A Pilot Study of the Effect of Exposure to Stand-Up Comedy Performed by Individuals with Mental Illness on Medical Students' Stigmatization of Those Affected

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ABSTRACT

Objective: Previous work shows that many medical professionals hold stigmatizing attitudes towards individuals with mental illness. Medical professionals' stigmatizing attitudes have been associated with the decreased use of needed healthcare services among individuals with mental illness, which can exacerbate the effects and symptoms of the illness on the individual. Medical professionals' attitudes are perhaps best modified early in their training. Thus, we aimed to determine whether a novel intervention could reduce medical students' stigmatizing attitudes towards individuals with mental illness.
Methods: Students attended a presentation about a program that trains individuals with mental illness to perform stand-up comedy, and then interacted with the comedians in small groups. Immediately before (T1) and after (T2) the intervention, participants self-rated their comfort with asking patients about mental illness, and completed scales measuring two aspects of stigma: stereotype endorsement, and broad negative attitudes towards people with mental illness.
Results: T1 and T2 questionnaires were returned by 49 students. At T2, 52% reported feeling more comfortable asking patients about a history of mental illness. There was no change in broad attitudes towards mental illness, but endorsement of negative stereotypes about mental illness decreased significantly from T1 to T2.
Conclusions: These pilot data warrant further investigation of the effects of this novel intervention.

KEYWORDS: *mental health, stigmatization, medical students, education, intervention*

INTRODUCTION

Mental illnesses are amongst the conditions that are most profoundly affected by illness-related stigma.[1] In fact, for some patients, coping with the stigma of mental illness can actually be more difficult than coping with the symptoms of the illness.[2]

Students and health care professionals, including medical students, hold stigmatizing attitudes towards people with mental illness.[3-6] These attitudes have been associated with reductions in help-seeking behaviours, decreased use of needed healthcare services, and lower compliance with medications among individuals with mental illness, thus exacerbating the effects and symptoms of the illness on the individual.[5] Conceptually, it seems logical to attempt to address physicians' attitudes towards individuals with mental illness during their formative years in medical school.[7]

At present, there is no gold-standard intervention for reducing mental illness-related stigma among medical students. Interventions that have shown varying degrees of success in this population include education, direct and indirect contact with individuals with mental illness, and simulation of psychosis.[7-9] Of these, contact is thought to have the most consistent positive effects on reducing stigma.[10] Previous studies have also targeted interventions designed to reduce stigma that psychiatry residents may hold, but because all specialties will come into contact with patients with mental illness, we chose to target medical students

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prior to specialization, specifically in their second year.[11,12]

We aimed to determine whether medical students' attitudes towards individuals with mental illness could be changed by exposure to a novel intervention involving an educational presentation about mental illness followed by a small group discussion with an individual living with mental illness who has trained as a stand-up comedian with a program called Stand up for Mental Health (SMH). Performing stand-up comedy is an activity that many individuals, regardless of their mental health status, would feel uncomfortable participating in, and as such, performers command a certain level of respect from their audience. Furthermore, laughing at issues related to mental illness is typically considered taboo; the fact that the comedians choose to use their experience with mental illness as material produces considerable shock. This invitation to laugh is an effective taboo-breaking strategy that may lead audiences to see mental illness in a different light, thereby decreasing stigma. Our personal observations and previous work suggested that these two qualities could ideally position this intervention as a powerful anti-stigma tool.[13]

MATERIALS AND METHODS

Recruitment and Procedure

Second year medical students at the University of British Columbia (UBC) were informed of the study first via e-mail, and then via a letter that was distributed in class one week prior to the study. Students were eligible to participate if they were enrolled in the course "Doctor, Patient and Society 420" where the intervention was scheduled to occur. Students from the main campus in Vancouver, and the distributed campuses at the University of Victoria and the University of Northern British Columbia were invited to participate.

All participants completed and turned in a questionnaire (T1) ten minutes prior to the intervention and another (T2) immediately after the intervention. This study was approved by the UBC research ethics board.

The Intervention

The founder of SMH hosted a live 90 minute large group presentation for second year UBC medical students from the Vancouver campus in February 2011 (streamed live by videoconference to distributed sites), which incorporated some of his own stand-up comedy and screened scenes from Cracking Up, the award-winning CBC documentary about SMH. After the presentation, students at all sites split into their small tutorial groups (6-8 students), where they interacted with a SMH comedian for 60 minutes. These comedians all had been diagnosed with a mental illness and had completed the 12 month SMH training course in order to learn how to perform stand up comedy. Comedians were physically present in all three locations.

The Questionnaires

Both the T1 and T2 questionnaires included two validated scales (described below) that measured different aspects of stigma: stereotype endorsement, and broad public stigma towards people with mental illness. In addition to the validated scales, the T1 questionnaire included demographic items such as age, sex, and ethnicity, as well as questions about personal history and experience with mental illness (see Table 1). The T2 questionnaire asked: "Did the lecture and small group sessions change how comfortable you would feel asking about a family or personal history of mental illness to your patients?"

Both T1 and T2 questionnaires contained a nine-item version of the Stereotype Endorsement (SE) scale which measured the degree to which respondents endorsed stereotypes about individuals with mental illness.[5] This scale contained adjectives (e.g. dangerous, unpredictable), and for each adjective, respondents rated how an individual with mental illness compared to an individual without mental illness on a five-point Likert scale. Scale scores were derived by summing item scores and dividing by the number of items. A mean value greater than the midpoint of three indicated that more negative attributes were ascribed to people with mental illness than to those without mental illness.[5]

Table 1. Participant Demographic Information. Participant demographic information from T1 questionnaire.

Characteristic	n (%)
Age	
20-30	46 (94)
31-40	3 (6)
41-50	0 (0)
51-60	0 (0)
Sex	
Female	27 (55)
Male	22 (45)
Ethnicity	
European	32 (65)
Asian	9 (18)
Southeast Asian	3 (6)
Hispanic	0 (0)
Black	0 (0)
Other	5 (10)
Sites	
Vancouver	32 (65)
Victoria	11 (22)
Prince George	6 (12)
Have you ever had mental illness yourself?	
Yes	15 (31)*
No	34 (69)
Have you ever had any exposure to the group Stand Up for Mental Health?	
Yes	7 (14)
No	42 (86)
Previous exposure to people with mental illness	
Family member with mental illness	29 (59)
Close friend with mental illness	27 (55)
Colleague with mental illness	10 (20)
Acquaintance with mental illness	18 (37)
Volunteer experience with people with mental illness	9 (18)
How comfortable do you generally feel to ask a patient about a family history of mental illness?	
Very comfortable	13 (31)
Quite comfortable	23 (48)
Neither comfortable nor uncomfortable	7 (15)
Quite uncomfortable	3 (6)
Very uncomfortable	0 (0)

*Mental illness that participants self-reported included depression and anxiety.

Secondly, we used the Opening Minds scale for healthcare providers (OMS-HC).[14] This scale consisted of 20 items assessing stigmatizing attitudes towards those with mental illness, and was designed specifically for health-care providers. Although not strict subscales, the measure addressed five content areas related to stigma: social distance, discrimination/devaluation, help-seeking/disclosure, recovering from mental illness, and social responsibility. Each item was rated on an anchored five-point Likert scale. A total mean score was computed with higher scores representing more stigmatizing attitudes towards people with mental illness.

Analysis

All data were analyzed using SPSS statistical software. T1 and T2 scale scores were compared using t-tests to investigate our two hypotheses that the intervention would reduce: a) negative stereotypes, and b) overall stigma. For our two hypotheses, we used a Bonferroni correction, and a significance threshold of $p<0.025$ for both tests (this allowed for two tests at a nominal overall significance level of 0.05). Subsequently, we performed exploratory, post-hoc paired t-tests for each individual scale item for both scales, and also for each of the five content areas of the OMS-HC scale (i.e., social distance, discrimination/devaluation, help-seeking/disclosure, recovering from mental illness, and social responsibility) at T1 and T2 (see Table 2). Results are shown in Table 2.

RESULTS

Demographics and Self-rated Comfort to ask Patients About Mental Illness

49 of 130 eligible students participated (response rate =37.7%). See Table 1 for demographic information and participants' baseline comfort with asking patients about mental illness. At T2, 49% of participants (n=24) reported feeling more comfortable asking patients about their history of mental illness as a result of the intervention.

There were no significant differences in SE or OMS-HC scale scores between individuals with different demographic characteristics (as shown in Table 1), but the small sample sizes in some groups limited the interpretation of these comparisons.

Stereotype Endorsement

With respect to the overall score, participants viewed people with mental illness more similarly to people without mental illness at T2 compared to T1, equating to a significant 6.3% decrease from T1 to T2 ($t(48) = 5.54$, $p < .001$, $d = 0.80$). Cronbach's alpha for the pre-test was marginal (0.67), but acceptable at post-test (0.73).

Opening Minds scale for healthcare providers (OMS-HC)

Although the overall mean score for the OMS-HC dropped at T2 (see Table 2), indicating less stigmatizing attitudes, this difference was not statistically significant. Post-hoc calculation revealed that given the observed effect size, our sample size was underpowered (43%).

In our exploratory post-hoc analyses of the different content areas, scores decreased at a nominal significance level of ≤0.05 (tentatively indicating reduction in negative attitudes) in only one content area: discrimination/devaluation, T1: M = 2.18, SD = 0.50; T2: M = 2.04, SD = 0.36.

In our exploratory post-hoc analyses for each of the items from the OMS-HC, scores decreased at a nominal significance level of ≤0.05, tentatively indicating less stigmatizing attitudes, for the following items: "I would see myself as weak if I had a mental illness and could not fix it myself", "More than half of people with mental illness don't try hard enough to get better", and "I struggle to feel compassion for a person with a mental illness" (see Table 2). Cronbach's alpha at T1 and T2 was adequate (0.76 and 0.77 respectively).

Table 2. Stereotype Endorsement Scale and Opening Minds Scale for Healthcare Providers (OMS-HC) Results. Results include mean scores from the T1 and T2 questionnaires, as well as significance.

	T1 MEAN (SD)	T2 MEAN (SD)	Sig. (2-tailed)
Stereotype Endorsement Scale			
***OVERALL SCORE	3.56 (0.29)	3.34 (0.32)	$t(48) = 5.54$, $p < 0.001$, $d = 0.80$
*Dangerous	3.69 (0.51)	3.21 (0.68)	$t(47) = 4.65$, $p = 0.0001$
*Unpredictable	3.96 (0.50)	3.63 (0.57)	$t(48) = 3.87$, $p = 0.0001$
Stupid	2.98 (0.32)	3.02 (0.38)	$t(48) = -1.43$, $p = 0.159$
Abnormal	3.48 (0.51)	3.38 (0.49)	$t(47) = 1.94$, $p = 0.058$
*Unreliable	3.73 (0.53)	3.41 (0.61)	$t(48) = 3.66$, $p = 0.001$
Weird	3.33 (0.52)	3.27 (0.45)	$t(48) = 0.83$, $p = 0.411$
*Reasonable	3.49 (0.74)	3.18 (0.53)	$t(48) = 2.53$, $p = 0.015$
Self-Controlled	3.65 (0.72)	3.43 (0.68)	$t(48) = 1.85$, $p = 0.070$
*Healthy	3.71 (0.58)	3.48 (0.65)	$t(47) = 2.86$, $p = 0.006$
OMS-HC Scale			
OVERALL SCORE	2.30 (0.33)	2.23 (0.33)	$t(47) = 1.82$, $p = 0.075$, $d = 0.263$
Social Distance	2.18 (0.50)	2.15 (0.51)	$t(47) = 0.64$, $p = 0.52$
*Discrimination/Devaluation	2.18 (0.50)	2.04 (0.36)	$t(47) = 2.68$, $p = 0.01$
Help-Seeking/Disclosure	3.05 (0.56)	3.01 (0.66)	$t(47) = 0.67$, $p = 0.51$
Recovering from Mental Illness	2.60 (0.68)	2.45 (0.09)	$t(46) = 1.4$, $p = 0.16$
Social Responsibility	2.5 (0.35)	2.56 (0.35)	$t(47) = -1.22$, $p = 0.23$

*** indicates a primary analysis that was significant at an α level of 0.025
* indicates an exploratory post hoc test, significant at a nominal α level of 0.05

DISCUSSION

To our knowledge, this study was the first to use comedians with mental illness as part of a contact intervention. After the intervention, we observed a significant decline in the degree to which medical students endorsed negative stereotypes about mental illness. Indeed, the intervention had a very large effect size (d=0.8) on reducing negative stereotypes, and after the intervention, close to half of the participants (49%, n=24) reported feeling more comfortable asking patients about their personal or family history of mental illness.

While we did not find significant differences in OMS-HC scale scores between T1 and T2, we did see a decline in stigmatizing attitudes in the content area of the scale related to devaluation/discrimination. Conceptually, change in this area is consistent with what might be expected based on the nature of the intervention. For example, there was significant positive change in responses to "I struggle to feel compassion for a person with a mental illness". The nature of the intervention made it less likely to address attitudes related to social responsibility, recovery from mental illness, and help-seeking/disclosure. The intervention also had no significant effect on the content area related to social distance, even though we had anticipated that we might have seen a positive effect in this area. While this lack of effect was somewhat disappointing, it is worth noting that other previously studied interventions have actually shown increases in desire for social distance; therefore, no change in comparison is a notable result.[15]

Limitations and Future Directions

It is impossible to conclude definitively that the changes in scale scores we observed in this study was a direct cause of the intervention because, this being an exploratory study, we did not include a control group. The sample size (n=49) was relatively small and our post-hoc calculations demonstrated that it provided inadequate power to detect change in the OMS-HC scale score given the observed effect size. However, this study provides the foundation for future studies involving larger sample sizes, control interventions, and longitudinal follow-up.

Finally, as the comedians had different types of mental illness (including schizophrenia, bipolar disorder, and depression), we used the term "mental illness" as a broad construct within the questionnaires, and encouraged participants to provide natural reactions to the term. However, some participants commented that their answers may have been different if the type of mental illness was defined (i.e. schizophrenia versus anxiety).

CONCLUSION

Interventions in medical students' early clinical years are crucial to reducing the stigma toward mental illness that they may hold. Because more than half of the participants felt more comfortable asking a patient about mental illness after the intervention, we can see that that there is a need to provide opportunities for contact between medical students and individuals with mental illness so that more young physicians will feel comfortable asking important clinical questions regarding mental illness. Physicians of all specialties work with patients with mental illness, and stigmatizing attitudes interfere with their ability to provide optimal patient care. There is a need for continued research into the effects of interventions designed to reduce stigmatizing attitudes towards individuals with mental illness, such that effective strategies can be integrated throughout medical school. As a result, our future physicians may work more effectively with all patients, without judgement, and with a better understanding of the challenges people with mental illness may face.

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