SHORT REPORT

Influencing attitudes of medical students towards substance misusers

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Abstract

Introduction: Substance use disorder is a stigmatised medical condition that is commonly associated with negative attitudes from clinicians, which results in a barrier to best practice treatment. Medical schools need to help develop professional behaviours in students, including compassion, empathy and respect.

Methods: We designed and implemented a brief experiential teaching activity that allowed students to hear multiple patient narratives of their addiction. The effects of this activity on the students' attitudes were investigated using an attitudinal questionnaire before and after the session. Differences in agreement with the attitudinal statements before and after the seminar are described.

Results: 118 second-year MD students participated in this study, with 102 completing both the pre- and post-seminar questionnaire. In most domains covered by the questionnaire, the proportion of student agreement with statements demonstrated a significant positive change in their attitude towards working with substance misusers.

Conclusion: Student knowledge, sense of responsibility and role legitimacy were high before the seminar, suggesting students accepted that they would have a duty to understand and treat addiction. By contrast, their initial responses to the "I don't like" and "I feel uncomfortable" questions suggested that they did not feel comfortable or confident with that role or anticipate that it would be rewarding or that the people would be likeable. Student responses to these questions all showed a significant positive change after the seminar. This suggests that listening to narratives of people in recovery from substance use disorders can positively influence attitudes of medical students.

Keywords: substance use disorder; empathy; changing attitudes; medical education; narrative; stigma

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Introduction

Substance use disorder (SUD) is a stigmatised medical condition that is commonly associated with negative attitudes from clinicians, which results in a barrier to best practice treatment (Hoggatt et al., 2019; Van Boekel et al., 2013) and impaired recovery from SUD (Crapanzano et al., 2018). The development of empathy is thought to improve healthcare by health professionals to stigmatised groups, with empathy for a member of a stigmatised group improving attitudes towards the group as a whole (Batson et al., 2002). Accordingly, it is important for medical schools to foster medical curriculum that promotes professional behaviours, including compassion, empathy and respect for SUD patients (AMC, 2012). Such behavioural professionalism is best taught by teaching methods of critical and guided reflection using an experiential, not theoretical, modality (Birden et al., 2013). One experiential teaching method is to guide students to develop narrative competence, described as "the ability to acknowledge, absorb, interpret, and act on the stories and plights of others", which is seen as an essential competency for the effective practice of medicine (Charon, 2001, p. 1897). There are many methods used for the development of narrative competence, including the ability to listen to others tell their own story and, by reflecting on the "narrative thread of the story … [to enter] into and … [be] moved by the narrative world of the patient" (Charon, 2001, pp. 1898–1899), which can result in improved student empathy (Kagawa et al., 2023).

A patient-centred approach to consultations is known to improve patient satisfaction and clinical outcomes (Dwamena et al., 2012). Traditionally, medical schools teach students strict protocols for taking a clinical history, providing a checklist of questions that should be asked (Walker et al., 1990). For example, in the teaching of psychiatry, students would be encouraged to ask questions relating to diagnostic criteria for conditions such as SUD. Such checklists can enable a comprehensive assessment of a patient but may create a clinician-centered consultation and restrict the patient from telling their story from their own perspective.

By allowing students to meet face to face in a non-threatening environment and simply listen to a person's narrative account of how addiction to substances has affected their life, the student may experience empathy and, as a result, improve attitudes and reduce stigma towards people with SUD.

Aim

To determine if a brief educational activity that allows students to speak in depth with people recovering from SUD can positively influence the students' attitudes.

Methods

This was a descriptive study where students' attitudes were assessed using an attitudinal questionnaire before and after the brief educational intervention. The educational intervention consisted of a 3-hour education seminar, jointly delivered by the disciplines

of psychiatry and primary care during the first psychiatric clinical rotation in the second year of a 4-year Doctor of Medicine (MD) program. The study was conducted in 2016 from February to November.

The study was approved by the Human Ethics Committee, University of Western Australia (Approval No RA/4/1/8115), with student participation voluntary. This seminar was open to all students regardless of whether they participated in the study.

The seminar consisted of a brief introductory lecture by an addiction medicine specialist psychologist followed by the opportunity for students to interview people in recovery from SUD and, finally, a debrief session for students and participants.

The introductory session focused on the evolution of SUD in the individual. This session also aimed to demonstrate clinical role modelling and engagement, with people in recovery participating in the introductory session and the subsequent debrief session. The people in recovery had a history of using a broad range of substances, including but not limited to alcohol, heroin and methamphetamine, and were in attendance with the students during this initial seminar and introduced to them. All interviewees were male residents of a drug rehabilitation facility and had been drug free for periods of up to 2 years.

The interviews were supervised by the medical educators, with each small group of students (4–6) interviewing up to four people in recovery separately. The educators briefly checked in with the groups but did not observe the entire interviews. Students were encouraged to take a narrative person-centred approach to the interview, thus enabling students to listen to the personal stories and see SUD and recovery from the patient's perspective, while observing how the patient narratives described some of the standardised diagnostic criteria for SUD.

The debrief session allowed students and people in recovery to share their experiences of the session and provided contact points for students and those in recovery for personal support.

Students who agreed to participate completed a questionnaire investigating attitudes towards SUD immediately before and after the seminar. Student demographics, including age, gender and previous qualifications, were included.

The pre- and post-assessment questionnaire was modelled on the modified Alcohol and Alcohol Problem Perception Questionnaire (AAPPQ) (Anderson & Clement, 1987). To reflect current patterns of drug use and reduce questionnaire completion time, some changes were necessary. The changes to the previously validated questions were kept to a minimum, with some legacy stigmatising terminology, such as the use of the word addict, included.

The questionnaire used a 5-point Likert scale ranging from strongly disagree to strongly agree. All questions are included in Table 1.

Table 1

Summary Results from Pre- and Post-Seminar Questionnaires

q = Question Number % = % of Total Responses		Post-seminar n = 102	Post-seminar n = 102	Chi²	*P* value
		Agree	Agree		
Role legitimacy					
Doctors have a responsibility to care for patients with					
q10	alcohol problems	111 (94%)	101 (99%)	3.8	0.05
q20	heroin problems	108 (92%)	100 (98%)	4.5	0.0339
q30	methamphetamine problems	107 (90%)	101 (99%)	7.38	0.0066
I feel I have the right to ask patients questions about					
q8	alcohol consumption	104 (88%)	98 (96%)	4.59	0.032
q18	heroin use	103 (87%)	95 (93%)	2.08	0.1493
q28	methamphetamine use	103 (87%)	97 (95%)	4.04	0.0445
General attitude					
In general, I don't feel that I'd like					
q2	problem drinkers	13 (11%)	2 (2%)	7.06	0.0079
q12	heroin addicts	17 (14%)	3 (3%)	8.7	0.032
q22	methamphetamine addicts	25 (21%)	3 (3%)	16.39	0.00005
I can't understand why					
q3	problem drinkers keep drinking	7 (6%)	4 (4%)	0.46	0.49
q13	heroin addicts continue to use heroin	9 (8%)	6 (6%)	0.26	0.61
q23	methamphetamine addicts keep using methamphetamine	9 (8%)	4 (4%)	1.35	0.2451
I believe I would often feel uncomfortable when working with					
q5	problem drinkers	17 (16%)	5 (5%)	6.85	0.0089
q15	heroin addicts	36 (31%)	4 (4%)	25.99	< 0.00001
q25	methamphetamine addicts	32 (28%)	3 (3%)	23.9	0.00001
Intervention is rarely successful for a patient with					
q6	an alcohol problem	14 (12%)	2 (2%)	7.96	0.00479
q16	a heroin problem	13 (11%)	4 (4%)	3.86	0.049

q = Question Number % = % of Total Responses		Post-seminar n = 102	Post-seminar n = 102	Chi²	*P* value
q26	a methamphetamine problem	15 (13%)	4 (4%)	5.56	0.0206
Pessimism is the most realistic attitude to take towards					
q4	problem drinkers	5 (4%)	0 (0%)	2.22	0.49
q14	heroin addicts	7 (6%)	0 (0%)	3.93	0.047
q24	methamphetamine addicts	9 (8%)	1 (1%)	5.57	0.01826
Confidence					
I feel as a doctor I will be confident to talk to my patient about					
q7	their problem drinking	66 (56%)	85 (83%)	10.24	0.0014
q17	their heroin addiction	53 (45%)	83 (81%)	30.81	< 0.00001
q27	their methamphetamine addiction	56 (47%)	82 (80%)	18.76	0.00002
Motivation					
I could not imagine working with patients with drug and alcohol problems as a career.					
q31		16 (14%)	6 (6%)	3.58	0.058
As a doctor, I would be happy to have in my practice patients who are					
q9	problem drinkers	99 (84%)	98 (96%)	8.67	0.0032
q19	heroin addicts	75 (64%)	90 (88%)	17.76	0.000025
q29	methamphetamine addicts	76 (64%)	88 (86%)	13.79	0.0002
In general, it would be rewarding to work with patients who are					
q1	problem drinkers	58 (49%)	87 (85%)	31.80	< 0.00001
q11	heroin addicts	48 (41%)	79 (77%)	30.3	< 0.00001
q21	methamphetamine addicts	49 (42%)	76 (75%)	24.26	< 0.00001

Survey delivery

An administrator not otherwise connected with the study administered and collected the students' consent forms and attitudinal questionnaires before and after the session. Students were instructed to only complete the post-seminar questionnaire if they had completed the pre-seminar questionnaire, with the number of participants recorded. Questionnaires were anonymous and non-identifiable, an institutional ethics approval requirement, and thus were not paired and could not be assumed to be independent.

Statistical analysis

Responses of strongly disagree, disagree and somewhat disagree were classified as *disagree*, and agree or strongly agree were classified as *agree*. The before- and after-questionnaire results are presented as frequencies/percentages of students who agreed with the statements. For the purposes of statistical analysis, because pre- and post-questionnaire data could not be paired, the two groups were assumed to be independent and Chi squared testing used to determine if there was a significant difference between the pre- and post-seminar groups.

Results

Two hundred and six students attended the seminars in 2016, with 118 (57%) students agreeing to complete the pre-seminar questionnaire. Of these respondents, 102 (50%) also completed the post-seminar questionnaire.

For participating students, 102/118 (86%) were less than 30 years of age and 71/118 (60%) were female. All students were postgraduates, with 87/118 (74%) having a science or biomedical science undergraduate degree. The remaining students had degrees in other diverse fields, such as arts, pharmacy, engineering and commerce.

Results from the pre and post questionnaires are presented in Table 1. For most of the domains covered by the questionnaire, the proportion of students agreeing with each statement significantly increased ($p < 0.05$) following the seminar, indicating a positive change in their attitude towards working with people with SUD. Questions were grouped into those relating to role legitimacy, general attitude, confidence and motivation.

Students identified that they had a good understanding of why people used substances before the seminar, with only 6–8% of students agreeing with questions such as "I can't understand why problem drinkers keep drinking". The small change in agreement with these statements after the seminar (4–6%) was not significant.

Before the seminar, students widely agreed with the questions related to role legitimacy, including a responsibility to care for patients with SUD (90–94%), which showed a small but significant increase after the seminar (98–99%). Students also felt they had the right to ask patients questions about drug use (87–88%), with a small increase in agreement after the seminar (93–96%). This represented a significant change for alcohol and methamphetamine but not for heroin use. Initial responses to statements relating to student confidence in dealing with people with SUD were lower (45–56%), yet they increased significantly after the seminar (80–83%). For the questions related to comfort, before the seminar, a substantial number of students were uncomfortable when speaking with people with SUD, in particular, methamphetamine users (28%). This dropped significantly (to 3%) after the seminar. Students initially had low rates of agreement on motivation-related questions, for example, whether it would be rewarding to work with people with SUD (41–49%). This increased significantly after the seminar (75–85%).

Discussion

In the current study, students were observed to positively change their attitudes and empathic responses following a structured 3-hour seminar. Before the seminar, student responses had high agreement with the questions related to knowledge, responsibility and role legitimacy for SUD management, suggesting students accepted that they would have a duty to understand and treat SUD. However, their initial responses to statements relating to their general attitude and confidence, the "I don't like" and "I feel uncomfortable" questions, suggested they did not feel comfortable or confident with this role nor anticipate that it would be rewarding or that persons with SUD would be likeable. In contrast, following the seminar, these general attitude questions showed the greatest and most significant change, with more students anticipating that working with people with SUD could be professionally rewarding, that they could become confident working with them and they could be less pessimistic about SUD. Overall results suggest that the seminar had a positive effect on the general attitude and confidence of medical students in working with people with SUD.

It is not uncommon for healthcare professionals to have negative attitudes towards persons with SUD and perceive treatment of these people as challenging, stressful and difficult (Van Boekel et al., 2013). In turn, patients diagnosed with SUD are critically attuned to these attitudes from healthcare professionals, and anticipated stigmatisation or negative attitudes is a major reason why people with SUD do not seek professional help (Barney et al., 2009). Accordingly, negative attitudes of health professionals towards people with SUD contribute to suboptimal healthcare (Van Boekel et al., 2013). This is concerning due to the high prevalence of SUD globally and the associated psycho-social and physical harm caused by drug use.

The potential for medical education to promote empathy is questionable, with modernist medical practice described as promoting a cognate professionalism (Shapiro, 2008), with patients approached as objects of interest rather than a sympathetic subject. Changing attitudes and empathy through structured educational activities is more difficult than imparting knowledge or teaching practical skills (Woloschuk et al., 2004). Factors that are known to mitigate stigmatising attitudes are attribution beliefs, knowledge of and experience with a stigmatised condition (Corrigan et al., 2003).

Students have experiences with people who have SUD during various clinical placements in medical school, which may unintentionally expose students to the attitudes of a wide range of health and other professionals who may not be aligned with the medical school curriculum on professionalism and may themselves exhibit stigmatised attitudes towards those with SUD (Woloschuk et al., 2004). Moreover, hospital exposure to SUD rarely allows students to appreciate the journey of those diagnosed with SUD.

Substantial clinical placements under the supervision of addiction medicine specialists have been shown to positively influence students' attitudes towards people with

SUD (Silins et al., 2007), however competing discipline training interests and time commitments within a medical curriculum do not always allow curriculum time for all students to have this extended exposure. Accordingly, teaching and learning methods that are less time consuming and resource intensive are required to provide needed input to students.

As people with SUD are often stigmatised, and students may not choose to encounter them in their daily life, this may limit students' professional engagement to scientific altruism. If students view the complex nature of people with SUD as a difficult problem to be solved, perhaps influenced by observing hospital patients at a crises point in their SUD, it may limit their desire to draw closer and connect (Shapiro, 2008). The seminar in this study allowed students to reframe their interactions with people with SUD and simply listen to the narratives of people in recovery, making it easier for students to see the person rather than the SUD.

Limitations

The pre-post design may have some response shift bias. Students were offered the pre and post questionnaires separately to reduce bias from students referring to their previous answers in the post questionnaire. However, to maintain confidentiality, an institutional ethics requirement, the questionnaires were unpaired. Samples were assumed to be independent for the purposes of statistical comparison, yet undoubtedly many of the questionnaires represented paired data. Potentially our p values may have been falsely high.

Conclusion

This study shows an improvement in attitudes post a single 3-hour session where medical students engaged and listened to patient narratives of the often-stigmatised condition of SUD and may be predicted to induce empathy towards people with SUD overall. Such an educational intervention may be implemented to aid with medical student empathy development where curriculum time or resource availability does not allow for more substantial activities, such as clinical placements under the supervision of addiction medicine specialists. Further, this initiative might help balance hospital exposure to SUD patients, for instance, in emergency department presentations, or end-result morbidity observed in the medical or surgical wards, where available time to appreciate the full predicament of the person with SUD is rarely available. This brief activity required few resources beyond the generosity of time donated by our participants (recovering SUD persons) and could be included in any health degree curriculum with a focus on professionalism.

Conflicts of interest and funding

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article. The authors reported there is no funding associated with the work featured in this article.

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