Medical student attitudes to mental health and psychiatry: the use of a patient-experience short film

ORIGINAL RESEARCH

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ABSTRACT

Background: Medical student attitudes to mental illness are significantly influenced by their undergraduate educational experience. Medical education therefore has a key role to play in challenging the stigma associated with mental illness. We developed a short educational film aimed at challenging stigmatising attitudes to mental illness and explored its effects on undergraduate medical student attitudes. We hypothesised that levels of stigmatising attitudes in medical students would reduce after students viewed the educational film.

Method: We used a validated scale (Mental Illness: Clinician Attitudes, MICA) to examine undergraduate medical student attitudes to mental illness at two time points – prior to (T1) and following (T2) viewing the short film. The film focused on patient experiences and was designed to highlight personal experiences of mental illness.

Results: 92 students completed the MICA before the film and 73 students at both time points. Having a personal history of mental illness was associated with less stigmatising attitudes (t=2.4, df=87, p=0.019). Stigma scores were reduced following the film viewing (t=7.101, df=72, p<0.001).

Discussion: This study suggests that patient experience films, used as educational tools, can challenge student perceptions of mental illness and lead to a reduction in stigmatising attitudes, at least in the short term. Future studies are required to examine the longer-term effects of such educational interventions in terms of student perceptions and attitudes towards mental health and psychiatry.

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BACKGROUND

Medical student attitudes to psychiatry as a profession and mental illness more broadly are influenced by experiences at medical school. Although such attitudes have been shown to improve following psychiatric attachments, (1, 2) there is a general pattern of deterioration in attitudes as students progress through medical school. (3, 4)

One explanation for this deterioration in student attitudes to psychiatry and mental illness relates to the degree of psychiatry bashing and badmouthing that undergraduate students are exposed to during medical school. (5, 6) This form of stigmatisation needs to be challenged as it significantly contributes to negative student attitudes to mental illness, and also impacts on recruitment and retention in psychiatry. The reach of such negative attitudes extends beyond psychiatry to wider medical practice and may in part explain why those with mental illness receive sub-optimal investigation and treatment when presenting with physical health problems. (7) Despite students being exposed to critical attitudes toward psychiatry, they see learning about mental illness as an integral part of their medical degree and there has been overwhelming support amongst students for the Anti-BASH campaign (#BanTheBash). (5)

If we are to improve medical student attitudes to psychiatry and mental health, psychiatry needs to be embedded and effectively integrated throughout all years of the undergraduate medicine programme using novel, resource-efficient methods. The use of online materials has been shown to be an effective method for supporting face-to-face learning that enhances clinical experience. (8) Embedding videos within eLearning has also been shown to be highly effective in terms of both student acceptance and learning. (9, 10)

Previous studies aiming to change medical student attitudes towards mental illness have largely used conventional teaching methods, such as a lecture about stigma (11) or psychiatry placement. (12) Our study adds to the literature on interventions designed to address mental health stigma in aiming to investigate whether a short film on mental health stigma could be used as an alternative educational resource for use in psychiatry curricula.

METHOD

We created a short film focusing on patient and clinician experiences of mental health stigma, to add to our undergraduate psychiatry online learning resources. This study aimed to i) examine undergraduate medical student attitudes to mental illness and psychiatry and ii) evaluate the effectiveness of the short film in reducing stigmatising attitudes in undergraduate medical students.

Film Development

The film was developed as part of a student selected component (SSC) at Cardiff University School of Medicine with the University Film Society (Diff Films). The film focused on the experiences of three individuals with lived experience of mental illness and four clinicians, all of whom were identified through the National Centre for Mental Health (NCMH: www.ncmh.info).

The topic areas and locations for the filming of the participants were selected with the intention of emphasising the true social contexts, backgrounds and situations of the individuals involved. So, for example, participants were filmed in their own homes, taking part in their usual everyday activities, and talking about their experiences of mental illness and stigma.

Approximately six hours of footage was collected which was edited into the ten-minute short film. All participants in the film provided consent and agreed on the final version of the film.

Study Sample, Assessment, and Procedures

The sample population included first- (n=296), second- (n=309), and third-year (n=299) medical undergraduate students at Cardiff University (total n= 904). Only these year groups were invited to take part in the study, as they were all following the new undergraduate medicine programme (C21) at Cardiff University. Second- and third-year students had completed a two-week mental health case-based learning programme in Year 2. This two-week module was based on small group learning and plenary sessions, with half a day clinical placement in psychiatry. Students in this sample had yet to undertake their six-week psychiatry placement as this takes place in Year 4 of the undergraduate curriculum.

To encourage students to provide honest answers (and reduce the risk of social desirability bias), anonymous data was collected via an online research module. The online module included an introductory section, where students provided consent and answered some basic demographic questions [sex, year group, personal experience of mental health problems (yes/no) and family/friend experience of mental health problems (yes/no)].

Students were then asked to complete the Mental Illness Clinician Attitude (MICA-2) scale, medical student version, (11) prior to watching the ten-minute film (time point 1: T1) and again immediately after watching the film (time point 2: T2). The MICA-2 scale medical student version is a sixteen-item scale that uses a six-point Likert scale and was specifically designed for use by medical students. The sixteen items focus on different areas of mental health/illness and psychiatry. A higher total score on the scale indicates a more stigmatising attitude towards mental illness and psychiatry. Qualitative student feedback about the film was also collected. Students were asked three open questions: "What did you

think was good about the film?", "What did you think was not so good, or you would like to see changed?", and "Do you have any other additional comments about the film?".

All 904 students were sent an email inviting them to participate in the study. The study was also advertised via social network sites. As this study was part of a student-selected component (SSC), the recruitment period for the study was limited to a two-week time frame.

Ethical approval was obtained from Cardiff University School of Medcnie and all participants provided informed consent.

ANALYSES

Quantitative Analysis

Independent t-tests were used to examine the relationship between T1 MICA score (baseline stigma level) and sex, personal history of mental health problems, and history of mental health problems in family members or friends. We hypothesised that having a personal or family history of mental health problems would be associated with lower levels of stigma (lower MICA score). One-way ANOVA was used to examine the relationship between year of study and baseline stigma score. The paired t-test was used to examine changes in MICA total scores between T1 and T2. We hypothesised that watching the film would be associated with lower levels of stigma (lower MICA score at T2 than T1).

Repeated measures MANCOVA was used to examine the relationship between change in MICA score (between T1 and T2) and the covariates sex, personal history of mental health problems, history of mental health problems in family members or friends, and year of study, to see whether any of these variables were related to the film's influence on student attitudes.

Qualitative Analysis

Inductive thematic analysis (13) was used to identify patterns of meaning within the qualitative data provided by students in response to the open questions at the end of the online module. Following a semantic approach, themes were identified within the explicit, surface meanings of the data, before the data were organised to show patterns of semantic content.

RESULTS

A total of 111 students (12% response rate) entered the online module and completed the demographic questions. Of these 111 students, 92 completed the survey up to the point of viewing the film. Of these 92 students, 73 continued the survey to completion and therefore completed the MICA at both time points. There

was no statistically significant difference between those who fully completed and those who did not fully complete the survey, for any of the demographic variables or T1 scores (baseline stigma score). The only demographic variable to show a significant association with T1 score (baseline stigma score) was having a personal history of mental health problems (see Figure 1).

There was a significant reduction in stigma scores between T1 and T2 (t=7.101, df=72, p<0.001, N=73). The mean total MICA score before the film (T1) was 38.1 and the mean score after (T2) was 34.1. There was no significant association between any of the covariates and the change in score between T1 and T2. The rates of students agreeing (strongly agree, agree or somewhat agree) to each of the statements on the MICA at T1 and T2, and the difference between these rates, is shown in Figure 2.

Student perceptions of the film: Key themes

A total of 34 students provided free-text comments about the film. Inductive thematic analysis resulted in three key themes which are presented below, along with representative student quotes.

1. The value of hearing from people with lived experience of mental illness.

The students valued listening to individuals with a history of mental illness, actually talking about their experiences, and everyday lives and presenting issues relating to stigma from their own view-point.

"Great to see things from their point of view and how they would like their mental health to be addressed."

"Great to see them in the context of their everyday lives"

"I liked that it wasn't about how they came to be diagnosed, or what the doctors did for them/their journey through the healthcare system, it was actually about their experiences of living with a mental health problem"

2. Representativeness of patients.

One of the key themes related to the predominant focus of the film on people who had recovered from mental illness and who were currently functioning well. Some students felt that there should be more of a focus on patients who do not recover from their illness and who have more limited functioning in everyday life.

"…focuses only on people who have recovered"

"It did not address other (perhaps even more) stigmatised mental illnesses such as schizophrenia or bipolar disorder."

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3. Additional student learning needs.

Another key theme that emerged related to the learning needs of the students.

"could focus on the doctor's perspective more – i.e. how doctors deal with people who have a mental illness"

"Maybe include more on how not to treat people with mental illness and include constructive things the audience can do to help that person"

"I would have loved them to discuss what they did and didn't like about their treatment from psychiatrists and healthcare providers to help us be better doctors in the future."

The students felt that the film could have focused more on the clinician's perspective, and more on treatment and practical things that undergraduate students can learn that will help them to effectively interact with, manage and support, people with mental illness.

DISCUSSION

We found that levels of stigmatising attitudes in undergraduate medical students were significantly reduced following the students viewing a short educational film about mental illness. Considering the minimum (16 points) and maximum (96 points) MICA score possible, the 4-point average change in score after watching the film represents a 5% reduction. This suggests that the film was successful in changing student attitudes about mental health, at least in the short term. This is in line with the current literature indicating that anti-stigma interventions aimed at particular groups (such as students) usually achieve short-term attitudinal improvements but that further work is needed to demonstrate longer-term improvements. (14)

A number of statements on the MICA appeared to show a greater degree of change compared to other statements between T1 (before the film viewing) and T2 (after the film viewing). Many of these centred around representations of individuals with mental illness, which was a key focus of the film. The largest change was seen for MICA item 12, with an additional 26.1% of students saying that the public does not need to be protected from people with mental illness. There was also a large increase (12.3%) in the number of students saying that they would feel as comfortable talking to someone with a mental illness as they would someone with a physical illness (MICA item 10).

Another two items that showed a large degree of change related to disclosure of mental illness, with higher numbers of students saying that they would disclose to a friend (12% change) or colleague (16.5% change) if they themselves experienced a mental illness (MICA items 4 and 7). Given the relatively high rates of

mental illness among the medical student population, the relatively low rates of disclosure, and the importance of students seeking appropriate support, both as undergraduates and post-qualification as doctors, this finding is of particular interest within undergraduate medical education.

Many of the MICA items that showed little change between T1 and T2 were those items where students already showed low levels of stigmatising attitudes at baseline (T1), for example, MICA items 2, 8, 11, 13, 16.

In agreement with previous research, (15) our study found that students who have a history of mental health problems have less stigmatising attitudes towards mental illness and psychiatry. However, in our study, having a family or friend with mental health problems was not significantly associated with less stigmatising attitudes. The literature concerning the influence of knowing someone who has a mental illness on attitudes to mental illness is conflicting, with some studies showing that this is associated with less stigmatising attitudes and others finding that it is not. (15,16) The differences in such findings likely relate to the proximity of the relationship with the person with mental illness and the particular illness features and experiences of the individual. A relatively high proportion of students rated positively as having a history of mental health problems in this study, which may be because we asked about mental health problems in a broad sense, rather than clinical diagnoses.

The mean baseline stigma score according to the MICA scale for our students (38.1) was similar to that found by Kassam et al in their sample of third-year students (37.0). (11) Interestingly, Lyons & Janca found a higher baseline stigma score of 48.2, according to the MICA, in their sample of fourth-year medical students. (12) Mental health nursing students have been found to have lower levels of stigmatising attitudes, with Gabbidon et al finding a mean score of 34.5 on the MICA. (15)

It was interesting to see that year of study was not significantly associated with baseline stigma scores (T1), as the Year 2 and 3 students have completed a two-week mental health case within the C21 case-based learning programme. It was thought that these students may have lower baseline stigma scores compared to the Year 1 students. These findings may suggest that the Year 2 case does not influence student attitudes in relation to mental health stigma, or that any influence it does have does not remain in the long term. It is worth noting, however, that it is possible that this study lacked adequate power to detect a significant effect here, particularly given the small number of Year 1 students (n=22).

Student perceptions of the film: Key themes

The first theme 'The value of hearing from people with lived experience of mental illness', further confirms previous findings in this area which have shown that films containing patients talking about their experiences of illness are more effective than educational films that do not include patient experiences in challenging student attitudes to mental health. (17, 18)

The second theme 'Representativeness of patients' highlighted how some students felt that the individuals in the film were not representative of all people with mental illness. The film was intentionally designed to focus on individuals who had recovered from mental illness. The aim of the educational tool was to challenge some of the stereotypical and stigmatising views of mental illness that are often portrayed by the media. Mental illness is often linked with violence, and people with mental illness are often portrayed as dangerous, criminal, evil, or very disabled and unable to live normal, fulfilled lives. (19) Out of all of the statements on the MICA scale, the largest change seen in student attitudes was seen for the item "The public does not need to be protected from people with a severe mental illness", with only 35.6% of students agreeing with this statement prior to watching the film, but 61.7% of students agreeing with this statement after watching the short film. This provides some support for the effectiveness of this particular film in challenging some of the more negative stereotypes that continue to surround mental illness.

The third theme 'Additional student learning needs' relates to the students highlighting areas that they felt they would benefit from in terms of additional learning experiences. Students wanted more direction about the role of the clinician in mental health care. Although this is focused on in depth in later years of the undergraduate curriculum, these findings do highlight the need for careful consideration about undergraduate psychiatry curricula and the timing of student learning experiences in relation to psychiatry and mental health. The amount and timing of psychiatry- and mental health-focused teaching within undergraduate medicine varies widely across UK medical schools. Psychiatry tends to be taught in the latter years of the curriculum, often in a standalone module, with few links to other areas. (20)

LIMITATIONS

It is important to consider the findings of this study in light of a number of limitations. The main limitation of this study relates to the relatively small sample size, and therefore the representativeness of the sample and our ability to generalise these findings to the wider student population. This project was conducted as part of an undergraduate student selected component and so was limited in terms of the data collection time period. In addition, this sample size is not much smaller than the original MICA study sample of

77 students, (11) although the latter were all from one year group. Despite the small sample size however, we did find a statistically significant difference in student attitudes before and after their viewing of the short film. The sample was also predominantly female (78%) which also limits the generalisabilty of our findings.

There is also a chance that individuals other than the target population completed the online survey. However, as students were sent the link to participate via direct email, we feel this risk was minimised. As this was not an experimental study, we also could not control for the viewing experiences of students, for example, some students may have fully focused whilst watching the short film and others may have disengaged but gone on to complete the online questionnaire anyway. In an effort to reduce the risk of this, we ensured that we were clear in our instructions to students about the aims and process for participation in the study.

Another potential limitation of the study relates to selection bias, in that students who had a prior interest in mental health may have been more likely to volunteer to take part. However, we would expect that those students who had such an interest in mental health to have less stigmatising views of mental illness and psychiatry. It is therefore possible that this study may underestimate the extent of stigmatising views of mental illness and psychiatry in the undergraduate student population.

Finally, this study only evaluated changes in student attitudes in the short term. Future work should consider the impact of educational tools in influencing longer-term attitude change. Longitudinal evaluation of student attitudes to mental health and psychiatry throughout medical school and beyond is required if we are to really understand the impact of the undergraduate curriculum in this area.

Despite these limitations, this study provides further insight into the extent of stigmatising views of mental illness and psychiatry that remain within the undergraduate medical student population. The study also presents a useful, resource-efficient, open-access educational tool that can be used to develop student attitudes to mental health, as part of a broader, integrated, undergraduate psychiatry curriculum. As highlighted by Papish et al, (21) reducing the stigma of mental illness is likely to require the combined effect of various components within medical education curricula including knowledge, contact-based interventions, and attending to the student's internal experience of working with people with mental illness. Such interventions may have an impact in the short term, but such effects are unlikely to persist without effective integration of successive learning opportunities designed to reduce stigma into the medical curriculum. (22)

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FIGURES

Figure 1: Demographic characteristics of the students who completed the MICA at T1 (n=92)

		n (%)	Mean (SD) MICA score T1	Association with T1 MICA score (effect size, degrees of freedom, p-value)
Year in medical school	First	22 (24)	40.1, (6)	t= 1.74, df= 89, p=0.18
	Second	16 (17)	35.9 (7.8)	
	Third	54 (59)	37.8 (7.2)	
Sex	Male	19 (21)	39.2 (8)	t= 0.84, df= 89, p= 0.41
	Female	72 (78)	37.6 (6.9)	
	Prefer not to say	1 (1)		
Personal experience of mental health problem	No	47 (51)	39.5 (5.7)	**t= 2.40, df= 87, p=0.019**
	Yes	42 (46)	36 (7.9)	
	Prefer not to say	3 (3)		
Family or friend experience of mental health problem	No	21 (23)	39.3 (5.5)	t= 0.92, df= 88, p=0.36
	Yes	69 (75)	37.7 (7.6)	
	Prefer not to say	2 (2)		

Figure 2: Percentage of students agreeing (strongly agree, agree and somewhat agree) to MICA-2 statements before (T1) and after (T2) watching the film (n=73).

Statement	Agree (%)		% Change
	T1	T2	
*1. I just learn about psychiatry because it is in the exam and would not bother reading additional material on it.	16.5	6.8	-9.7
*2. People with a severe mental illness can never recover enough to have a good quality of life.	8.2	6.8	-1.4
3. Psychiatry is just as scientific as other fields of medicine.	83.5	91.8	+8.3
*4. If I had a mental illness, I would never admit this to any of my friends because I would fear being treated differently.	43.9	31.4	-12.5
*5. People with severe mental illness are dangerous more often than not.	12.4	5.5	-6.9
*6. Psychiatrists know more about the lives of people treated for a mental illness than do family members or friends.	53.4	53.3	-0.1
*7. If I had a mental illness, I would never admit this to my colleagues for fear of being treated differently.	68.5	52.0	-16.5
*8. Being a psychiatrist is not like being a real doctor.	5.5	4.1	-1.4
9. If a consultant psychiatrist instructed me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions.	90.4	82.1	-8.3
10. I feel as comfortable talking to a person with mental illness as I do talking to a person with a physical illness.	68.5	80.8	+12.3
11. It is important that any doctor supporting a person with a mental illness also assesses their physical health.	100	97.2	-2.8
12. The public does not need to be protected from people with a severe mental illness.	35.6	61.7	+26.1
*13. If a person with a mental illness complained of physical symptoms (such as chest pain), I would attribute it to their mental illness.	5.5	6.8	+1.3
*14. General practitioners should not be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	9.6	13.7	+14.1
*15. I would use the terms 'crazy', 'nutter', 'mad' etc. to describe people with a mental illness who I have seen in my work.	6.8	1.4	-5.4
16. If a colleague told me they had a mental illness, I would still want to work with them.	100	100	0

* items reverse scored according to MICA-2 manual

http://www.kcl.ac.uk/ioppn/depts/hspr/research/ciemh/cmh/research-projects/sapphire/assets/MICA-Manual-FINAL-updated-jan-2013.pdf

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