Mental Health Commission of Canada

Commission de la santé mentale du Canada

Opening Minds at University:

Results of a Contact-Based Anti-Stigma Intervention

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Abstract:

Objective: To evaluate the impact of a contact-based anti-stigma intervention on undergraduate university journalism and health studies students. The symposium was sponsored by the Opening Minds program of the Mental Health Commission of Canada.

Method: Baseline data were collected 1-3 days before the seminar and again at the close of the session using a 20-item scale measuring attitudes, expressions of social distance, and feelings of social responsibility.

Results: Post-test data showed significant improvements overall. Change was concentrated in younger age groups (those under 25 years of age), however older students (above 25) were less stigmatizing to begin with, suggesting a possible floor effect.

Conclusion: We demonstrated that brief contact-based interventions have the potential to promote and consolidate positive attitudes, reduce social distance and promote a sense of social responsibility among university students.

Implications:

- It is feasible to introduce contact-based interventions into universities.
- Brief contact-based interventions have the potential to promote and consolidate positive attitudes, reduce social distance and promote a sense of social responsibility among students who express neutral or uncertain views.

Limitations:

- Data could not be linked across students so individual change could not be assessed.
- Non-response among journalism students was high but supplementary analysis showed that there were no differences in the composition of pre-test and post-test journalism students, suggesting minimal response bias.

Keywords: stigma, antistigma, contact-based intervention, evaluation

Introduction and Purpose:

Stigma and discrimination have gained the attention of the public health and policy communities as a hidden and costly burden caused by society's prejudicial reaction to people with a mental illness.[i] Stigma and discrimination pose major obstacles in virtually every life domain, carrying significant negative social and psychological impacts. Reducing stigma and discrimination have become important policy objectives at both international and national levels.[ii] The Mental Health Commission of Canada has made stigma reduction one of its major objectives.[iii] The recent launch of the Commission's *Opening Minds* anti-stigma anti-discrimination initiative marked the largest systematic effort to combat mental illness related stigma in Canadian history.

This paper describes the results of a half-day anti-stigma symposium that targeted university students in journalism and included students in health studies. The symposium, which was sponsored by the Mental Health Commission of Canada, featured five presenters, three of whom shared their personal experiences with mental illness and the impact of stigma on their everyday lives. In addition, two specialists—one mass media expert and one journalist—talked about the media's pivotal role in the creation and maintenance of stigma. The complete symposium can be viewed on line at the Mental Health Commission of Canada's web site.[iv]

Background:

Contact-based educational approaches centre on people with lived experiences of a mental illness telling their personal stories to students who then have an opportunity to ask questions and engage in active discussion. They are considered to be one of the most promising practices for stigma reduction[v] and have been successfully used to reduce stigma and discrimination in high school students.[vi, vii] A comprehensive review of the literature published between 1990 and 2009 yielded nine studies that used a contact-based approach to reduce stigma in college or university students. Three studies used an experimental design (all showing positive results) and the remainder used a quasi-experimental pre-test/post-test design (with more mixed results). Interventions ranged from brief seminars to full (16-week) semester courses. Direct personal contact, indirect video contact, and traditional educational approaches were evaluated. Five studies targeted students in health studies (psychology, social work, and medicine), and the remainder used convenience samples of undergraduate students. One study included a one-month follow-up.

Three of the studies that used undergraduate students were conducted in the United States by the same Chicago-based research group, and were variants on a theme.[viii, ix, x] All used the same experimental design to randomly assign community college students to various experimental and control conditions. Results from this series support the hypothesis that contact-based educational approaches are effective in improving university students' knowledge, attitudes, and social tolerance. One study,[x] also showed that indirect contact through video-based sessions was as effective as direct personal contact. The fourth study using undergraduate students [xi] combined indirect, video-based contact, with direct, interpersonal contact, followed by active discussion. Using a quasi-experimental design they noted statistically significant improvements in knowledge, attitudes, and social tolerance for the participants in the contact-based intervention, with no improvements in the comparison group. While they could not tease apart the separate mechanisms of action, they considered that the combined effect of contact (direct and indirect) with education had changed audience members' cognitions, suggesting the inclusion of multiple elements in antistigma efforts.

Two studies have targeted psychology students. Wallach[xii] studied attitudinal change in Israeli psychology students who, as part of their class, visited a local psychiatric hospital. A sub-group of these students accepted an invitation to volunteer at the hospital. A third group received traditional classroom teaching with no contact. As expected, those who volunteered showed the most significant attitudinal improvements. However, of greater interest is the finding that both the classroom experience and the visit to the hospital produced negative attitudinal change, indicating that anti-stigma efforts may also be detrimental and consolidate negative views. Corrigan and colleagues [xiii] examined the effect of a semester long course on psychology students in the US. The course involved 16 weeks of instruction (the longest intervention assessed) and used a combination of traditional classroom teaching augmented with contact based methods. Over the term, students had an opportunity to meet and discuss issues with people who had a serious mental illness as well as family members. A comparison group was composed of psychology students who did not enrol in the course. Results were mixed. One attitudinal dimension improved in both groups, another improved in the treatment group, and a third did not improve at all. In some cases, the magnitude of change was higher among students with prior personal contact with people who had a mental illness, but in other cases, prior contact had no effect.

Two studies have targeted social work students. In a Canadian study,[xiv] second year masters level social work students who were enrolled in a mental health concentration received a traditional classroom lecture including readings and discussion focusing on the subjective experience of mental illness, a 30-minute video documenting the progress of people with a severe mental illness who were involved in an advocacy program; and a structured one-to-one interview with someone who had a mental illness. Students were paired with clients from local mental health programs. An open-ended interview schedule helped them structure a conversation focusing on illness management and recovery. The comparison group consisted of masters level social work students enrolled in a health concentration. Students in the intervention groups showed significant attitudinal improvements. No change was noted in comparison subjects. Structured dialogues were also used in Israel with bachelor of social work students,[xv] but there were no statistically significant differences in any of the attitudinal dimensions measured. Sample sizes in this study were small (65 in total) and students in both treatment and comparison groups expressed accepting views at baseline, potentially causing

a ceiling effect. Qualitative responses suggested that some important differences in student perceptions may have occurred.

One study examined the effects of an anti-stigma intervention on first year medical students. Students attending one medical school in Turkey were provided with a 1-day anti-stigma program as part of the World Psychiatric Association's Global Anti-stigma program. The intervention included a 2-hour lecture on the causes of schizophrenia, screening of the film, *A Beautiful Mind,* and direct personal contact and discussion with a person with schizophrenia. Comparison subjects (attending a different medical school) received an unrelated lecture. Improvements in knowledge, attitudes, and social tolerance were noted in the treatment group, but none were statistically significant. Sample sizes may have been too small (60 in total) to detect statistical effects. A one-month follow up showed some lessening of the effect, particularly with respect to social distance items.

Methods:

We used a pre-test/post-test design to evaluate changes in student's (a) stigmatizing attitudes, (b) social acceptance, and (c) sense of social responsibility toward people with a mental illness. The pre-test survey was completed 1-3 days before the symposium. Post-test data were collected immediately following the presentation. Follow-up data were collected after six months.[1] The data collection plan was approved by the Mount Royal University Research Ethics Board. Surveys were anonymous and information that could be used to identify a student or small student group (such as postal code) was not collected.

Measures:

We adapted items from the questionnaire used by several program sites in the World Psychiatric Association's global anti-stigma program to evaluate contact-based high school programs. [vi, vii] Our Stigma Evaluation Survey contained 20 self-report items (shown in Tables 2-4). Six items measured stereotypical attitudes and eight measured social distance toward people with a mental illness. We also developed six new items to measure feelings of social responsibility toward people with a mental illness and their service needs. All items were scored on a 5-point agreement scale, ranging from strongly agree; agree; neutral or unsure; disagree; or strongly disagree, with reverse scoring of items so that higher scores would reflect higher levels of stigma. Chronbach's alpha for the full scale was .83. We also measured gender, age (year of birth), main area of study, and whether or not they had a close friend or family member who had a mental illness. Students identified their main areas of studies as journalism 75% of 122 respondents), nursing (11%), justice studies (10%), and athletic therapy (4%). For the purposes of analysis, we have recoded these to reflect journalism students and other health studies students. The post-test survey also included three open-ended questions asking participants about what they liked the best; liked the least; and what they thought they might do differently having heard the presentation. The terms "mental illness" and "the mentally ill" were used throughout the survey to prompt stereotypical responses. The Stigma Evaluation Survey is available from the authors upon request.

[1] Follow up data collection is pending so not reported in this paper.

Study Sample:

Though the symposium was originally targeted to journalism students, faculty members from other health and social service related classes requested that their students also be allowed to attend, and class time was released. Interested teachers and members of the general public also attended. The pre-test response rate was 87% (122 of 141 were returned). The post-test response rate was 92% (254 out of 276). The analysis is restricted to students (122 pre-test surveys and 93 post-test surveys).

Data Analysis:

For ease of presentation, item responses have been collapsed into three groups: agree (strongly agree or agree), neutral (neutral or unsure) or disagree (strongly disagree or disagree). Denominators for calculations were based on usable data so n sizes and missing data (where appropriate) appear on the tables. Fisher's exact test was used to calculate probabilities. To create scale scores, items were summed across all surveys having complete data. Chronbach's alpha was too low for the attitude items to be considered a separate sub-scale (pre-test alpha = .47; post-test alpha = .53) so we report only the proportions for these items. The pre-test/post-test alphas for the social distance sub-scale were good (.79 and .73 respectively), as were the items making up the social responsibility sub-scale (.83 and .81 respectively). The alphas for the entire scale (all 20 items) were also good (.83 for both pre and post-tests). Because we did not have ethics clearance to include identifying data, individual students could not be followed over time. Consequently, scores on pre-test and post-test surveys could not be linked, and paired analyses could not be performed. Instead we used Wilcoxon's sum-rank test to account for the correlated samples.

Results:

Table 1 describes the characteristics of the baseline and pre-test samples. A total of 122 pre-test surveys were received. Of these 92 respondents identified themselves as journalism students. Ninety-three post-test surveys were received, 53 from journalism students. This gives a non-response rate among journalism students of 42%. To assess possible response bias, we compared the demographic characteristics of journalism students across pre-test and post-test survey samples. There were no statistically significant differences in gender, age group, or level of prior contact (analysis not shown), suggesting that non-response bias may be minimal. Table 1 also shows that there were no significant differences with respect to gender or the extent to which participants had previous contact with a close friend or family member with a mental illness. However, a significantly greater proportion of the post-test sample was 25 years of age or older.

Attitudes:

Table 2 shows proportions for the six attitude items. Three items reflected large and statistically significant differences. Almost 30% more students disagreed with the statement that "people with mental illnesses tend to be dangerous and unpredictable" at the post-test compared to the pre-test. Similarly, 11% more students disagreed with the statement that "people who are mentally ill are too disabled to work" and 12% more students disagreed with the statement that "people with mental illnesses are untrustworthy". Ninety percent of both baseline and post-test samples disagreed that people with a mental illness could snap out of it if they wanted to, indicating a ceiling effect for this item. Just over half of the baseline sample considered that there were effective treatments for mental illnesses and this rose by only 3%. Finally, the majority of the baseline and post-test samples (86% and 87% respectively) agreed that people with a mental illness are often treated unfairly, with no change on this item.

Social Acceptance:

Table 3 shows the item analysis for the eight social distance questions and the aggregated sub-scale scores. Statistically significant improvements were noted in all but two items, reflecting a statistically significant reduction in social distance overall. One item (not minding if someone with a mental illness lived next door) suffered from a ceiling effect, as the majority of students (92%) agreed in both the pre and post-test. No change was noted in the

proportion of respondents who would go to a doctor if they thought they had a mental illness, with the majority (80%) of pre and post-test samples agreeing. For three items (upset if someone sat next to me in class; would make close friends; would not give someone a job), the shift occurred in the neutral group. For the other three items, change also occurred among those holding stigmatized views.

Social Responsibility:

Table 4 shows the item analysis for the six social responsibility items and the aggregated sub-scale scores. Statistically significant improvements were noted in the aggregate scale score, driven by large changes in two items. In both cases, almost 20% more post-test respondents would support spending more tax dollars to improve services for people with a mental illness and would volunteer their time to work in a mental health agency. All of the remaining items failed to achieve statistical significance.

Table 5 shows the average change in scores from pre-test to post-test for each of the sub-groups in the study. The most stigmatizing groups at the time of the pre-test were individuals with no prior contact with someone with a mental illness (a friend or family member)—a rank that they retained at the post-test. On average, stigma scores decreased significantly (by an average of 5 points or by almost 10% in the average scale score) with slightly larger improvements occurring among females, those aged 22-24, health studies students, and those with no prior contact with someone with a mental illness. The only group not to experience a statistically significant decrease in stigma were those aged 25 and older. As this was the group least likely to stigmatize in the first place, this may reflect a floor effect.

What Respondents Would Do Differently

Just over half (53%) of the journalism and health studies students responded to an open-ended question indicating that they would behave differently after having heard the symposium. Over a third did not provide an answer and approximately 10% thought they would not behave differently. Theme based coding of their comments indicated that 60% of the journalism students who indicated they would do something different said they would change their views about people with a mental illness, and almost half (46%) would pay more attention to the way in which media stories are covered. For example, they indicated they would "be more conscientious about covering the subject" or "be very aware of the wording"

they would use when writing stories. Eighty-one percent of the health studies students indicated that they would change the way they viewed people with a mental illness. This included treating patients "non-judgementally" and "humanely", being more "empathetic and understanding", and making clients feel "loved, accepted, and respected". Some students considered that they would not change because they already were tolerant and understanding: "I do not think I have stigma, so my practice will not change"; "no, I have shared these views for a number of years"; or "I already had a broad knowledge of mental illness so I don't feel that much has changed".

Summary and Conclusion:

This paper describes the results of a pre-test/post-test survey of university level journalism and health studies students who received a half-day anti-stigma symposium sponsored by the Mental Health Commission of Canada. The symposium combined direct personal contact with people who shared their personal stories about their experiences with mental illness with information from experts concerning the role of the media in creating and maintaining stigma. The symposium was targeted to journalism students, but also attended by students in other health related areas, as well as members of the general public. Students completed pre-test surveys in class 1-3 days prior to the seminar and then again following the presentations. We assessed changes in attitudes, expressions of social acceptance and feelings of social responsibility using a 20-item scale. Post-test scale scores were 10% lower than pre-test scores indicating a significant reduction in stigma.

Surveys completed by journalism students dropped by 42% between the pre-test and the post-test. The journalism students who did not respond were similar to those that did with respect to gender, age group and previous contact with someone with a mental illness (all factors considered to be string correlates of stigma) suggesting that non-response bias may have been minimal.

In order to preserve student anonymity (a requirement of the ethics clearance) we were unable to link data across pre-test and post-test surveys to assess individual change. Consequently, our analysis was limited to examining aggregate change. This may have reduced our power to detect important differences at the item level because p values (though exact) were calculated on the assumption of independent samples. Aggregate scores were compared using non-parametric statistics appropriate for correlated samples.

In conclusion, we demonstrated that brief contact-based interventions have the potential to promote and consolidate positive attitudes, reduce social distance and promote a sense of social responsibility among university students.

Table 1: Pre-test and Post-test Student Characteristics

Characteristic	Pre-test % (N=122)	Post-test % (N=93)
Type of Student[f] • Journalism • Health studies	 75.4% (92) 24.6% (30)	 57.0% (53) 43.0% (40)
Sex[a] • Male • Female • Missing	 29.7% (33) 70.3% (78) 11	 28.0% (26) 72.0% (67) 0
Age group[b] • 19-21 • 22-24 • 25+ • Missing	 48.6% (53) 31.2% (34) 20.2% (22) 13	 33.7% (30) 28.1% (25) 38.2% (34) 2
Contact[c] • Any close friend or family member[c] • Close friend[d] • Family member[e]	 65.5% (72) 28.2% (31) 47.3% (52)	 67.7% (63) 32.3% (30) 53.8% (50)

[a] *X^2=8.1, df 1, P =. 004*
[b] *X^2= 0.08, df 1, P=.78*
[c] *X^2 = 8.38, df 2, P= .02*
[d] *X_2 = 0.12, df 1, P= .73*
e X_2 = 0.40, df 1, P= .53
[f] *X_2 = 0.85, df 1, P= .36*

Note: denominators for percent calculations exclude missing values.

Table 2: Attitudes

Survey Item	Pre-test % (n)	Post-test % (n)
(R) Most people with a mental illness could snap out of it if they wanted to [a] • Disagree • Neutral • Agree	 91.7 (111) 5.8% (7) 2.5% (3)	 89.1% (82) 6.5% (6) 4.3% (4)
(R) People with mental illnesses tend to be dangerous and unpredictable [b] • Disagree • Neutral • Agree	 56.2% (68) 34.7% (42) 9.1% (11)	 84.9% (79) 8.6% (8) 6.5% (6)
(R) There are few effective treatments available for the mentally ill [c] • Disagree • Neutral • Agree	 54.5% (66) 24.8% (30) 20.7% (25)	 57.6% (53) 29.3% (27) 13.0% (12)
(R) People who are mentally ill are too disabled to work [d] • Disagree • Neutral • Agree	81.0% (98) 15.7% (19) 3.3% (4)	92.1 (82) 4.5% (4) 3.4% (3)
(R) People with mental illnesses are untrustworthy [e] • Disagree • Neutral • Agree	 82.5% (99) 10.0% (12) 7.5% (9)	 94.6 (87) 4.3% (4) 1.1% (1)
People with mental illnesses are often treated unfairly [f] • Disagree • Neutral • Agree	 6.6% (8) 7.4% (9) 86.0% (104)	 10.9 (10) 2.2% (2) 87.0% (80)

Note: (R) *= items that were reverse scored.* P-values in this table (a-f) are reported using Fisher's Exact Test so there is no corresponding test value. Chronbach's alphas were too low to aggregate responses into a sub-scale so aggregate scores are not presented for this table.

[a] *P = .720*
[b] *P<.001*
[c] *P = .332*
[d] *P=.03*
[e] *P=.02*
[f] *P=.15*
[g] *z= 3.5, p < .001*

Table 3: Social Distance

Survey Item	Pre-test % (n)	Post-test % (n)
I would be upset if someone with a mental illness sat next to me in class [a]		
• Disagree	86.0% (104)	95.7% (89)
• Neutral	9.9% (12)	3.2% (3)
• Agree	4.1% (5)	1.1% (1)
I would make close friends with someone who had a mental illness [b]		
• Disagree	8.3% (10)	8.6% (8)
• Neutral	39.7% (48)	23.7% (22)
• Agree	52.1% (63)	67.7% (63)
If I was an employer, I would not give someone with a mental illness a job [c]		
• Disagree	70.8% (85)	83.7% (77)
• Neutral	22.5% (27)	8.7% (8)
• Agree	6.7% (8)	6.6% (7)
I would not go to a physician if I knew that s/he had been treated for a mental illness [d]		
• Disagree	49.2% (59)	68.8% (64)
• Neutral	25.0% (30)	20.4% (19)
• Agree	25.8% (31)	10.8% (10)
I would let someone with a mental illness baby-sit my children [e]		
• Disagree	37.2% (45)	21.7% (20)
• Neutral	39.7% (48)	44.6% (41)
• Agree	23.1% (28)	33.7% (31)
I would not want someone with a mental illness to be a school teacher [f]		
• Disagree	50.0% (60)	67.7% (63)
• Neutral	35.0% (42)	24.7% (23)
• Agree	15.0% (18)	7.5% (7)
I would go to the doctor if I thought I had a mental illness [g]		
• Disagree	6.7% (8)	6.5% (6)
• Neutral	12.5% (15)	15.1% (14)
• Agree	80.8% (97)	78.5% (73)
I would not mind if someone with a mental illness lived next door to me [h]		
• Disagree	4.2% (5)	4.3% (4)
• Neutral	4.2% (5)	3.2% (3)
• Agree	91.7% (110)	92.5% (86)

2Sub-scale score [l] • Mean • Standard deviation • 95% Confidence interval for the estimate	 18.5 4.7 13.5-14.9	 16.1 4.1 12.0-13.7

Note: P-values in this table (a-h) are reported using Fisher's Exact Test so there is no corresponding test value. High scale scores reflect higher stigma.

[a] *P = .06*
[b] *P = .04*
[c] *P = ..02*
[d] *P = .01*
[e] *P=.04*
[f] *P=.03*
[g] *P= .90*
[h] *P= 1.0*
[l] *z=3.5, P<.001*

Table 4: Social Responsibility

Survey Item	Pre-test % (n)	Posttest % (n)
I would make a one-time donation to a charity to support mentally ill people [a]		
• Disagree	5.8% (7)	9.7% (9)
• Neutral	17.5% (21)	12.9% (12)
• Agree	76.7% (92)	77.4% (72)
I would make a regular donation to a charity to support mentally ill people [b]		
• Disagree	12.5% (15)	14.0% (13)
• Neutral	50.0% (48)	30.1% (28)
• Agree	47.5% (57)	55.9% (52)
I would sign a petition to support better programs for the mentally ill [c]		
• Disagree	2.5% (3)	3.2% (3)
• Neutral	4.2% (5)	5.4% (5)
• Agree	93.3% (112)	91.4% (85)
I would support spending more tax dollars to improve services for the mentally ill [d]		
• Disagree	6.7% (8)	6.5% (6)
• Neutral	31.7% (39)	12.9% (12)
• Agree	61.7% (74)	80.6% (75)
I would volunteer my time to work in an agency for the mentally ill [e]		
• Disagree	14.9% (18)	11.8% (11)
• Neutral	41.3% (50)	25.8% (24)
• Agree	43.8% (53)	62.4% (58)
I would join an advocacy program to improve the rights of the mentally ill [f]		
• Disagree	16.5% (20)	12.9% (12)
• Neutral	38.0% (46)	31.2% (29)
• Agree	45.5% (55)	55.9% (52)
Sub-scale score[g]		
• Mean	14.1	12.9
• Standard deviation	3.8	3.9
• Median	15	13

Note: P-values in this table (a-f) are reported using Fisher's Exact Test so there is no corresponding test value. Higher scale scores reflect higher stigma.

[a] *P = .43*
[b] *P = .34*
[c] *P = .85*
[d] *P=..01*
[e] *P=.02*
[f] *P=.34*
[g] *z=2.8, p < .001*

Table 5: Analysis of Change in Aggregate Stigma Scores

Aggregated Score	Pre-test Mean	Post-test Mean	Wilcoxon Rank-Sum Test
Gender • Male • Female	 45 45	 40 39	 Z=1.7, P=.08 Z=3.6, P =< .001
Age Group • 19-21 • 22-24 • 25+	 47 44 41	 43 38 39	 Z=2.1, P = .03 Z=2.8, p < .01 **Z=0.6, P = .54**
Class: • Journalism • Health studies	 44 47	 40 41	 Z=3.1, P=.002 Z=3.2, P = .001
Contact • Contact with friends/family • No contact	 42 50	 38 44	 Z=3.0, P < .01 Z=3.0, P < .01
Overall (20 items)	45	40	Z=4.0, P< .001
Notes: Chronbach's alpha for the pre-test and the post-test was .83. Higher scale scores reflect higher stigma.			

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