the table, none of the three main content areas showed a statistically significant improvement from pre to post-workshop, although the mean score improvement for the content area of attitudes toward people with a mental illness was approaching significance [t(163)=1.92, p=.056].

Table 3. Stigma Content Areas: Changes in Respondent Mean Scores from Pre to Post-program (n=164)

Content Area	Pre-test mean (95%CI)	Post-test mean (95%CI)	Mean Change (95%CI)	Paired t-test
Attitude towards people with mental illness	**1.83** (1.79-1.87)	**1.78** (1.74-1.82)	**0.55** (-.001-.112)	t(163)=-1.92 *p*=.056
Disclosure/help-seeking	**2.43** (2.38-2.48)	**2.38** (2.33-2.43)	**0.47** (-0.22-.117)	t(163)=1.34 *p*=.182
Social distance	**1.88** (1.84-1.92)	**1.88** (1.84-1.92)	**.000** (-.055-.064)	t(163)=0.15 *p*=.879

5.4 Individual Item Analysis

Using paired data, individual item changes on the scale were measured from pre to post-workshop. The following three statements showed a statistically significant improvement from baseline to post training:

- *Q12. Despite my professional beliefs, I have negative reactions towards people with mental illness.*
- *Q14. There is little I can do to help people with mental illness.*
- *Q16. The best treatment for mental illness is medication.*

There were no statements that showed statistically significant increases in stigma from pre to post-test.

5.5 Threshold of Success

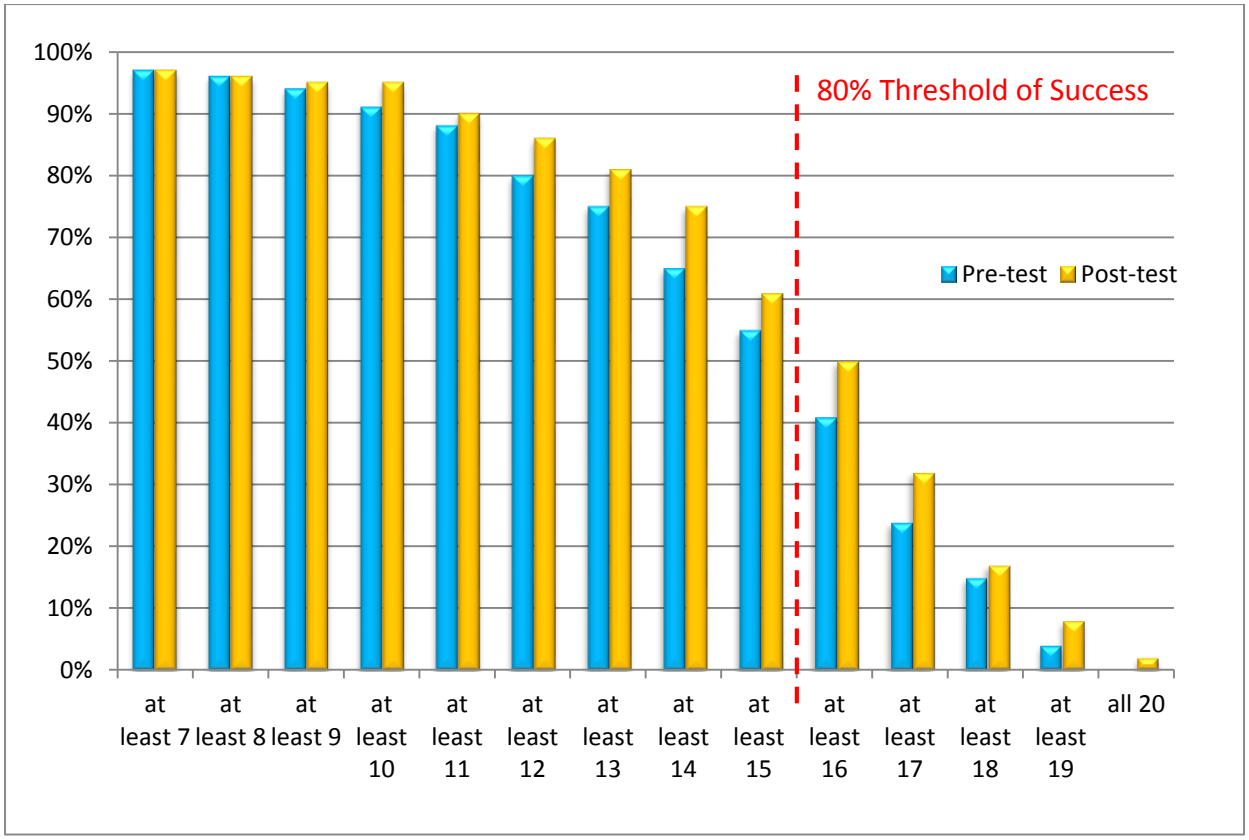
Another way to examine the impact of CBIS training on mental illness-related stigma is to examine how many participants reached a "threshold of success" on the OMS-HC scale; in other words, how many participants responded to a certain number of items on the OMS-HC in a non-stigmatizing way.

The threshold of success measure was derived by recoding each participant's response on the OMS-HC scale to represent either a stigmatizing or a non-stigmatizing response. For example, "Most people with mental illness could snap out of it if they wanted to" was recorded as non-stigmatizing if the respondent selected *strongly disagree* or *disagree,* and recoded as stigmatizing if the respondent chose *neutral*, *agree*, or *strongly agree*.

Figure 4 shows the cumulative percentages of participants who had non-stigmatizing responses for each possible score out of 20 at pre, post, and follow-up. A threshold of 80% (or at least 16 out of 20 "correct" - i.e. non-stigmatizing answers) was used as an indication of success on the OMS-HC.

As highlighted in the figure, prior to the CBIS training session, approximately four in ten participants managed to cross the threshold of success on the OMS-HC (41.2%). By the end of the session, the percentage who had crossed the threshold level of success had increased to 50% of participants.

Figure 4. Cumulative Percent of Non-stigmatizing Responses on OMS-HC for Pre-test and Post-test



n=164 (paired data)

5.6 Desire for More Training in Mental Illness

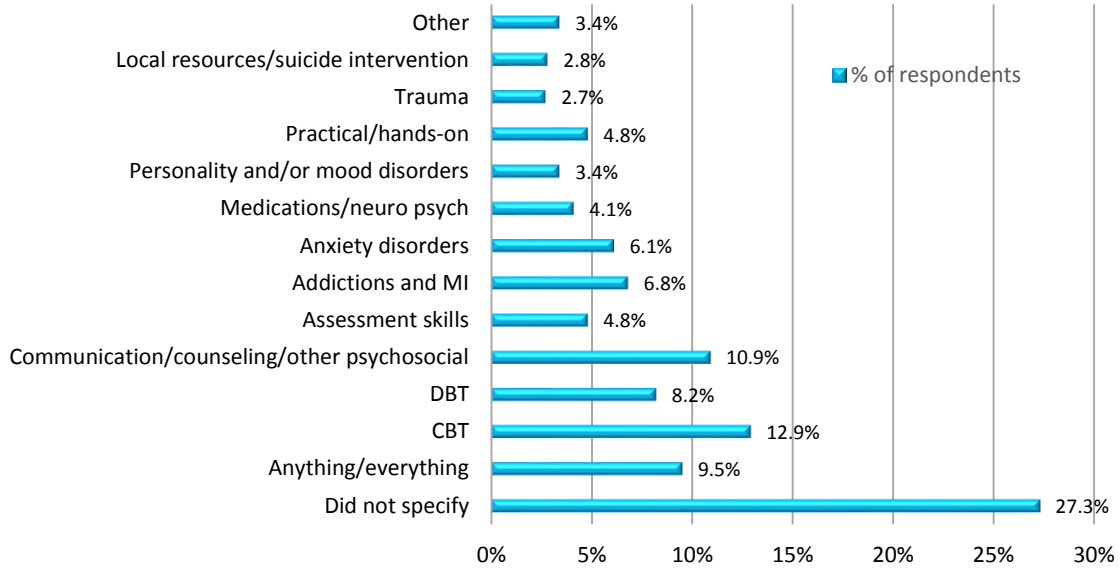
In addition to measuring the impact of the workshop (i.e., changes in attitude as measured by the OMS-HC), respondents were asked if they desired more training in mental illness. Virtually all participants indicated they would value more training in the field of mental illness (92.1%).

When asked to specify what kind of training they would value, over one third either did not specify their response (25.9%) or indicated they would like any kind of additional training in mental illness (9.5%).

Many participants specifically mentioned that they would value more training in cognitive behavioural therapy (CBT)/additional CBIS training (12.9%). Dialectical behavioural therapy (DBT) was another commonly mentioned area for desired further training (8.2%).

Participants also mentioned that additional training for specific disorders would be of value. The most commonly mentioned disorders were anxiety disorders (including post-traumatic stress disorder (6.1%) and addictions and mental illness/concurrent disorders (6.8%). Assessment-related training was also mentioned by a number of participants (4.8%).

Figure 5. Additional Areas of Desired Training as Specified by Program Participants



n=147. Multiple response questions; totals will exceed 100%

5.7 Additional Comments/Participant Feedback

At the completion of the post-workshop survey (post-test), participants were given the opportunity to provide additional comments. Approximately 20% of participants used this space, mostly to provide feedback about the workshop itself. The vast majority of participant comments were positive in nature. A sample of comments is provided below:

- *"Amazing manual. Thanks for all the tools organized."*
- *"Great information. Simple and easy to use tools that can easily be applied to practice."*
- *"Great seminar. I would like to see this module used Canada-wide. I would also like to see more seminars on specific training tools/aspects. Thank you."*
- *Great workshop! Easy to use manual! Well-presented. Thank you."*
- *"I didn't have a lot of mental health stigma, but this helped to reduce it even further. Thanks!"*
- *"CBIS doesn't address mental illness in a way that would reduce stigma (it's not that kind of training)."*
- *"Incredibly valuable training, highly practical. I will use it in practice on a regular basis."*
- *"More opportunity for networking please."*
- *"Thank you for the resources in a simplified and concrete way. I would have liked more opportunities to mingle with professionals from other areas."*
- *Thanks for this training…there was so much introduced. Could there be a follow up on how to put this into play, how it has been used so far, etc.? I want this to be doable."*

6 FOLLOW-UP RESULTS

As noted above, the OMS-HC scale was again distributed to program participants approximately three months following the completion of the course, and again at six months post-course completion. A total of 86 participants completed the three month follow-up survey, and 72 completed the six month follow-up survey.[3] Analyzing scale scores a period of time *after* program completion allows for an examination of the extent to which program impacts have been sustained over time. Three month follow-up scores are presented in this and the following section. Six month follow-up results are presented in Sections 6.3 and 6.4.

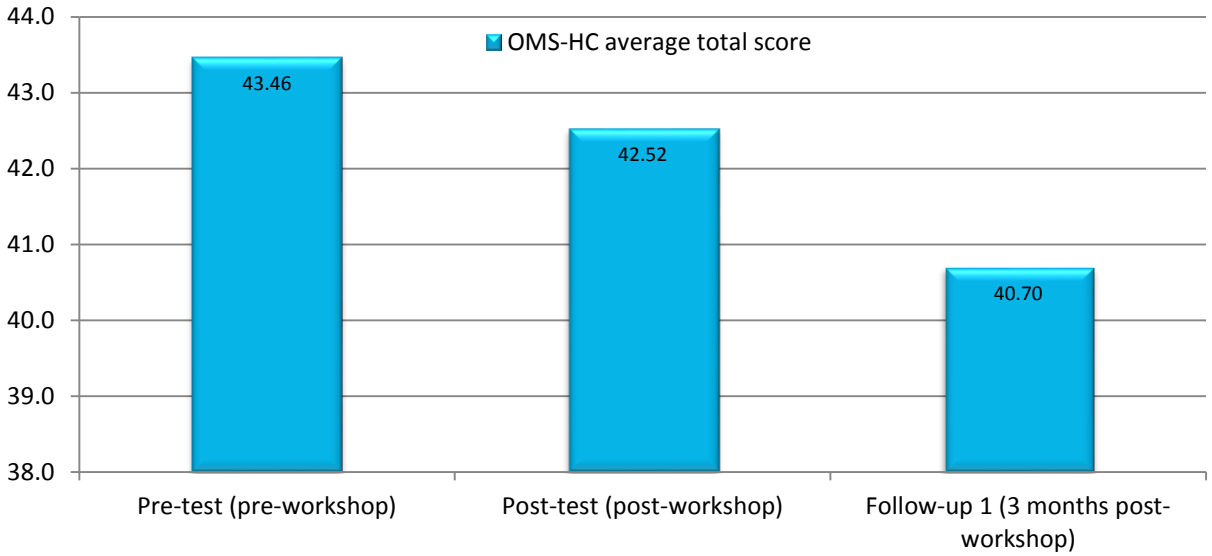
6.1 Three Month Follow-up: Quantitative Results

Similar to the analysis of score changes from pre to post-workshop described above, a paired analysis of OMS-HC score changes across time was performed for those participants who completed a survey at each of the first three time points: pre CBIS workshop, post CBIS workshop, and at the three month follow-up (n=75). As highlighted in **Figure 6**, scores improved from pre to post-workshop, and again at the three month follow-up, from 42.52 at post-test, to 40.70 at the time of the three month follow-up. This

[3] Of the 187 program participants who provided consent to participate in the study, 155 provided email addresses to receive follow up surveys. From this sample of 155, nine survey invitations were returned as undeliverable, resulting in a reduced sample for the follow up surveys of 146 participants.

represents an improvement of 4.2% from post-test to follow-up, and a total score improvement of 6.3% from baseline to three month follow-up. The standardized mean difference (SMD) of the score change from baseline to the time of the three month follow-up is .38, which may be considered a moderate effect.

Figure 6. OMS-HC Score for CBIS Participants at Three Time Points: Pre-workshop, Post-workshop and Three Month Follow-up (n=75)



Results of paired t-tests showed that the score improvement from post-workshop to the time of the three month follow-up survey was statistically significant [t(74)=2.49, p=.015], as was the score improvement from pre-workshop to the three month follow-up survey [t(74)=3.72, p<.001].

Scores across the three time points were also analyzed across the main dimensions of stigma: attitudes toward mental illness; propensity toward disclosure of a mental illness/help seeking; and social distance. These results are highlighted in **Table 4**. As shown, mean scores for all three dimensions of stigma improved across the three time points.

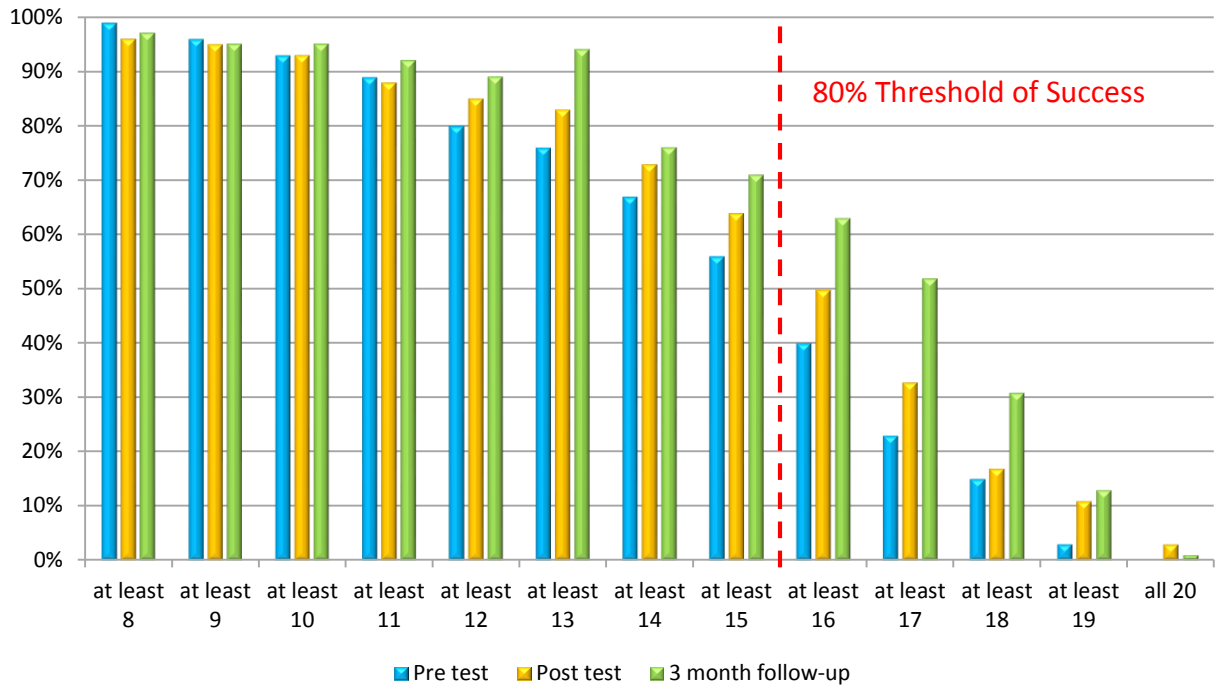
Paired t-tests showed that OMS-HC scores improved significantly from the time of the pre-test to the time of the three month follow-up survey on two of these dimensions of stigma: attitudes toward people with a mental illness, and propensity toward disclosure of a mental illness/help seeking. The mean score improvement from pre-workshop to the time of the first follow-up for the dimension of social distance was approaching significance.

Table 4. Stigma Content Areas: Changes in Respondent Score from Pre-test to Post-test to Three Month Follow-up (n=75)

Content Area	Pre-test mean	Post-test mean	Follow-up mean	Mean Change from pre-test to follow-up (95%CI)	Paired t-test (pre-test to follow-up)
Attitude towards people with mental illness	**1.85**	**1.82**	**1.70**	**0.15** (0.04-0.26)	t(74)=-2.85 *p*=.006
Disclosure/help-seeking	**2.46**	**2.42**	**2.29**	**0.16** (0.02-0.31)	t(74)=2.22 *p*=.029
Social distance	**1.89**	**1.89**	**1.79**	**.010** (0.06-0.21)	t(74)=1.76 *p*=.082

The threshold of success analysis was also undertaken for participants who completed all three surveys (n=75) to examine score changes from baseline to the time of the first follow-up,. These results are highlighted in **Figure 7**. As shown, four in ten participants were across the threshold of success on the OMS-HC at baseline (40.0%). By the end of the session, the percentage that had crossed the threshold of success had increased to 50%. At the time of the three month follow-up, over six in ten CBIS workshop participants had crossed the threshold of success on the OMS-HC (62.6%).

Figure 7. Cumulative Percent of Non-Stigmatizing Responses on OMS-HC for Pre-test, Post-test and Three Month Follow-up (n=75)



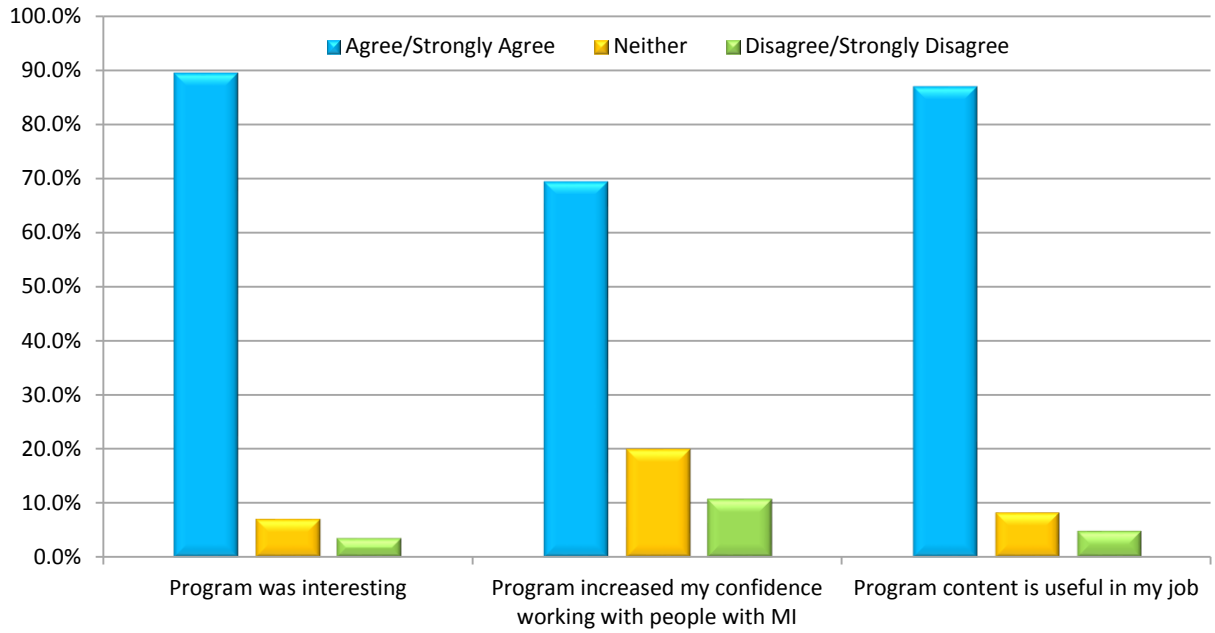
6.2 Three Month Follow-up: Participant Feedback/Program Satisfaction

As part of the three month follow-up survey, program participants were also asked a series of questions about their satisfaction with, and usefulness of, the CBIS program. Participants were asked to rate their agreement with the following statements:

- *The content of the program was interesting.*
- *The content of the program increased my confidence in working with people with mental illness.*
- *The content of the program will be useful in my job.*

Results are highlighted in **Figure 8**. As shown, the vast majority of respondents felt that the program content was interesting (89.4% agreed or strongly agreed) and useful to their practice (86.9% of respondents agreed or strongly agreed). Over two thirds also agreed or strongly agreed that the program content increased their confidence in working with people with mental illness (69.4%).

Figure 8. Participant Perception of Program at Follow-up (n=86)



Program participants were also asked to describe which workshop activities or parts of the program most affected their perception or understanding of mental illness. While many respondents indicated that they already had a strong understanding of mental illness and that the workshop did not change their perceptions much, many provided specific comments on the usefulness of the workshop in this regard. A sample of respondent comments to this question is provided below:

> *"The cognitive behavioural component and the wholistic approach helped me understand how mental illness is on a continuum, as I could see how many of the approaches could benefit people I know, myself included, who don't have an official mental illness."*
>
> *"I believe I already had a really good understanding of the mental illness and the stigma surrounding it as I have worked in the mental health field for 14 years. I am aware, however, that even professionals working in mental health can contribute negatively to the stigma out there so having the opportunity to challenge these beliefs was a valuable part of what was presented."*
>
> *"I was glad to see the input of someone with lived experience being used and acknowledged at a significant level."*
>
> *"The training reaffirmed my belief that people just don't wear a label and don't fit nicely into boxes."*
>
> *"I think I already had a good understanding of mental illness, but I found the assessments and screening tools very valuable. They gave me more in depth insight, more immediately, with the people I work with. I also appreciate the handouts for individuals and families."*

"I already had a strong understanding of mental illness. The program was helpful as another tool only."

"In general, the training was well laid out and covered all the topics with information that increases our understanding, empathy, and support."

"The diagnostic interview has been helpful in understanding patients better."

"I really appreciated the live acting and videos. I'm a visual learning so just reading material about mental illness is not useful to me. I need to see it"

"I already work in mental health so this program did not influence my perceptions."

"The reinforcement of the importance of open communication and dialogue with patients was helpful."

"Having concrete tool and activities to work through with people is helpful because I would rather be able to provide something instead of sending them away with nothing."

"I appreciated with video story. I learn best with personal aspects to the information instead of just facts."

Program participants were also asked how they thought the program could be improved. While many respondents thought the program did not need to be changed in any way, some did offer suggestions for improvement. The most commonly mentioned ideas for improvement included having more input and involvement from people with lived experience of mental illness, making the workshop longer, and including a follow-up session. A sample of respondent comments to this question is provided below.

"Broaden the scope to include eating disorders. Also, invite an individual living with a mental illness to speak to the group in order to order to provide a unique perspective to individuals without a mental illness."

"It would be great to offer a follow-up presentation, providing a little more time towards using the provided tools effectively. Or, possibly breaking the presentation down into two presentations, to allow for more time to work with the materials provided. Additional presentations to expand on CBIS in general would be great."

"I think the program was perfect the way it was."

"I really liked … the easy access binder of resources, etc. I think more stories of successful people who also have a managed mental illness would be very useful in reducing discrimination. It really helps to profile people and show videos of competent individuals and then to show how they are managing a mental illness."

"The only criticism, shared by others, was the delivery. The time frame was very short. People had not even gotten through the line up for lunch and they were presenting again leaving some feeling frustrated and rushed. So either plan an adequate time frame for lunch or skip it."

"Have a physician and nurse present who have a mental illness."

"It would be great to offer a follow-up presentation, providing a little more time towards using the provided tools effectively. Or, possibly breaking the presentation down into two presentations, to allow for more time to work with the materials provided. Additional presentations to expand on CBIS in general would be great."

"I think it should be offered as a longer program with more time for role-play."

"There should be more information with substance abuse/recovery tools. Most of my clients have concurrent issues."

"The session was excellent but I think it would be better to have it for a full day. Also some time up follow up session would be helpful to remember and integrate the information."

"I have no ideas for improvement. I thought it was well done."

"It could include a follow-up session, or a guide to do short follow-up sessions as small independent groups in our own offices. I think this would help 'keep it alive' as far as using the resources goes."

"Have a mental health peer workers as part of the training."

"More opportunities for participants to have time to practice the communication skills. Ongoing follow up monthly for folks to practice and learn the info so it is integrated at a deeper level."

"Demonstration of approach to different situations rather than everyone role playing different scenarios. Some people (like me!) don't like that and learn better by watching others' examples."

Lastly, program participants were asked if their behaviour toward people with mental illness would be different than it was before they participated in the CBIS program. Most respondents who answered this question felt that their behaviour would not be different, the most common reason being that they already had a good understanding of mental illness and/or already felt comfortable working with persons with mental illness (this theme was represented in 35 of the 58 responses to this question). Those participants who did feel their behaviour would be different (23 of 58 responses), commonly indicated that the program improved their confidence and ease in working with, and providing support to, persons with mental illness. A selection of participant responses to this question is provided below.

"No, because I have always been un-biased with people who live with mental illness."

"Yes. Having a clearer understanding of the struggles individuals are facing in the area of mental illness has been helpful."

"I feel that I am better equipped to assess and support people with mental illness."

"This program helped me by raising my confidence that I can provide relevant, timely assistance. This is important to me as our workload is high and having a confident response to clients' mental health needs is very important."

"No. The program severely lacked substance and had little influence on me. The only thing that wasn't new to me was again a reaffirmation that governments are not taking mental health and addictions issues seriously enough."

"Not really as I already recognize societal stigma regarding mental illness and I base my practice on treating others holistically...not just the mentally ill."

"No, simply because I already had a good understanding of mental illness."

"No not really. I have always had a positive attitude and behaviour towards people with mental illness and this program did not change that."

"No. I already work in mental health and I am very comfortable working with this population."

"Yes. The program made me feel more at ease in helping people with a mental illness."

"No. I routinely use similar materials in my current position and past positions. The value of the program for me was in confirming current practices and aligning with other professionals and providers."

"No. Although the program was very informative and helpful, my opinion about those with a mental illness remains the same. Having worked in this field for many years I realize that there is no difference between those with a physical illness or mental illness. Both deserve equal treatment."

"Yes - I feel better prepared with activities that I can use to work with clients now."

"Yes, there was a lot of useful information, particularly the doctor's sheet and the questions that were being asked and how they are phrased in well meaning sentences."

"Yes. I think the session helped me to understand some of my own prejudices."

"Not really, but I have a better resource toolbox to grab from in supporting people with mental health challenges."

"I felt unsure of what to do, what to say. I can't say that is completely gone, but I realize that I now have something to offer, some things I can do to help and be supportive."

"I am a psychiatric nurse, and this course has given me a more confident perspective on my own abilities, and invisible work."

"Yes, because now I have more confidence that I can do more to help."

"Yes, it just helped me raise my own awareness of my thoughts and feelings about working with people who have a mental illness."

"Yes, I feel more confident that there are tools to assist in managing symptoms of mental illness. As a healthcare provider who does not have any prescribing ability, it is helpful to know that there is something that I can do."

"No. There is a very strong history of mental illness in my family, so have been aware of the very real challenges involved all my life."

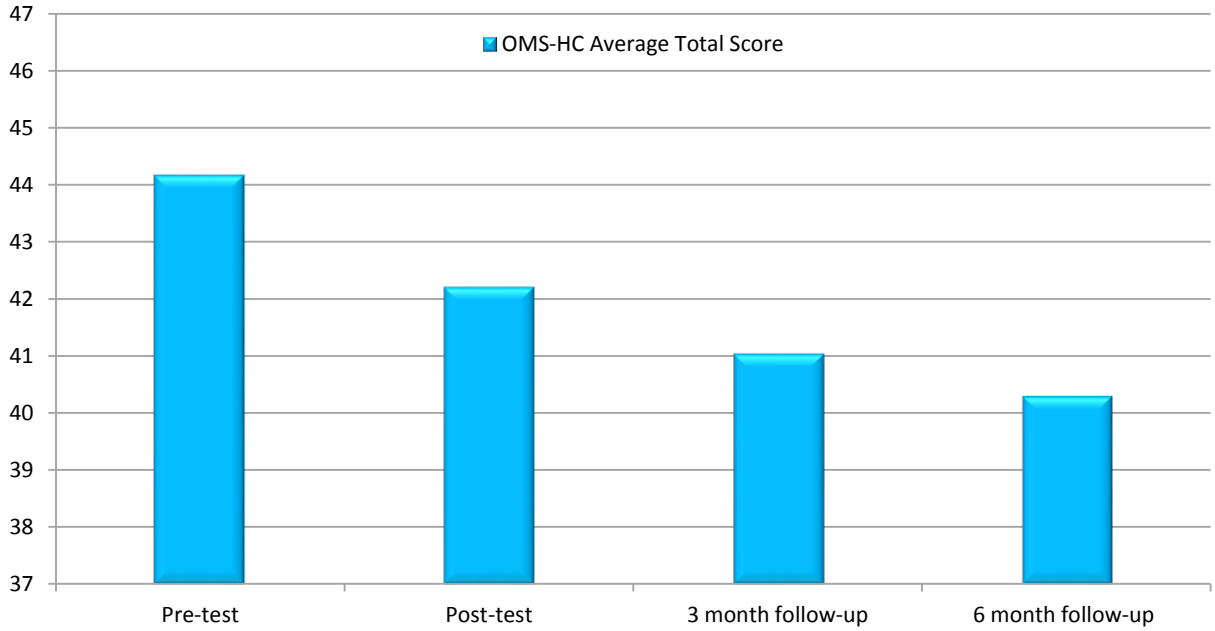
"Yes. I now have a deeper understanding of the importance of engaging with the person with a therapeutic approach."

"Yes. I now have a much better understanding of people with mental illness."

6.3 Six Month Follow-up: Quantitative Results

As noted above, a total of 72 participants completed the six month follow-up survey. However, difficulties matching follow-up surveys to corresponding pre and post surveys resulted in only 30 of the six month follow-up surveys being matched across all four time points (for the purpose of conducting paired analyses of OMS-HC score changes over time).[4] A paired analysis of score changes over time was conducted for those participants who completed surveys at all four time points (n=30). These results are highlighted in **Figure 9**. As highlighted in the figure, a positive score improvement was realized from pre to post program, and the improvement was sustained to the time of both follow-up surveys.

Figure 9. OMS-HC Score for Participants at Four Time Points: Pre-program, Post-program, 3 Month Follow-up and 6 Month Follow-up (n=30)



[4] To ensure anonymity, survey respondents are asked to provide a 'unique ID' at the beginning of their survey to allow for the matching of surveys and responses over time. The unique ID is to be a combination of the respondent's mother's initials and their own year of birth. Many respondents did not follow this formula consistently across all four surveys, inhibiting the ability to match individual surveys with confidence.

Results of a paired t-test showed that the score improvement from baseline to the time of the six month follow-up did not meet the criteria for statistical significance, although it showed a trend toward significance [t(29)=1.96, *p*=.060].[5]

In order to determine whether the observed decreases in OMS-HC total scores and subscale scores where progressive over time, generalized estimating equation models were used, based on an unstructured correlation matrix. The slope of the mean scale or subscale scores per month over time was estimated with the immediate post-intervention score (i.e., the post-test) serving as a baseline score.

The slope for OMS-HC total scores was not statistically significant (z=-1.8, p=0.072), but this result must be interpreted with caution since social distance scores did not show a decrease from baseline at three or six months. The slope for the attitudes sub-scale (-0.22 points per month) was highly significant (z=-2.93, p=0.003) and that for the disclosure subscale showed a trend towards statistical significance (z=-1.89, p = 0.058).

6.4 Six Month Follow-up: Participant Feedback/Program Satisfaction

The six month follow-up survey asked program participants if they were using the skills they acquired in the CBIS program. As highlighted in **Figure 10** (next page), over three quarters of respondents indicated that they were using the skills they learned in the program (76.1%). Of those who indicated they were not using the skills they learned in the program, many indicated that the CBIS skills were something they already knew and used, or that they had not had sufficient time to practice and implement the skills learned. A sample of participant comments to this question is provided below.

> *"I use the skills in supporting the patient to navigate their self-management through education, some assessment, cognition and lifestyle. My area deals with diverse ambulatory patients and these skills are usually used informally when dealing with their treatment of care in a holistic manner."*
>
> *"The activation module has been very helpful."*
>
> *"The handouts are useful in some situations."*
>
> *"The skills were not new to me and I use them in my practice anyway."*
>
> *"There was minimal attention paid to using the skills, and the program was way too short."*
>
> *"I use CBT a lot."*
>
> *"With our clients we are often using the Activation module for handouts relating to depression, goals and especially the 'chunk a day'. The other most often used is the Relaxation Module handouts. These are well received."*

[5] Consistent with the pre to post program findings reported in Section 4.2 (above), results of a paired t-test also showed that the score improvement from baseline to post-test was statistically significant [t(28)=2.63, *p*=.014].

"Without reinforcement my memory of the principles has faded away."

"I use the worksheets with achievable goals for clients."

"I am now better able to gauge a where a person is at and knowing where to go from that point."

"For the most part I am using the handouts in the manual to give to clients, to discuss together, and for them to take home for further use."

"I am a trained professional and the skills just enhanced my overall abilities. I used it as a refresher."

"I am more aware of listening than I was before the course."

"I am not intentionally using the skills though I think some of them have been integrated into my approach. A refresher would be helpful."

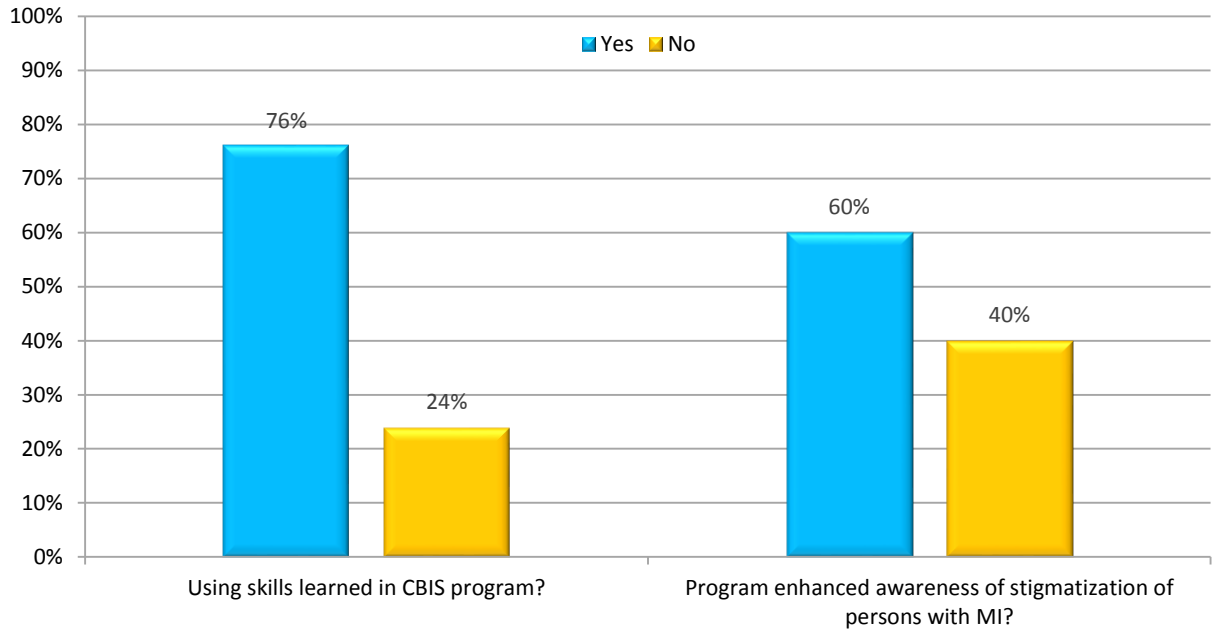
"I do make use of some of the handouts in the binder provided as they are very clear and concise. Clients have found them helpful."

"I now feel more comfortable addressing mental health issues with clients and more confident referring them to appropriate services."

"I have not made time or space in my new and exceedingly challenging job to take a step back and intentionally incorporate what I learned."

"There needs to be some follow-up to the training. There was minimal attention paid to using the skills, and the program was way too short."

Figure 10. Respondent Feedback at Six Months Post CBIS Training (n=72)



Respondents were also asked if the CBIS training increased their awareness of the stigmatization of persons with mental illness. As further highlighted in **Figure 10** (above), six in ten participants indicated that it did (60.0%). Of the four in ten (40.0%) who did not feel that the program increased their awareness of stigmatization of mental illness, most (60.7%) indicated that they *already* had a strong awareness.

7 SUMMARY AND CONCLUSIONS

The evaluation of the Cognitive Behavioural Interpersonal Skills (CBIS) training showed positive, favourable results in terms of its effectiveness for reducing mental illness related stigma among healthcare providers. The following were among the evaluation's major findings:

- Participants had statistically significant lower scores on the OMS-HC stigma scale at post-test as compared to baseline, with sustained positive improvements at follow-up. Results from the follow-up surveys suggest that the initial reduction in stigma was not only sustained at three months post-training, it was further improved, moving from what might be considered a 'weak' program effect to a 'moderate' one. Although further research is required to investigate this hypothesis in greater depth, it could be that as healthcare providers put the CBIS skills into practice, the quality of their interactions and their ability to help improves, leading to improved attitudes towards mental illness.(5)
- There was a notable increase in the percentage of workshop participants who gave non-stigmatizing responses to at least 80% of the questions from baseline to the time of the follow-up

surveys. Prior to the CBIS workshop, approximately four in ten participants answered all scale items in a non-stigmatizing way. By post-workshop, the proportion had increased to approximately 50%. By follow-up, over six in ten participants responded to all items on the OMS-HC in a non-stigmatizing way.

- There were improvements in score on two main dimensions of stigma captured by the OMS-HC, attitudes towards people with a mental illness, and propensity towards disclosure of a mental illness/help seeking. Paired t-tests showed that OMS-HC scores improved significantly from the time of the pre-test to the time of the three-month follow-up survey on both these dimensions, with continued improvements to the time of the six-month follow up. While the mean score improvement from pre-workshop to the time of the first follow-up for the dimension of social distance was showing a trend towards significance, the improvement was not sustained to the six-month follow-up. There were also statistically significant improvements on a number of individual scale items, with no scale items showing statistically significant increases in stigma.
- Participant satisfaction and feedback measures suggest that practicing healthcare providers find the program valuable. Over two thirds indicated that the CBIS workshop increased their confidence working with persons with a mental illness and over eight in ten reported that the skills they learned in the program were useful for their job. Additionally, at the time of the six month follow-up, fully three-quarters indicated that they were using the skills they learned in the workshop, and six in ten said that the program had enhanced their awareness of stigmatization of persons with mental illness. Qualitative feedback provided by program participants was also positive overall.

Given that participants had relatively low levels of stigma to begin with [i.e., as compared to baseline scores for other programs evaluated by OM [see (6) and (7), for example], these are encouraging findings.

The results from this evaluation are also consistent with findings from previous evaluations of the larger Practice Support Program Adult Mental Health Module, of which the CBIS training is a part (7-9), which lends further support to the theory that increasing healthcare providers' skills, confidence and comfort in treating persons with mental illness, and increasing their understanding of mental illness as something in inherently treatable or manageable, can reduce stigma.(5, 9)

Finally, while evaluation results are overall positive, it is worth noting that suggestions for improvement were provided by a number of participants. The main recommendations for improvements to the current program included: adding a refresher or follow-up session to supplement the initial workshop, making the initial workshop longer, and having more input and involvement from people with lived experience of mental illness. The effectiveness of refresher/follow-up sessions has been supported in other evaluations conducted by OM,(10) as has the inclusion people with lived experience of mental illness - most commonly in the form of a recovery story/personal testimony delivered by a person with lived experience of mental illness. (6, 10-11) It would thus be of value for future offerings of the CBIS program to consider incorporating these suggested elements, and the resulting impacts on healthcare provider stigma measured.

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Appendix A

OMS-HC Scale for Health Care Providers

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness.	☐	☐	☐	☐	☐
2. If a person with a mental illness complains of physical symptoms (e.g., nausea, back pain or headache), I would likely attribute this to their mental illness.	☐	☐	☐	☐	☐
3. If a colleague with whom I work told me they had a mental illness, I would be just as willing to work with him/her.	☐	☐	☐	☐	☐
4. If I were under treatment for a mental illness I would not disclose this to any of my colleagues.	☐	☐	☐	☐	☐
5. I would be more inclined to seek help for a mental illness if my treating healthcare provider was not associated with my workplace.	☐	☐	☐	☐	☐
6. I would see myself as weak if I had a mental illness and could not fix it myself.	☐	☐	☐	☐	☐
7. I would be reluctant to seek help if I had a mental illness.	☐	☐	☐	☐	☐
8. Employers should hire a person with a managed mental illness if he/she is the best person for the job.	☐	☐	☐	☐	☐
9. I would still go to a physician if I knew that the physician had been treated for a mental illness.	☐	☐	☐	☐	☐
10. If I had a mental illness, I would tell my friends.	☐	☐	☐	☐	☐
11. It is the responsibility of health care providers to inspire hope in people with mental illness.	☐	☐	☐	☐	☐
12. Despite my professional beliefs, I have negative reactions towards people who have mental illness.	☐	☐	☐	☐	☐
13. There is little I can do to help people with mental illness.	☐	☐	☐	☐	☐
14. More than half of people with mental illness don't try hard enough to get better.	☐	☐	☐	☐	☐
15. People with mental illness seldom pose a risk to the public.	☐	☐	☐	☐	☐
16. The best treatment for mental illness is medication.	☐	☐	☐	☐	☐
17. I would not want a person with a mental illness, even if it were appropriately managed, to work with children.	☐	☐	☐	☐	☐
18. Healthcare providers do not need to be advocates for people with mental illness.	☐	☐	☐	☐	☐
19. I would not mind if a person with a mental illness lived next door to me.	☐	☐	☐	☐	☐
20. I struggle to feel compassion for a person with mental illness.	☐	☐	☐	☐	☐

Appendix B

Table B1. OMS-HC Frequency Distributions for Pre-test, Post-test, and Follow-up *(all respondents; valid percent)*

Item	Pre-program (n=178)			Post-program (n=172)			Follow-up 1(n=85)		
	Disagree/ Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree	Disagree/ Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree	Disagree/ Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree
1. I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness.	111 (62.4%)	34 (19.7%)	32 (18.0%)	118 (68.6%)	28 (16.3%)	26 (15.1%)	60 (69.7%)	15 (17.4%)	11 (12.8%)
2. If a person with a mental illness complains of physical symptoms (e.g. nausea, back pain or headache), I would likely attribute this to their mental illness.	127 (71.3%)	46 (25.8%)	5 (2.8%)	115 (66.8%)	48 (27.9%)	9 (5.3%)	69 (80.2%)	15 (17.4%)	2 (2.3%)
3. If a colleague with whom I work told me they had a managed mental illness, I would be as willing to work with him/her. (reverse)	3 (1.7%)	10 (5.6%)	165 (92.7%)	3 (1.8%)	8 (4.7%)	161 (93.6%)	2 (2.3%)	4 (4.7%)	80 (93.1%)
4. If I were under treatment for a mental illness I would not disclose this to any of my colleagues.	60 (33.7%)	63 (35.4%)	55 (30.9%)	61 (35.5%)	63 (36.6%)	48 (27.9%)	32 (37.2%)	20 (23.3%)	34 (39.5%)
5. I would be more inclined to seek help for a mental illness if my treating healthcare provider was not associated with my workplace.	22 (12.3%)	30 (16.9%)	126 (70.8%)	19 (11.1%)	28 (16.3%)	125 (72.7%)	15 (17.4%)	8 (9.3%)	63 (73.2%)
6. I would see myself as weak if I had a mental illness and could not fix it myself.	126 (70.8%)	32 (18.0%)	20 (11.3%)	129 (75.9%)	28 (16.5%)	13 (7.6%)	68 (79.1%)	12 (14.0%)	6 (7.0%)
7. I would be reluctant to seek help if I had a mental illness.	139 (78.1%)	18 (10.1%)	21 (11.8%)	134 (77.9%)	26 (15.1%)	12 (7.0%)	72 (83.8%)	12 (14.0%)	2 (2.4%)
8. Employers should hire a person with a managed mental illness if he/she is the best person for the job. (reverse)	7 (3.9%)	8 (4.5%)	163 (91.6%)	4 (2.4%)	9 (5.3%)	157 (92.4%)	2 (2.4%)	4 (4.7%)	80 (93.0%)
9. I would still go to a physician if I knew that the physician had been treated for a mental illness. (reverse)	9 (5.1%)	32 (18.0%)	137 (77.0%)	9 (5.3%)	21 (12.2%)	142 (82.6%)	3 (3.5%)	10 (11.6%)	73 (84.9%)

Item	Pre-program (n=178)			Post-program (n=172)			Follow-up 1 (n=85)		
	Disagree/Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree	Disagree/ Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree	Disagree/ Strongly Disagree	Neither Agree nor Disagree	Agree / Strongly Agree
10. If I had a mental illness, I would tell my friends. (reverse)	23 (13.0%)	50 (28.1%)	105 (59.0%)	21 (12.2%)	58 (33.7%)	93 (54.1%)	10 (11.7%)	17 (19.8%)	59 (68.6%)
11. It is the responsibility of health care providers to inspire hope in people with mental illness. (reverse)	12 (6.8%)	32 (18.0%)	135 (75.3%)	6 (3.6%)	25 (14.6%)	140 (81.8%)	2 (2.3%)	13 (15.1%)	71 (82.6%)
12. Despite my professional beliefs, I have negative reactions towards people who have mental illness	138 (77.6%)	30 (16.9%)	10 (5.6%)	140 (81.4%)	25 (14.5%)	7 (4.1%)	73 (84.9%)	8 (9.3%)	5 (5.9%)
13. There is little I can do to help people with mental illness	162 (91.0%)	10 (5.6%)	6 (3.4%)	162 (94.7%)	7 (4.1%)	2 (1.2%)	78 (92.8%)	1 (1.2%)	5 (6.0%)
14. More than half of people with mental illness don't try hard enough to get better.	140 (78.6%)	30 (16.9%)	8 (4.5%)	141 (82.0%)	26 (15.1%)	5 (2.9%)	79 (91.8%)	3 (3.5%)	4 (4.7%)
15. People with mental illness seldom pose a risk to the public. (reverse)	31 (17.4%)	36 (20.2%)	111 (62.3%)	26 (15.2%)	31 (18.0%)	115 (66.9%)	8 (9.5%)	14 (16.5%)	63 (74.2%)
16. The best treatment for mental illness is medication.	81 (45.5%)	86 (48.3%)	11 (6.2%)	98 (57.0%)	67 (39.0%)	7 (4.1%)	41 (47.7%)	36 (41.9%)	9 (10.5%)
17. I would not want a person with a mental illness, even if it were appropriately managed, to work with children.	134 (77.5%)	33 (19.1%)	6 (3.5%)	135 (78.5%)	31 (18.0%)	6 (3.5%)	66 (76.8%)	14 (16.3%)	6 (7.0%)
18. Healthcare providers do not need to be advocates for people with mental illness.	173 (97.2%)	3 (1.7%)	2 (1.1%)	163 (94.7%)	7 (4.1%)	2 (1.2%)	80 (95.3%)	2 (2.4%)	2 (2.4%)
19. I would not mind if a person with a mental illness lived next door to me. (reverse)	4 (2.2%)	31 (17.4%)	143 (80.3%)	3 (1.8%)	24 (14.0%)	144 (84.2%)	4 (4.7%)	6 (7.1%)	75 (88.3%)
20. I struggle to feel compassion for a person with a mental illness.	168 (94.4%)	7 (3.9%)	3 (1.7%)	161 (93.6%)	6 (3.5%)	5 (2.9%)	83 (97.6%)	1 (1.2%)	1 (1.2%)

Table B2. OMS-HC: Mean Scores from Pre-test to Post-test with Content Areas Indicated *(paired surveys)*

Qn	Dimension	Item	Mean score			Pair Samples T-Test (n=75)	
			Pre-test	Post-test	Follow-up	T-value	P-value
1	Attitude	I am more comfortable helping a person who has a physical illness than I am helping a person who has a mental illness.	2.35	2.25	2.17	1.54	0.13
2		If a person with a mental illness complains of physical symptoms (e.g. nausea, back pain or headache), I would likely attribute this to their mental illness.	2.23	2.19	2.04	2.06	0.04
3	Social Distance	If a colleague with whom I work told me they had a managed mental illness, I would be as willing to work with him/her.	1.57	1.72	1.67	-0.90	0.37
4	Disclosure	If I were under treatment for a mental illness I would not disclose this to any of my colleagues.	2.96	2.91	3.00	-0.32	0.75
5		I would be more inclined to seek help for a mental illness if my treating healthcare provider was not associated with my workplace.	3.76	3.75	3.73	0.25	0.81
6	Disclosure	I would see myself as weak if I had a mental illness and could not fix it myself.	2.24	2.14	1.96	2.12	0.04
7	Disclosure	I would be reluctant to seek help if I had a mental illness.	2.19	2.17	1.83	3.09	<.001
8	Social Distance	Employers should hire a person with a managed mental illness if he/she is the best person for the job.	1.73	1.64	1.55	1.75	0.09
9	Social Distance	I would still go to a physician if I knew that the physician had been treated for a mental illness.	2.16	2.08	1.92	2.49	0.02
10	Disclosure	If I had a mental illness, I would tell my friends.	2.44	2.49	2.39	0.56	0.58
11		It is the responsibility of health care providers to inspire hope in people with mental illness.	2.04	1.92	1.88	1.27	0.21
12	Attitude	Despite my professional beliefs, I have negative reactions towards people who have mental illness.	2.05	1.89	1.83	2.36	0.02
13	Attitude	There is little I can do to help people with mental illness.	1.74	1.69	1.73	0.12	0.91
14	Attitude	More than half of people with mental illness don't try hard enough to get better.	1.91	1.91	1.63	2.92	<.001
15		People with mental illness seldom pose a risk to the public.	2.41	2.24	2.08	2.89	<.001

Qn	Dimension	Item	Mean Score			Pair Samples T-Test (n=177)	
			Pre test	Post-test	Follow-up	T-value	P-value
16		The best treatment for mental illness is medication.	2.60	2.36	2.60	0.00	1.00
17	Social Distance	I would not want a person with a mental illness, even if it were appropriately managed, to work with children.	2.05	2.08	2.07	-0.16	0.88
18	**Attitude**	Healthcare providers do not need to be advocates for people with mental illness.	1.61	1.60	1.49	1.76	0.08
19	Social Distance	I would not mind if a person with a mental illness lived next door to me.	1.93	1.91	1.76	2.19	0.03
20	**Attitude**	I struggle to feel compassion for a person with a mental illness.	1.61	1.57	1.37	2.99	<.001