Mental Health Commission of Canada
Commission de la santé mentale du Canada

North Bay Mental Health Orientation with PhotoVOICE: Evaluation Report

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www.mentalhealthcommission.ca

1 OPENING MINDS: CHANGING HOW WE SEE MENTAL ILLNESS

As part of its 10-year mandate, The Mental Health Commission of Canada (MHCC) 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, initially reaching out to healthcare providers, youth, the workforce, and media. OM's philosophy is not to reinvent the wheel, but rather to build on the strengths of existing programs from across the county. As a result, OM has actively sought out such programs, few of which have been scientifically evaluated for their effectiveness. Now partnering with over 80 organizations, OM is conducting evaluations of the programs to determine their success at reducing stigma. OM's goal is to replicate effective programs nationally. A key component of programs being evaluated 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 has been generally supported throughout international studies as a promising practice to reduce stigma. Over time, OM will add other target groups.

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

2 BACKGROUND

In the spring of 2009, Opening Minds issued a Request for Interest (RFI), seeking existing programs aimed at reducing stigma among its initial target groups of healthcare providers and youth. The North Bay Regional Health Centre responded to this RFI and entered into a partnership with OM.

The North Bay Regional Health Centre (NBRHC) is an amalgamation of two hospitals, one of which was a mental health hospital. Stigma reduction was identified as a priority for the new hospital. NBRHC was interested in learning whether the one-hour mental health component embedded within the hospital's orientation program for new staff was effective at reducing stigma against mental illness.

A three-day hospital orientation is mandatory for all new hires. One component of this larger orientation is a one-hour session on mental illness. The mental health session had three main elements: the screening of a documentary showing participants involved in NBRHC's PhotoVOICE program,[1] a music video featuring a song written and performed by a former patient,[2] and a personal story of mental illness and recovery, followed by questions and answers with the audience. For most sessions, the personal story was told by the session facilitator, a peer support specialist. If the peer support specialist was not available to speak in person, a digital recording of a personal testimony was shown to participants.

OM conducted an evaluation of the NBRHC Mental Health Orientation with PhotoVOICE Session, which was delivered to approximately 185 new staff at NBRHC throughout the months of August to December, 2012. Further details on the methodology used for this evaluation are provided below.

3 EVALUATION METHODS

In order to assess attitude change towards mental illness, orientation participants were given a questionnaire package at three different time-points. The first survey was completed before the initial intervention (pre-test survey). The second questionnaire was given to participants immediately following the completion of the one-hour mental health component of the orientation session (post-test survey). The final survey was administered electronically, three months following participants' attendance at their orientation (follow-up survey).

The pre-test survey contained the 20-item Opening Minds Scale for Health Care Providers (OMS-HC), questions pertaining to experiences with mental illness, and demographic questions (age, gender, training, and professional status). For the post-test and follow up surveys, participants completed the 20-item OMS-HC again so that changes over time could be assessed. They were also asked to indicate which aspect of the mental health component of the orientation session affected them most, and why.

The OMS-HC is a 20-item questionnaire that measures healthcare providers' attitudes towards people with a mental illness. 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*. A copy of the OMS-HC scale is included as **Appendix A**.

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 study, Cronbach's

[1] PhotoVOICE is a program available to mental health in-patients at NBRHC. Program participants go into the community to take pictures that represent for them a certain principle of recovery. Through the program, participants are given the opportunity to share and discuss their work, with a final public showing (at a local art gallery) of their artwork at the end of the program. The documentary shown during the mental health orientation session featured the PhotoVOICE project focusing on the recovery principle of "hope." The documentary can be viewed at http://www.youtube.com/watch?v=Vp6xQB2ltmU&feature=channel&list=UL

[2] The music video, which is approximately 4 minutes in length, is an acoustically-performed song with a message of hope and recovery. It is written and performed by a former patient. It can be viewed at http://www.youtube.com/watch?v=id9gAChFVbw&feature=youtu.be

alphas for the scale were .79 at pre-workshop, .76 at post-workshop, and .73 at follow-up, indicating 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 towards 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.

4 RESULTS

In all, 182 of the 185 participants completed one or more of the evaluation surveys. Demographic characteristics of survey respondents are highlighted in Section 4.1 below.

Analysis of OMS-HC score change from pre- to post-orientation was performed based on a total of 177 paired pre and post surveys (178 pre-test surveys and 181 post-test surveys were completed). These results are highlighted in Sections 4.2 to 4.4 below. Section 4.5 details participants' feedback about the orientation session, while Section 4.6 highlights OMS-HC differences by participant type.

The response rate was lower for the three-month follow up survey, with a total of 62 completed surveys.[3] Given the lower response rate for the follow up survey, results for this component of the study should be interpreted with caution. Follow up survey results are described in section 4.7. These results are not based on a paired analysis.

Individual item scores for the OMS-HC at all three time points are provided in the various data tables in **Appendix B.**

4.1 Participant Demographics

Table 1 highlights the breakdown of participants by age, gender, and occupation. As shown in the table, over three quarters of the orientation participants were female (76.4%). As well, most were between 18-29 years old (78.6%) and most were nursing students (73.6%).

[3] A total of 163 respondents provided contact information to receive the follow-up survey. Ten of the follow-up survey invitations were returned as undeliverable, resulting in a follow-up survey sample of 153 possible respondents. Of the 153 follow-up survey invitations sent (invitations included three reminders to complete the survey), 62 respondents completed the follow-up survey, for a response rate of 40.5%.

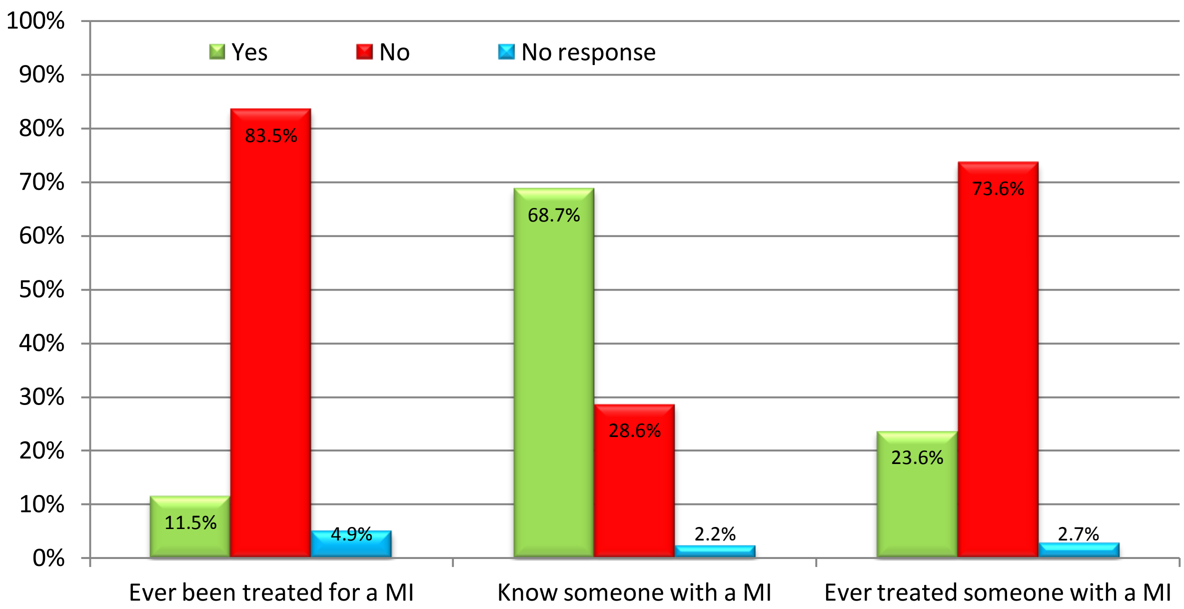
Table 1. Demographic Characteristics of Participants

	n (=182)	%
Gender		
Female	139	76.4%
Male	37	20.3%
No response	6	3.3%
Age group (mean age=26)		
18-29	143	78.6%
30-39	19	10.4%
40-49	9	4.9%
50-59	4	2.2%
No response	7	3.8%
Occupation		
Student/nursing student	134	73.6%
Nurse	20	11.0%
Administration	7	3.8%
Lab technician	7	3.8%
Ambulance/emergency	5	2.7%
Social work/OT	3	1.6%
Security	2	1.1%
Other	1	0.5%
No response	3	1.6%
Years of work experience (mean=2.68)		
<1 year	57	43.3%
1-5 years	58	30.8%
6-10 years	8	4.3%
>10 years	10	5.3%
No response	49	26.9%

The demographic section of the pre-test survey also asked respondents about their personal experience with mental illness. These results are highlighted in **Figure 1**. As shown, most participants had not had previous experience treating persons with mental illness (70.9%). This is likely due to the fact that the majority of orientation participants were still completing their healthcare education.

Most participants said they personally knew a friend or family member with a mental illness (68.7%), while just over one in ten respondents indicated that they had been treated for a mental illness at some point in their lives (11.5%).

Figure 1. Participant Experience with a Mental Illness (MI) (n=182)

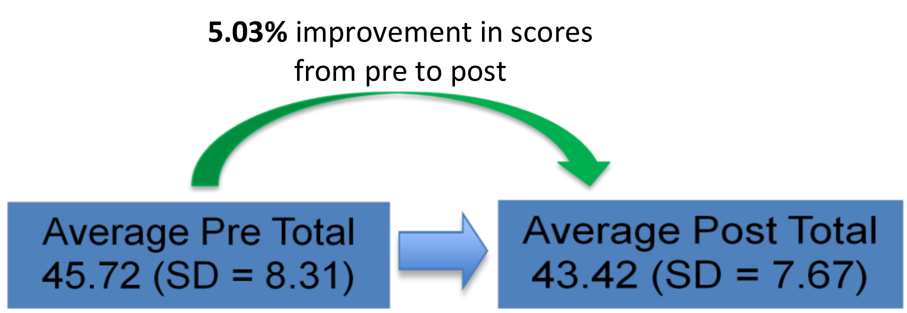


4.2 OMS-HC Total Score Change from Pre to Post Mental Health with PhotoVOICE Orientation Session

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 24 to 69, with an average of 45.72 (SD = 8.31). For the post-test, total scores ranged from 24 to 65, with an average of 43.42 (SD = 7.67). As highlighted in **Figure 2,** scores decreased approximately 5% from pre to post. This indicates that participants' attitudes became less stigmatizing after the Mental Health with PhotoVOICE Orientation Session. Results of a paired t-test showed this change to be statistically significant ($t(176)=5.73$; $p<.001$).

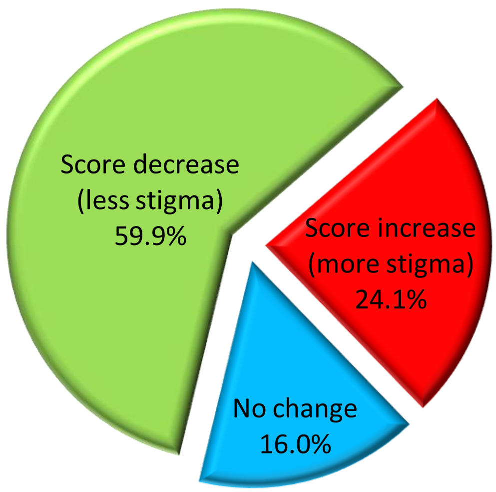
Figure 2. Opening Minds Scale for Healthcare Providers – Average Total Scores for Pre- and Post-test (n=177)



The breakdown of total score change from pre to post Mental Health with PhotoVOICE Orientation Session is highlighted in **Figure 3**. This figure 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.

While 59.9% of participants' scores improved from pre to post, 16.0% of participants had no change in score on the OMS-HC from pre- to post-orientation session. Approximately one quarter of participants had an increase in score from pre- to post-orientation session (24.1%).

Figure 3. Direction of Change from Pre to Post: OMS-HC scale (n=177)

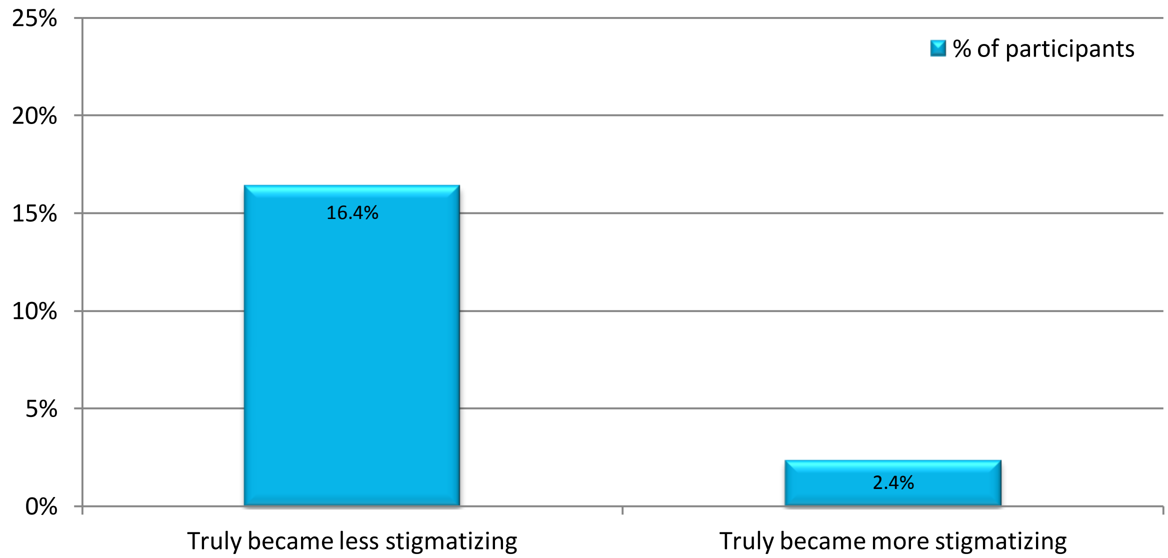


The minimum delectable change (MDC) statistic is another method for examining changes in scores from pre- to post-workshop. The calculated MDC for the OMS-HC scale is 6.51.[4] This suggests that a score increase or decrease of 6.5 points or more on the OMS-HC scale reflects a true change in attitude – one that cannot be attributed to measurement error.

When the MDC is applied to participants' score changes from pre- to post-orientation, it can be determined (with 90% confidence) that for 16.4% of the sample, attitudes towards mental illness truly became less stigmatizing from pre- to post-orientation. By contrast, only 2.4% became more stigmatizing from pre- to post-orientation. This is highlighted in **Figure 4** below.

[4] The MDC for the OMS-HC scale was calculated based on a standard error of measurement (SEM) of 2.80 (from test-retest results as described in Kassam et al. 2012 (1)) and a z score of 1.65 (90% confidence level). The formula for calculating this statistic is as follows: MDC=SEM*√2*z score associated with confidence level of interest.

Figure 3. Pre to Post Score Change using the MDC Statistic (n=177)



4.3 Dimensions of Stigma

The OMS-HC scale contains within it three main content areas, each measuring a specific dimension of stigma.

The first dimension is healthcare providers' inclinations towards 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 and 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 2**.

As noted in the table, all three content areas showed a statistically significant improvement from pre-test to post-test on the OMS-HC. Scores improved by approximately 5% from pre to post survey for both the 'attitude towards people with mental illness' and the 'social distance' content areas. For the dimension of disclosure/help-seeking, scores improved by approximately 6% from pre- to post-test.

Table 2. Stigma Content Areas: Changes in Respondent Score from Pre to Post (n=177)

Content Area	Pre-test	Post-test	% change	Paired t-test
Attitude towards people with mental illness	12.38	11.75	5.1%	t(176)=3.52*
Disclosure/help-seeking	10.71	10.06	6.1%	t(176)=3.92**
Social distance	9.78	9.27	5.2%	t(176)=3.64**

** p=.001; ** p<.001*

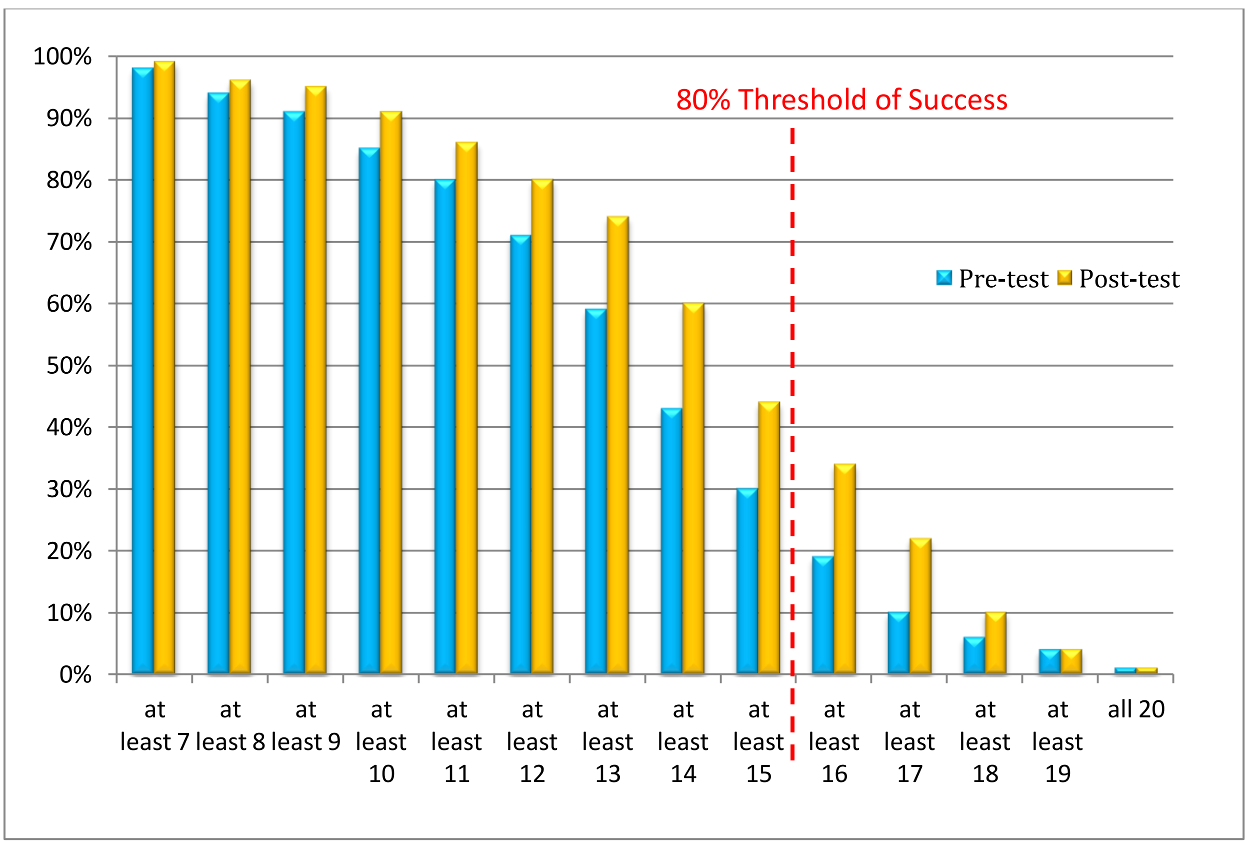
4.4 Threshold of Success

Another way to examine the impact of the Mental Health with PhotoVOICE Orientation Session 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 5 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.

Figure 5. Cumulative Percent of Non-stigmatizing Responses on OMS-HC for Pre-test and Post-test



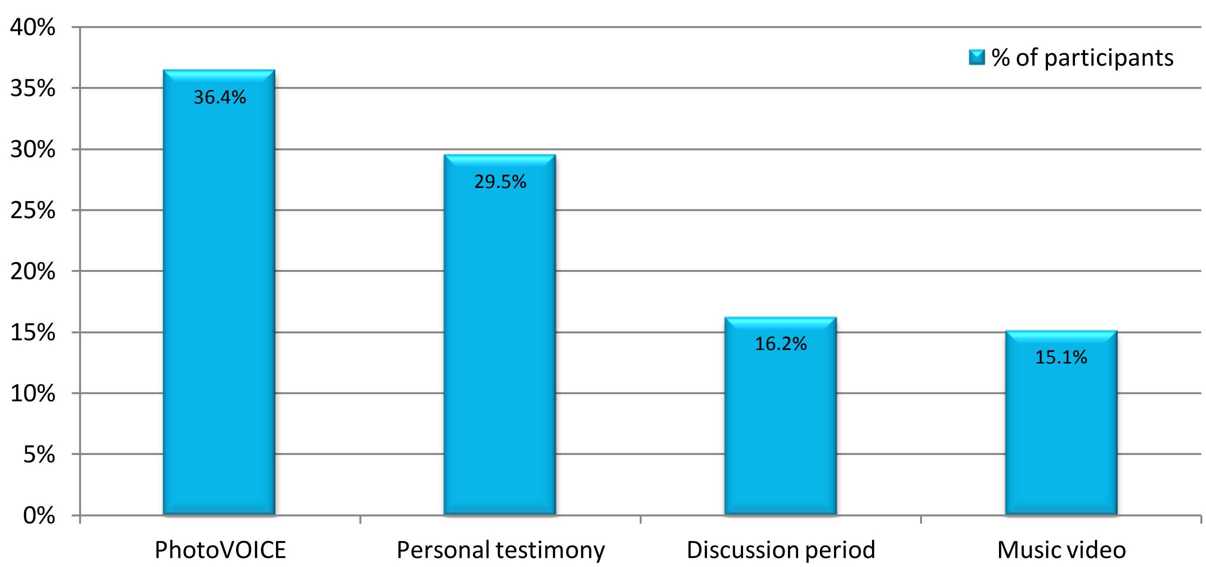
As highlighted in the figure, prior to the Mental Health with PhotoVOICE Orientation Session, only 18.1% of participants managed to cross the threshold of success on the OMS-HC. However, by the end of the session, the percentage who had crossed the threshold level of success had increased to nearly a third of participants, at 32.0%.

4.5 Participant Feedback

In addition to measuring the impact of the anti-stigma intervention using quantitative techniques (i.e., changes in attitude as measured by the OMS-HC), respondents were also asked to rate what aspect(s) of the program they thought most affected their perceptions of mental illness. They were then asked to elaborate on their response.

As highlighted in **Figure 6**, 36.4% of responses indicated the PhotoVOICE presentation as the aspect of the session that most affected their perceptions of mental illness. This was closely followed by the personal testimony component of the orientation session, with 29.5% of responses saying this component was the one that most affected their perceptions of mental illness.

Figure 6. Aspect of the Orientation Session Respondents felt most Affected their Perceptions of Mental Illness



Multiple response question: total responses =272.

Below are some comments provided by participants describing how and why they were affected by particular aspects of the workshop.

PhotoVOICE:

- *Very innovative vehicle to gain understanding into a person's world by letting them choose what to photograph and equally importantly, explain why that photograph was important or interesting to them.*
- *Seeing art in any shape is relaxing. Seeing that people with mental illnesses see the world the same and can appreciate the beauty is reassuring.*
- *Seeing people expressing happiness and love gives me hope that everyone has strength and courage to keep moving forward despite their challenges. We all struggle.*
- *I was really moved and impressed with the methods they were using (taking pictures) to bring hope to the patients.*

Personal Testimony:

- *It was a touching personal story. I've had psych placements and personal stories allow you to better understand patient experiences.*
- *I think it affected me the way it did because we got to know her story and know how she felt.*
- *I love to hear personal stories, they touch me emotionally. I have a lot of respect for people who can conquer or cope with mental illness.*
- *I find it more impactful when people can see someone in recovery and holding a respectable profession who does not feel [the] need to hide their disorder.*

Discussion period:

- *I enjoy hearing more information about mental illness. Education is key.*
- *Made me more aware.*

Music video:

- *Music puts feeling into a story, gives hope!*
- *I enjoyed the music video. It allowed me to see a person with a mental illness overcoming life's obstacles and not only live with a mental illness, but accept it.*
- *I found that it gave me a new perspective of the talents and abilities that are/can be within each person.*

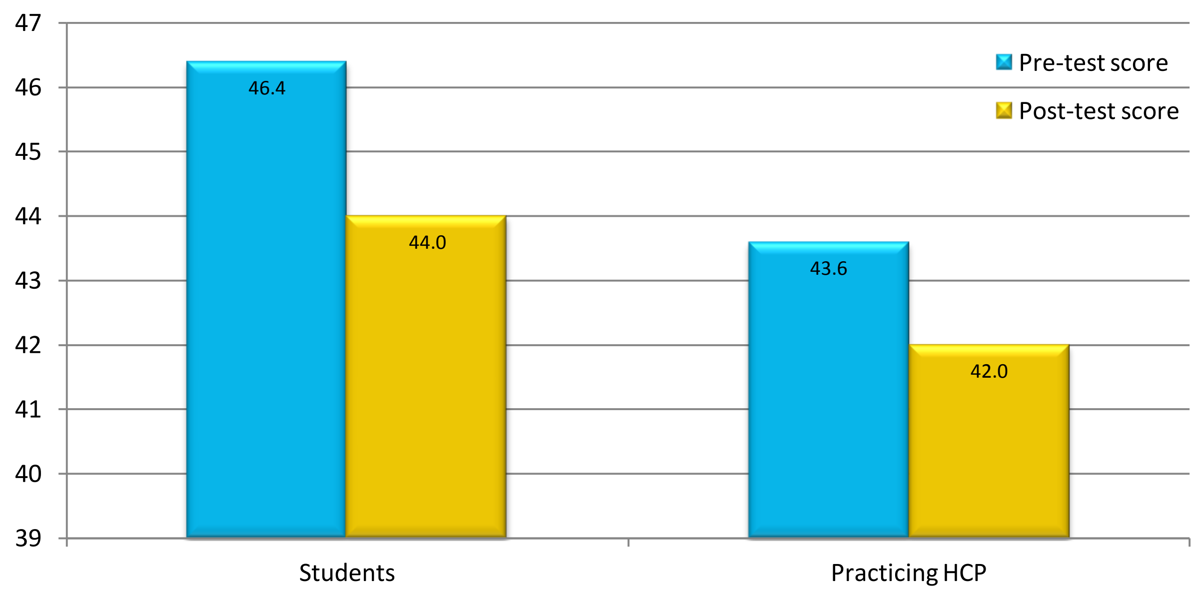
4.6 Differences by Participant Type

As described in Section 4.1 above, many of the orientation participants were students (73.6%), while others were healthcare professionals already in practice (24.8%). OMS-HC scores at the three time-points were examined according to 'student' versus 'practicing professional' status. As highlighted in **Figure 7**, students had higher average total baseline scores on the OMS-HC (46.4) than did practicing healthcare professionals (43.6).

As further highlighted in the figure, students' OMS-HC scores changed an average of 5.2% (2.4 points on the OMS-HC scale) from pre-test to post-orientation, while the average score improvement among practicing professionals was 3.7% (1.6 points on the OMS-HC scale) from pre- to post-orientation.

Although the change in score observed among the practicing healthcare professional group was smaller in magnitude than that observed for the student group, results of paired t-tests indicate the change in score from pre- to post-orientation for both groups is statistically significant.[5]

Figure 7. OMS-HC Pre- and Post-test Scores by Participant Type: Students and Practicing Healthcare Professionals



n=132 for the student group (paired data); n=45 for the practicing healthcare professional group (paired data)

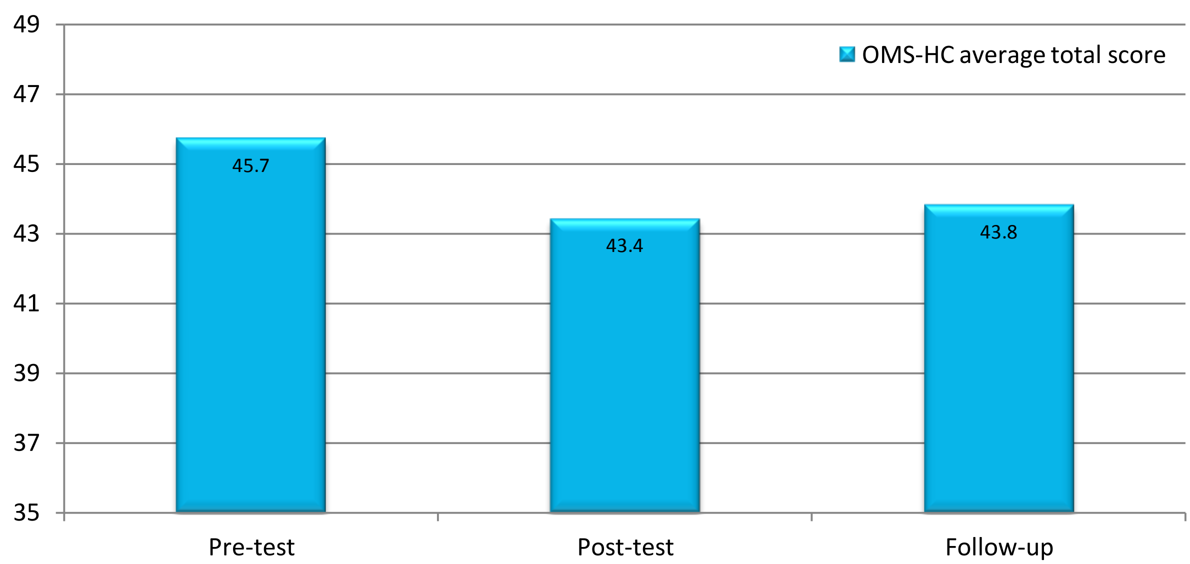
[5] For students t(131)=5.422 (p<.001). For practicing healthcare professionals t(44)=2.06 (p=.045).

4.7 Follow-up Survey Results

As described above, participants of the Mental Health with PhotoVOICE Orientation Session were asked to complete a follow-up survey three months after the completion of their orientation session. The follow-up survey was administered in order to gain a sense of sustained change over time. The follow-up survey included the OMS-SC scale, as well as three open-ended questions.

Figure 8 highlights the results of the OMS-HC scores at all three time points.[6] For the three month follow-up, total scores ranged from 27 to 64, with an average of 43.79 (SD=7.45). This score is slightly higher than the score observed immediately following the Mental Health with PhotoVOICE Orientation Session (i.e., post-test survey). Follow-up scores were, however, still 4.2% improved over those observed at baseline.

Figure 8. OMS-HC Average Total Scores across Time: Pre, Post, and Follow-up



Pre test n=178; post test n=181; follow up n=62.

[6] Given the attrition from the time of the pre and post surveys to the time of the follow up survey, paired analysis was not undertaken with the follow-up survey results.

Table 3 shows the confidence intervals for the average total scores at the three time-points.

Table 3. OMS-HC Average Total Scores and Confidence Intervals at Pre, Post, and Follow-up

Survey Time Period	n	Score	Confidence Interval (95%)
Pre-test	178	45.7 (SD=8.3)	44.5 - 46.9
Post-test	181	43.4 (SD=7.6)	42.4 - 44.5
Follow-up	62	43.8 (SD=7.4)	41.9 - 45.6

Examining differences in follow-up scores by participant type (i.e., students versus practicing healthcare professionals), results suggest that positive score change may be more likely to be sustained among the practicing healthcare provider group than among the student group. For example, the average total follow-up score among the student group was 45.4 (n=41), a 2.4% sustained improvement from this group's average total baseline score.[7] By contrast, the follow-up score for the 'practicing healthcare professionals' group was 40.7 (n=21), a 6.7% improvement from this group's average total pre-test score.[8]

4.7.1 Participant Feedback at Follow-up

The open-ended questions on the follow up survey asked participants to describe how (if at all) their behaviours, feelings, or thoughts regarding people with mental illness had changed as a result of the orientation session, as well as reflections on any positive or negative aspects of the orientation session about which they still thought.

For the question asking participants to describe how their behaviours, thoughts, or feelings towards persons with a mental illness had changed as a result of the orientation session, just over half provided a response (53.3%; 33 respondents).

Of these, most indicated that the orientation session changed their behaviours and/or attitudes for the positive (60.6%, 20 respondents), saying that the session gave them a better understanding of and insight into mental illness, and made them feel more accepting of persons with a mental illness. A sample of respondent comments to this question is provided below:

- *It gave me more insight into the lives of those who have a mental illness.*
- *I feel I have more of an understanding of what people may be going through.*

[7] Using unpaired data, the baseline average total OMS-HC score for the student group was 46.5 (n=133).
[8] Using unpaired data, the baseline average total OMS-HC score for the practicing health care professional group was 43.6 (n=45).

- *I am more accepting and understanding of people with a mental illness.*
- *I became more aware of their struggle to say stable and the events that can lead to a breakdown and how easily it can happen to anyone.*
- *I feel that it helped show that, yes, people with a metal illness may have problem with the illness is not managed, but they can be a part of society. They are no different from anyone else; they just have an invisible illness.*
- *It changed how I feel because it showed a human side and how people with a mental illness do things just like us to strive to learn new things.*
- *I didn't really have much in terms of preconceived notions, although after the speaker I felt inspired.*
- *I would have had no idea that the person at the orientation had a mental illness if he did not tell us.*

One third of the respondents who answered this question felt that the orientation session did not lead to any change in their behaviours, feelings, or attitudes towards mental illness (33.0%, 11 respondents). Most of these individuals noted that they have always held positive attitudes and behaviors for those living with a mental illness and the orientation session only reinforced things they already knew. Two participants (6.1% of those who responded to this question) indicated that the orientation session left them feeling slightly less comfortable towards people with a mental illness.

In the follow-up survey, respondents were also asked to describe any part – positive or negative – of the Mental Health with PhotoVOICE Orientation Session they attended that they still thought about. Of those who provided responses (n=42), most indicated that they still had positive recollections about all of the sessions main components, including the session facilitator's personal story of mental illness and recovery, the PhotoVOICE documentary and the music video.

A sample of participant comments is provided below:

- *Both the music video and the PhotoVOICE documentary were very inspiring and brought good emotions about dealing with mental illness.*
- *I remember the person presenting the session was in recovery from mental illness. It gave a different perspective on the topic.*
- *I remember that the videos were really well done. It was also nice listening to the speaker.*
- *The person who facilitated the session had suffered from a mental illness that at one time had consumed them but they overcame it. I would trust this person to provide me with quality care and I got the impression that this person was a wonderfully put together person. Having this person do the session really set the tone and gave us valuable perspective. It made it hit home.*

- *The part I still think about is the music video by one of the patients and the activity program going out and taking photos.*

Few participants indicated recalling anything negative about the orientation session at the time of follow-up; one participant recalled the room being uncomfortably chilly, and two participants recalled that there were things said about mental illness in the orientation session with which they disagreed.

5 SUMMARY AND CONCLUSIONS

The evaluation of the North Bay Regional Health Centre Mental Health with PhotoVOICE Orientation Session was overall favourable.

- Results from the OMS-HC indicate that the program was effective at decreasing stigmatizing attitudes, as demonstrated by: 1) statistically significant lower scores on the OMS-HC at post-test as compared to baseline; 2) a notable increase in the percentage of respondents who gave non-stigmatizing responses to at least 80% of the questionnaire at post-test as compared to baseline.
- In breaking down the OMS-HC scale into three major dimensions of stigma – attitudes towards people with a mental illness, attitudes towards disclosure/help-seeking, and desire for social distance – paired analysis showed a statistically significant improvement in scores on all three content areas from pre- to post-orientation session.
- Participant perceptions of program impact were also positive. Participants themselves felt that the orientation session was a positive and impactful experience and most participants expressly indicated that the session positively affected their perception of mental illness.
- At the time of the follow-up survey, total average scores on the OMS-HC scale were still 4% improved from those observed at baseline.

These results suggest that North Bay Regional Health Centre Mental Health with PhotoVOICE Orientation Session was effective at reducing mental illness-related stigma. For a short intervention (i.e., one-hour, single session program), these results are encouraging and are comparable to other successful short anti-stigma interventions for healthcare providers previously evaluated by OM.(2-3)

The North Bay Regional Health Centre Mental Health with PhotoVOICE Orientation Session program does not include a direct discussion of, or education about, stigma against mental illness as one of its main components. Rather, its stigma-combating approach is to shift perceptions and increase understanding of persons with mental illness solely by featuring first-person perspectives of people with lived experience of mental illness expressing happiness, hope, recovery, and success. The program used a combination of in-person and recorded presentations, as well as a combination of personal testimony, music, and photography to accomplish this task. The results from this evaluation suggest that this is an effective approach.

In addition, previous research has found that positive (i.e., non-threatening, cooperative, and pleasant) and 'stereotype-challenging' contact with members of a stigmatized group are important to the reduction of stigma and prejudice.(4) Results from the current evaluation – particularly those gleaned from participant comments on the post-test and follow-up surveys – suggest that the NBRHC Mental Health with PhotoVOICE Orientation Session meets both these criteria.

Other factors within a contact situation considered potentially important for attitude change are: equal status, intimacy, and the voluntary nature of contact.(3) While the nature of the contact for this program was not necessarily voluntary or intimate[9], it could be considered 'equal status.' Specifically, having the peer support specialist (who also delivered the personal testimony component of the program) as session facilitator, contact took place in an 'equal status' context in that participants saw him/her as a fellow healthcare worker, much similar to themselves.(5)

The NBRHC Mental Health with PhotoVOICE Orientation Session demonstrated positive results in terms of its ability to reduce stigma against mental illness. This program could be replicated and/or used as a model for anti-stigma programming in other hospitals or healthcare settings, although evaluation is always required to examine program outcomes in other jurisdictions or settings. As well, implementing such a program within a model of sustainability would be of additional benefit. Offering periodic booster or refresher sessions would help to ensure that any reductions in stigma realized from the initial intervention are maintained and reinforced over time.

[9] Typically, 'level of intimacy' refers to one-on-one contact between participant and member of the stigmatized group. For the NBRHC Mental Health Orientation with PhotoVOICE Session, contact was not one-on-one but in a group setting. Despite this, many participants said the nature of the program content allowed them to gain a deeper understanding of and insight into mental illness and the lives of persons who experience a mental illness. As well, this program did not have 'voluntary nature of contact' as attendance was mandatory for the orientation session.

References

(1) Kassam A, Papish A, Modgill G, Patten S (2012). The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: The Opening Minds Scale for Health Care Providers (OMS-HC). *BMC Psychiatry* 12(62).

(2) Mental Health Commission of Canada. *British Columbia's Interior Health Authority's Usage of the Ontario Central LHIN Anti-Stigma Training Program*. Calgary: Author, 2011.

(3) Mental Health Commission of Canada. *Quantitative Analysis of the 'Mental Illness and Addictions: Understanding the Impact of Stigma' Program*. Calgary: Author, 2010.

(4) Couture, SM, Penn, DL. Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health* 2003; 12(3), 291-305.

(5) Pinfold, V., Thornicroft, G., Huxley, P., & Farmer, P. Active ingredients in anti-stigma programmes in mental health. *International Review of Psychiatry* 2005; 17, 113-23.

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

Data Tables

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

Item	Pre-orientation (n=178)			Post-orientation (n=181)			Follow-up (n=62)		
	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.	41.2% (73)	28.8% (51)	39.9% (53)	49.7% (90)	27.1% (49)	23.2% (42)	53.2% (33)	32.3% (20)	14.5% (9)
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.	70.6% (125)	22.0% (39)	7.3% (13)	81.2% (147)	13.3% (24)	5.6% (10)	82.3% (51)	9.7% (6)	8.1% (5)
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)	2.8% (5)	5.1% (9)	92.1% (164)	1.7% (3)	5.0% (9)	93.4% (169)	3.2% (2)	6.5% (4)	90.3% (56)
4. If I were under treatment for a mental illness I would not disclose this to any of my colleagues.	25.8% (46)	35.4% (63)	38.8% (69)	32.0% (58)	35.9% (65)	32.1% (58)	32.3% (20)	22.6% (14)	45.2% (28)
5. I would be more inclined to seek help for a mental illness if my treating healthcare provider was <u>not</u> associated with my workplace.	21.9% (39)	25.3% (45)	52.8% (94)	25.6% (46)	26.1% (47)	48.4% (87)	21.0% (13)	12.9% (8)	66.1% (41)
6. I would see myself as weak if I had a mental illness and could <u>not</u> fix it myself.	52.2% (93)	25.3% (45)	22.5% (40)	60.8% (110)	22.1% (40	17.1% (31)	61.3% (38)	21.0% (13)	17.7% (11)
7. I would be reluctant to seek help if I had a mental illness.	62.4% (111)	16.9% (30)	21.8% (37)	69.1% (125)	13.8% (25)	17.2% (31)	71.0% (44)	16.1% (10)	12.9% (8)
8. Employers should hire a person with a managed mental illness if he/she is the best person for the job. (reverse)	1.7% (3)	10.1% (18)	88.2% (157)	1.7% (3)	5.0% (9)	93.4% (169)	1.6% (1)	1.6% (1)	96.8% (60)
9. I would still go to a physician if I knew that the physician had been treated for a mental illness. (reverse)	10.7% (19)	16.3% (29)	73.0% (130)	7.7% (14)	14.4% (26)	77.9% (141)	6.4% (4)	16.1% (10)	77.4% (48)

Item	Pre-orientation (n=177-8)			Post-orientation (n=180-1)			Follow-up (n=60-2)		
	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)	18.5% (33)	29.8% (53)	51.7% (92)	12.7% (23)	30.9% (56)	56.4% (102)	17.8% (11)	29.0% (18)	53.2% (33)
11. It is the responsibility of health care providers to inspire hope in people with mental illness. (reverse)	5.5% (8)	21.5% (38)	74.0% (131)	3.9% (7)	14.9% (27)	81.2% (147)	8.2% (5)	18.0% (11)	73.8% (45)
12. Despite my professional beliefs, I have negative reactions towards people who have mental illness	77.0% (137)	14.6% (26)	8.4% (15)	85.6% (155)	8.3% (15)	6.1% (11)	3.3% (2)	9.8% (6)	86.9% (53)
13. There is little I can do to help people with mental illness	80.3% (143)	13.5% (24)	6.2% (11)	87.8% (159)	7.2% (13)	5.0% (9)	85.2% (52)	11.5% (7)	3.3% (2)
14. More than half of people with mental illness don't try hard enough to get better.	68.9% (122)	26.0% (46)	5.1% (9)	71.7% (129)	22.8% (41)	5.6% (10)	70.5% (43)	19.7% (12)	9.8% (6)
15. People with mental illness seldom pose a risk to the public. (reverse)	23.8% (42)	42.9% (76)	33.3% (59)	22.6% (41)	37.6% (68)	39.8% (72)	19.7% (12)	47.5% (29)	32.8% (20)
16. The best treatment for mental illness is medication.	58.4% (104)	32.0% (57)	9.6% (17)	56.9% (103)	32.0% (58)	11.0% (20)	62.3% (38)	26.2% (16)	11.5% (7)
17. I would not want a person with a mental illness, even if it were appropriately managed, to work with children.	60.1% (107)	30.9% (55)	9.0% (16)	71.8% (130)	21.5% (39)	6.7% (12)	75.0% (45)	18.3% (11)	6.7% (4)
18. Healthcare providers do not need to be advocates for people with mental illness.	72.0% (128)	21.1% (37)	6.9% (12)	75.0% (135)	19.4% (35)	5.5% (10)	82.0 (50)	16.4% (10)	1.6% (1)
19. I would not mind if a person with a mental illness lived next door to me. (reverse)	3.9% (7)	19.7% (35)	76.4% (136)	2.8% (5)	13.8% (25)	83.4% (151)	3.3% (2)	8.2% (5)	88.5% (54)
20. I struggle to feel compassion for a person with a mental illness.	90.4% (161)	6.2% (11)	3.4% (6)	91.7% (166)	6.1% (11)	2.3% (4)	91.7% (55)	8.3% (5)	0% (0)

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

			Mean score		Pair Samples T-Test (n=177)	
Qn	Dimension	Item	Pre-test	Post-test	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.	2.81	2.61	3.31	.001
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.	2.13	1.94	3.34	.001
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.	1.63	1.57	1.18	.239
4	Disclosure	If I were under treatment for a mental illness I would not disclose this to any of my colleagues.	3.16	2.97	3.24	.001
5		I would be more inclined to seek help for a mental illness if my treating healthcare provider was not associated with my workplace.	3.41	3.23	3.04	.003
6	Disclosure	I would see myself as weak if I had a mental illness and could not fix it myself.	2.53	2.37	2.39	.018
7	Disclosure	I would be reluctant to seek help if I had a mental illness.	2.42	2.26	2.19	.030
8	Social Distance	Employers should hire a person with a managed mental illness if he/she is the best person for the job.	1.65	1.57	1.92	.057
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	2.07	1.79	.075
10	Disclosure	If I had a mental illness, I would tell my friends.	2.60	2.46	2.57	.011
11		It is the responsibility of health care providers to inspire hope in people with mental illness.	2.02	1.92	1.78	.077
12	Attitude	Despite my professional beliefs, I have negative reactions towards people who have mental illness.	1.90	1.71	3.40	.001
13	Attitude	There is little I can do to help people with mental illness.	1.94	1.80	2.60	.010
14	Attitude	More than half of people with mental illness don't try hard enough to get better.	2.03	2.02	0.20	.839
15		People with mental illness seldom pose a risk to the public.	2.90	2.83	1.11	.266

			Mean Score		Pair Samples T-Test (n=177)	
Qn	Dimension	Item	Pre test	Post-test	T-value	P-value
16		The best treatment for mental illness is medication.	2.38	2.42	-0.87	.384
17	Social Distance	I would not want a person with a mental illness, even if it were appropriately managed, to work with children.	2.36	2.16	3.52	.001
18	**Attitude**	Healthcare providers do not need to be advocates for people with mental illness.	2.06	2.02	0.61	.545
19	Social Distance	I would not mind if a person with a mental illness lived next door to me.	1.97	1.89	1.73	.085
20	**Attitude**	I struggle to feel compassion for a person with a mental illness.	1.63	1.62	0.23	.817