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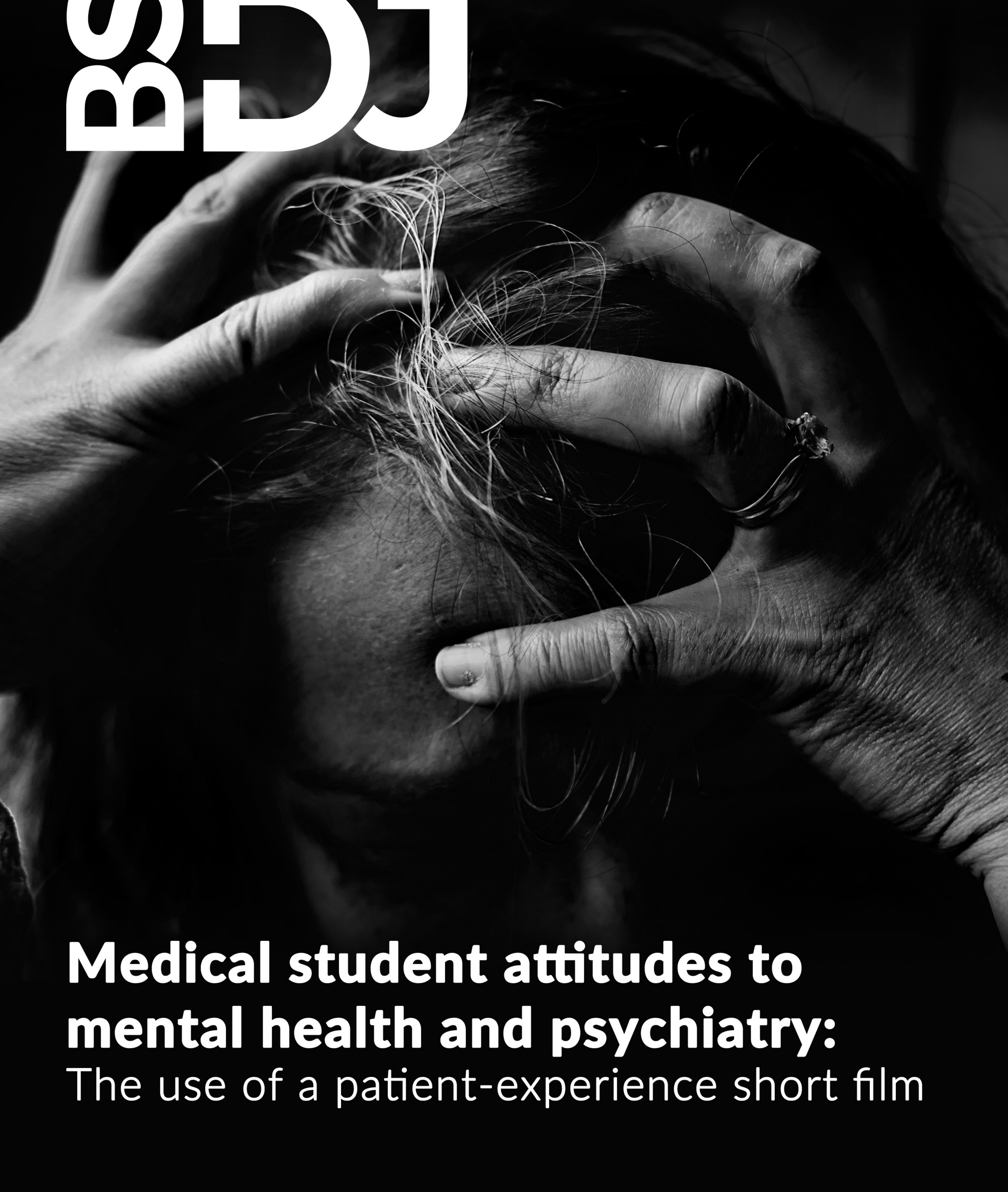

Medical student attitudes to mental health and psychiatry:

The use of a patient-experience short film

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Editorial

Editorial

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Welcome to the first issue of volume 2 of *The British Student Doctor*. This is our second year of publishing this biannual, diamond open access, peer-reviewed journal for medical students. Whilst our first year involved many challenges, establishing the brand and mission statement of the journal, meeting with designers, solicitors and other professionals, our second year has also been a challenge in other ways. As co-editors of this journal, but also as new junior doctors within the NHS, we have had to learn to balance the stresses of modern clinical practice within an understaffed healthcare system, whilst remaining diligent to our academic commitments. An important part of this transition from medical student to junior doctor has been about protecting our own mental health – striving to remain mindful of the pressures that we face and the need to look after ourselves before we can care for others.

It is known that rates of anxiety, depression, burnout and suicidal ideation are significantly higher in medical students than the general population. (1) 1 in 10 medical students experience suicidal thoughts (2) and a recent systematic literature review found that psychiatric morbidity among UK doctors can be as high as 52%, whereas the prevalence of common mental disorders in private UK households is only 21%. (3)

If mental health issues are not handled appropriately at earlier stages of a student's career, this inevitably holds a poor trajectory for the psychological wellbeing of doctors in the future. Numerous hypotheses explain the high incidence of mental health issues in medical students and doctors. Medicine is known to be one of the most intensive career paths, with a high workload and frequent assessments, which further contributes to an over-competitive environment. (4) Medical students and doctors are also known to have high levels of neuroticism and conscientiousness, which often results in greater levels of stress. (5) From an early stage, students are exposed to stressful and emotionally driven environments, requiring a professional approach. The increasingly litigious, bureaucratic and rapidly evolving nature of the profession also contributes to the high levels of perceived stress. (6)

Various avenues have been explored to manage medical student mental health issues. Earlier methods include increasing access to mental health services, whereas more recent approaches also include developing wellbeing programmes, as well as the introduction of mindfulness practice. (1) Mindfulness is a process to become more conscious of the present moment to manage thoughts, feelings and strong emotions. If an individual becomes more self-aware, they are less likely to experience compassion fatigue and burnout. (7)

Mindfulness practice is growing in popularity throughout medical schools worldwide. A literature review in 2013 found that 14 medical schools taught mindfulness practice. Since then, the number has been steadily increasing. The first *'Mindfulness in Health and Higher Education'* conference was held in 2016 at the University of Leicester (UK) and, since then, first-year students at the medical school have also received mindfulness training. (8) We are thus pleased to publish a letter by Dr Jonathan Hales, Lead for Mindfulness and Resilience at University of Leicester, in response to *'Why Mindfulness matters in Medical Education'*.

A landmark trial by Galante et al. found a positive result, in that the provision of mindfulness, as part of a wellbeing service, improves outcomes in mental illness in students aged 18 years or older. (9) Therefore, to tackle the ever-increasing prevalence of mental illness, could practice-based techniques such as mindfulness be the solution to increasing resilience within medical schools and thus, clinical environments?

In this issue of *The British Student Doctor*, we publish a piece of original research by medical students from Cardiff University which explores medical student attitudes to mental health and psychiatry, through the use of short films. In their well-executed study, they find that stigmatising attitudes can be reduced by the use of patient stories – these films act as triggers for our ability to empathise. Interestingly, the students in the study were found to be more likely to discuss their own mental health with a friend or colleague after the intervention. However, 31% of medical students would still not admit their own mental health conditions to their peers. Perhaps it is not just our patients who we may stigmatise, but also our fellow colleagues. In the ever-stressful environment of modern clinical practice, we need to create a culture where mental health is accepted, embraced and valued. If not, how can the medical profession be ready to care?

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Original Research

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.

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 Medcinie 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."

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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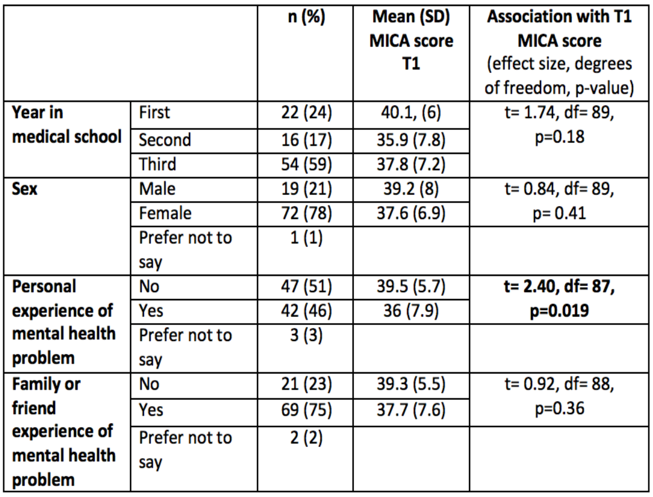
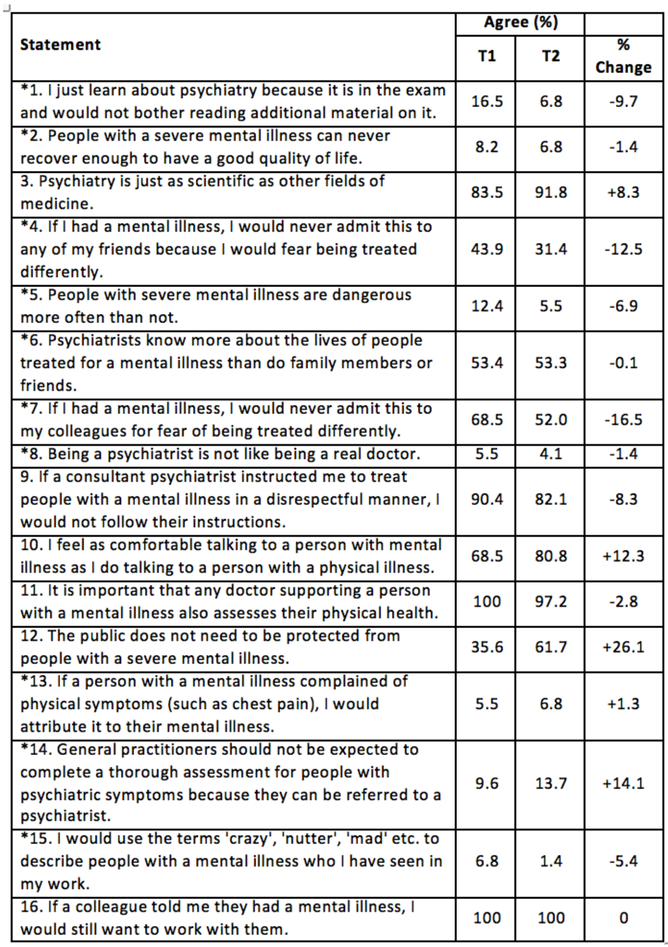
FIGURES

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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Discussion

Medicalisation: the definition of disease and the role of tomorrow's doctors

DISCUSSION

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ABSTRACT

Medicalisation transforms formerly non-medical aspects of human life, bringing them under what Foucault called 'the medical gaze'. Physicians, the definers of disease and gatekeepers of diagnosis, have traditionally held the sole power to medicalise. However, as the patient-doctor dynamic and medical training continues to shift away from a paternalistic model towards holism, and we enter an era where personalised medicine is becoming more prominent, medicalisation is increasingly driven by external forces. These forces range from pharmaceutical companies to socio-political movements to patients themselves. Medical students and physicians have a responsibility to understand these forces and how they influence the practise and scope of medicine.

Medicalisation is "a process by which some non-medical aspects of human life become to be considered as medical problems". (1) As future diagnosticians and definers of disease, medical students will play a part in medicalisation; however, the 'engines' of medicalisation are increasingly shifting to external forces which medical students and practitioners have a responsibility to understand. (2) This paper examines how medicalisation is occurring within various social, political and environmental spheres, and how medical students inherit responsibility for the complex problems that subsequently arise.

The sociological constructs of health, illness and disease labelling

To understand medicalisation, it is essential to recognise the ambiguity in the definition of disease. Objective criteria or results plotted on a normal distribution are often the clinical standard for health or disease; however, this approach may be reductionist, losing the impact and nuance of disease in the patient's context. The World Health Organisation (WHO) takes a more holistic view, defining health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". (3) However, this definition may medicalise areas of human experience which are non-pathological variations – for example, the 'non-diseases' described by the BMJ, which include socially important issues such as ageing. (4) For example, although it is normal to experience a decline in physical ability with age, (5) the WHO definition suggests that most or all elderly people are unhealthy, a blanket description of a heterogeneous group. There is in fact marked variation in health status in older people (6) and self-rated well-being is among the highest of any age group in the UK. (7)

Healthcare medicalisation

Diagnosis and disease labelling is an essential part of medicalisation. As medical practitioners, we should be aware that labelling a patient with a disease is not a trivial or benign act. It impacts the human experience - it may be cathartic, or it may lead to anxiety and stigma, requiring considerable work to pass as 'normal'. (8)

For example, a patient in his seventies presents to the memory clinic. His wife has noticed a progressive decline in his memory and cognitive ability. His father had a long and difficult battle with Alzheimer's disease. He insists that he receive no diagnosis and the symptoms be attributed to old age. This is a difficult scenario as diagnosis and treatment of these symptoms may help to slow the disease progression, but the distress of anticipating what happened to his father means that a lack of diagnosis outweighs the benefit of receiving one.

It may be difficult to avoid medicalisation through disease over-labelling. The following case demonstrates how the desire of medical practitioners to diagnose and classify may mean that avoiding one form of medicalisation leads to another.

A young man presents to a genito-urinary medicine (GUM) clinic with pearly penile papules who insists on their surgical excision. The doctor explains that this is a normal variant and suspects that surgery will not address the patient's underlying dissatisfaction with his body image. The doctor considers his psychological needs and whether he could have body dysmorphic disorder (BMD). However, it is important to establish the degree of interference with daily life in order to distinguish BMD from non-pathological body dissatisfaction, otherwise the practitioner may be substituting one medicalised diagnosis for another. (9) Inappropriate diagnosis would lead to the harms of stigma and over-treatment.

There is also the potential for iatrogenic harm in medicalisation through over-diagnosis and over-treatment. Once the diagnostic label is received, the patient enters the medical world and is then potentially subject to unnecessary invasive and harmful tests and treatments. This is particularly important in screening programmes – over-diagnosis occurs when screening identifies an illness which would not have caused problems during the patient's lifetime. For example, screening for abdominal aortic aneurysms to pre-empt rupture will identify some cases which would, in fact, have remained asymptomatic. Selection of appropriate patients to intervene with is therefore important - if the deaths from preventative surgery outweigh the deaths due to the condition going unnoticed, harm has been done. (10)

Finally, increased diagnosis might not benefit anyone – identification of papillary thyroid cancer has increased threefold in 30 years, yet the death rate has remained stable, suggesting 'zealous imaging' has merely identified many low-risk tumours. (11)

Political and social medicalisation

A recent emerging trend has centred around medicalising issues formerly considered to be socio-political problems, influencing how they are dealt with and their impact on human experience. For example, the Weight Management Centre reports a trend in depoliticising obesity by medicalising it into a diagnosis. (12) This shift invokes Parsons's 'sick role', (12) absolving the patient of responsibility for their obesity and placing the onus of recovery on medical treatment with the compliance of the patient. This classification of disease has led to voluntary public health initiatives such as 'Change 4 Life', which emphasise to the public the importance of changing behaviours. However, they fail to address the social barriers to change and reasons for obesogenic environments. (13) These campaigns may widen health inequalities because obesity disproportionately affects people from lower socioeconomic backgrounds, (13) who tend to be less responsive to voluntary interventions.

Social medicalisation may also occur in the context of attempted harm reduction. For example, healthcare providers in Kenya have provided medicalised female genital mutilation (FGM), with the rationale that a minor 'symbolic' or 'psychological' procedure with proper infection control and anaesthesia will be safer than dangerous community procedures which would nevertheless occur. Although direct harm is minimised, indirect harm occurs as this legitimises the practice of FGM and therefore acts as a barrier to its reduction. (14) In this instance, medicalisation fails because it does nothing to alleviate the social harm and even worsens the oppression of women.

Disease-mongering

'Disease-mongering' is a form of medicalisation where a party promotes the recognition of a new disease. There are myriad examples of diseases which have become medicalised and part of social discourse largely as a result of concerted pharmaceutical campaigning. These include erectile dysfunction, generalised anxiety disorder and attention-deficit hyperactivity disorder. (2) Although direct-toconsumer drug advertising is not permitted in the UK, pharmaceutical companies exert an influence on what constitutes disease via physicians. Pharmaceutical sales representatives have been demonstrated to impair rational prescribing by physicians, leading to the favouring of non-generic versions of medications and the prescription of higher doses. (15) It is therefore not unreasonable to propose that pharmaceutical influence could increase physician medicalisation, which may not be in patients' best interests. To provide independent and objective information to patients, physicians must recognise their own biases and consider that they may medicalise even unknowingly because of pharmaceutical influence.

Medicalisation may also be driven by patients themselves. Social media and the Internet provide spaces for patients – identified or anonymous – to gather and share illness experiences. These can be especially beneficial for patients with rare diseases and those who are stigmatised. (16) However, self-diagnosis symptom checker websites often triage poorly and are risk-averse, (17) assuming the worst case scenario for symptoms, which may cause anxiety over benign symptoms. If this could lead to inappropriate self-treatment and distrust of mainstream medicine where it contradicts the collective experience of the group, we have a duty to understand and address the practitioner-patient gap that these spaces fill.

Holism and medicalisation

Through understanding disease as a spectrum of experiences unique to each patient, holistic medicine attempts to reverse the 'medical gaze' described by the philosopher Foucault, (18) which medicalises states of being by reducing people to malfunctioning parts. Holism may therefore be seen as a method to reduce medicalisation by considering a patient's biological, psychological and social milieu. This is reflected in the General Medical Council's expectation of doctors to work in partnership with patients. (19)

However, it may be argued that holism, including newer forms such as personalised/system medicine and emphasised patient choice, paradoxically encourages medicalisation for the same reason. If disease is inherently part of the patient's life experience then that life experience is increasingly subject to examination, diagnosis, and alteration by medicine. This has been described as 'the medicalisation of health and life itself'. (20)

The role of medical students

Medicalisation is a multi-faceted issue with various drivers, from healthcare practitioners and the pharmaceutical industry to social and political players. What role do we as students have in this process? As students and those just entering practice, we will experience a world of medicine which is becoming increasingly complex and specialised. For all we learn about diagnosis, we are taught little about over-diagnosis, over-treatment and medicalisation. Perhaps it is our role to observe the sources of medicalisation in our own practice: the next time you are in a clinic or on a ward round, you should consider the balance of the interaction and who instigates the medical or surgical approach – the practitioner, the patient, or an outside force?

We should engage with our patients and understand what motivates their perceptions of health and disease. We should be judicious in requesting investigations and performing procedures and be equipped to understand and question the evidence base of clinical recommendations. It may seem self-defeating for doctors to limit the scope of medicine; however, we should keep in mind always that the patient is our first concern. We must take time to place the patient at the centre of care and consider the whole person.

Finally, we must also take care to consider the boundaries of medicine and to what degree it should influence our society, politics and our patients' lives. If medicalisation is inevitable, care must be exercised to ensure that it occurs in ways which benefit the human experience for all members of society.

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Discussion

An inconsistency in our labs

DISCUSSION

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ABSTRACT

There is a gaping disparity between the way we practise medical research and the way we practise medicine; it is a significant void and one that shows no signs of shrinking. While the UK and the NHS go about treating patients in a deontological fashion, based on the principles of an age-old oath of doing no harm, we are utilising cold utilitarianism in research on animals.

The UK general public are animal lovers. Indeed, we were the first to introduce animal welfare laws in 1822 (1) and have since led the field in the protection of animals used for research and in prevention of cruelty to animals through the Animal (Scientific Procedures) Act 1986 (2) and the Animal Welfare Act 2006. (3) As is often the case, animal welfare laws reflect public opinion and behavior. It is evident from donations to animal welfare charities that we are fond of animals; in 2010, the RSPCA and RSPB were the 12th and 15th most popular charities in Britain, and the Don-key Sanctuary came in five places ahead of Medicines Sans Frontier. (4) On the whole, it is fair to say that we shy away from animal cruelty, even towards beings not covered by animal welfare laws, such as insects. Cruelty to mammals tends to evoke a gut reaction of distaste; testament to this is the number of children who become vegetarians after learning where burgers come from (though often only until they have forgotten their visit to the farm).

Animal research is usually portrayed on a spectrum of vilification. That which is done for the de-velopment of cosmetics is widely regarded as bad, again reflected in law, this time at a European level, with a total ban on all cosmetics or ingredients tested on animals. (5) That which is done for non-essential, but beneficial, medical treatment is often considered a grey area. And those research studies which are credited with directly saving human lives are generally perceived to be morally permissible, though for decades the mantra of replacing animal research with suitable alternatives wherever possible has been preached. (6)

The latter viewpoint is justified on utilitarian grounds; that the many will benefit at the expense of the few (or rather, that we choose the many to benefit, rather than the few). We permit harm to animals based on the assumption that human lives will be saved as a result. Early literature that discussed the problems surrounding animal testing concentrated on whether or not animals suffer and feel pain. It is now generally accepted that they do and science muses on the extent to which animals suffer. (7) Furthering our understanding of animals is a laudable scientific aim in itself, even more so if the knowledge gained is used to justify the replacement of animal testing and provide alternatives, thereby reducing animal suffering. It is clear that animal testing causes harm to animals but that this is done in an attempt to alleviate human suffering. What is not clear is the extent to which we should allow this, and where the line should be drawn.

Utilitarianism is largely ignored in the day-to-day practice of medicine. If you were to patrol the wards looking for organs to harvest and old people to kill you would receive a swift notice from the GMC and an even swifter visit from the police. As a rule, we treat the patient in front of us, ignoring the effects this will have on future patients. Doctors do play a pivotal role in deciding where the government spends its healthcare budget, but these are specific doctors, away from the patients their decisions will impact. With the exception of some policies, such as the Cancer Drugs Fund, which remain controversial or are even publicly lambasted, we allocate resources on a strict rule-utilitarian basis; those services that can provide so many Quality Adjusted Life Years, for so much funding, are adopted. This enables us to do the most good for the most number of people, while never having to deny someone a reasonable treatment.

Unlike resource allocation, and like day-to-day practice, research does not usually operate on a utilitarian basis; this is solely reserved for animal testing. Placebo controlled studies in humans are frequently impermissible because they would require one cohort to receive suboptimal care. If early results from a study show significant detrimental effects, the study is stopped. All research proposals must undergo rigorous ethical approval. If you want to deceive a study participant, or expose them to potential harm, you would need to obtain full and informed consent from volunteers. Pharmaceutical research in pregnancy and children is near enough impossible to complete because the risk to both mother and child is deemed to be too high, no matter how promising the treatment or intervention under investigation nor how great the benefit may be to others. This, rightly, is not a utilitarian approach. First, do no harm.

The problem of inconsistency arises. If exposing human volunteers to sub-optimal treatment is unacceptable, why is it acceptable to test on animals in order to advance human medical knowledge? To do so is not in-keeping with traditional, deontological medical practice in the UK. Doctors do not sell their patients down the river because there is greater benefit to be found in their sacrifice - this would go against the very essence of deontology, which focuses on the duty itself: the duty of a doctor to protect each person who comes under their care, as an individual and irrespective of the impact this may or may not have on others. The inconsistency is this: we request expensive emergency procedures because we worry that it could be us or a loved one in that emergency room next, no matter how much more efficiently that money could be spent, but we also support animal testing because it benefits the human race, despite causing direct suffering to animals. It would appear we have a double standard. It is a tricky balance and these are tricky questions, which is why we do not expect the public to proportion the health care budget. We do, however, expect our regulatory, governing, and funding bodies to have considered their approach to the situation and come at it with some consistency.

It might be argued that ‘first, do no harm’ is applicable to humans only, and that, therefore, we are not in breach of our deontological principles by causing harm to animals to better treat ourselves. However, as a rule this is not how we behave. We have already discussed animal protection laws which prevent the total disregard of animal welfare, and our tendencies to donate to animal charities. All of these things benefit animals, arguably with some detriment to humans and yet we go about them anyway. If this were a deontological principle, we would be in direct contradiction to it.

Likewise, the issue of pragmatism should not feature in this discussion; whether test 'A' or test 'B' is more efficient has no bearing on their ethical consistency with test 'C'. Of course, it would be more expensive, time consuming and restrictive to medical research if we only tested on humans, but the argument I am presenting concerns consistency. You can believe that animal research should continue and still appreciate that we do not conduct research in a way that is con-sistent with other ethical principles in medicine.

It seems that we are justifying animal testing by applying utilitarian principles to our actions, but this is not something we do anywhere else in medical treatment or research. Utilitarianism in healthcare is not used to support harm-doing and it would be worrying if it were. While we understandably want to do good for our own species, it is in opposition to our visceral reactions and reflected beliefs to harm other species in the process. The tide has already turned on cosmetic research; perhaps it is not a case of if, but when, we will look back on animal testing in medical research as a breach of our moral code. The medical profession may be hesitant to accept it, but if we are to maintain consistency in our convictions, research must only be conducted on consenting volunteers. Permitting harm to one being for the sake of another is the epitaph of an uncaring society.

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Education

Enhanced recovery after surgery: the future of elective arthroplasty?

EDUCATION

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ABSTRACT

Summary

Enhanced recovery after surgery is a method of streamlining the patient journey pre-, intra- and post-operatively in order to account for foreseeable and unforeseeable barriers to recovery. Originally pioneered in general surgery, the technique has been adopted in other specialities, given its potential to minimise the duration of hospitalisation, hasten recovery and improve patient experience. Enhanced recovery programmes are of particular interest in orthopaedic surgery, where patients who often have multiple comorbidities could gain substantial benefits from more efficient management. This is particularly pertinent given the rising prevalence of age-related joint disease requiring arthroplasty: Enhanced Recovery is more economically and clinically efficient.

Relevance

Enhanced recovery is a relatively novel - heterogeneously implemented – method of managing the surgical patient journey. Intrinsic to the success of such programmes is a thorough understanding of its components and close communication within the multidisciplinary team. Medical students' understanding of what these protocols involve will significantly affect their management of foreseeable – and unforeseeable – barriers to success in elective surgical patients during clinical years and in their future practice. It is therefore essential that all medical students – whether they have an interest in a surgical career or not – have a grounding in the components of enhanced recovery, because such programmes will form part of their practice at some point in their careers.

Take-home message

Enhanced recovery is a proactive intervention, which has been shown to be extremely effective across a number of surgical disciplines in reducing length of stay, whilst maximising postoperative outcomes. Trainees would benefit from a detailed knowledge of enhanced recovery programmes in order to provide a higher standard of care during their encounters with patients at every stage of the surgical pathway.

Enhanced Recovery Programmes: An Introduction

Enhanced Recovery After Surgery (ERAS) is a proactive, multifaceted approach focused on reducing postoperative morbidity and convalescence. The approach standardises the entire surgical pathway - informed by advancing knowledge of the perioperative stress response - in order to minimise adverse events and hence, safely reduce length of hospital stay. (1, 2) These reductions in average length of stay are highly cost-effective, due to a reduction in post-operative delays and the need for additional interventions. (2) ERAS was pioneered in the late 1990s by Kehlet in colorectal surgery as a response to the inadequacy of "unimodal responses to multimodal perioperative morbidity". (3, 4)

A General Overview

ERAS encompasses a set of approaches and values aimed at patients undergoing major surgery. Many of the principles revolve around two questions: "why are surgical patients at risk?" and "why is a surgical patient currently in hospital?". (5) This prompts clinicians to attempt to identify and minimise known and unknown adverse events, ultimately improving the patient experience. (6) ERAS streamlines patients' pre-, peri- and post-operative treatment and focuses on improving surgical techniques, employment of regional anaesthesia (where appropriate), early mobilisation, restoration of enteral nutrition and optimised postoperative pain management. (7) Consequently, limited evidence exists demonstrating that ERAS modestly increases quality of life equivalent to +0.086 QALYs compared to standard protocols (+0.006 QALYs) in hip and knee surgery. (8) However, the clinical significance of this remains to be corroborated in larger studies and is a key area for future investigation.

ERAS forms part of the modern "surgical revolution", focused on reducing perioperative stress and maximising recovery, whilst also reducing the need for unnecessary additional interventions. (1, 6) This shortened recovery period in conjunction with optimised pain relief is advantageous in orthopaedic procedures, as it reduces the duration of convalescence prior to mobilisation. (1) The end goal is always to reduce length of stay and maximise rehabilitation that may be hindered by the hospital environment. (4, 9) However, a key question is whether striving for earlier patient discharge is a desirable or even a beneficial goal. There was concern that premature discharge could increase complication rates, resulting in a rise in readmission of up to 13% and reduced patient satisfaction. (2, 10) Yet, enhanced recovery has been shown to result in no change in orthopaedic readmission rates compared to patients on traditional surgical pathways (ERAS: 4.8%; traditional pathways: 4.7%). (10) Furthermore, enhanced recovery has been shown to reduce length of stay by up to 3.5 days in colorectal patients, whilst causing no significant difference in mortality. (2)

ERAS Programmes in the UK

Since the millennium, 14 NHS Enhanced Recovery innovation centres have been established. These have received widespread support from clinicians, management and patients. However, ERAS programs are inherently heterogeneous due to their patient- and specialty-centred nature. Therefore, a standard enhanced recovery programme acts as a blueprint on which to map and adapt to local needs. (2, 11) Uptake has been slow, often due to organisational inefficiency and multidisciplinary resistance to change. (3, 4)

The Components of ERAS

Enhanced Recovery is most effective as a pre-emptive protocol, optimising the entire surgical pathway (Figure 1). (9) This pathway can be applied to all patients with modifications to meet specific needs, empowering the patient to become an active participant in their recovery. (4)

1. The Preoperative Phase

At this stage, patients are actively educated about their condition and the surgery that they are to undergo and the expected day of discharge is recorded, ensuring that all team members are working towards a common goal. (4, 12) This sets discharge expectations, creating a "length of stay boundary". Additionally, education aims to psychologically prepare patients by setting expectations of postoperative pain and discomfort. (7, 9) These steps ensure that patients "go ahead" and "stay ahead" of impediments to rehabilitation. (6) All patients undergo preoperative assessments to identify significant comorbidities, which can then be proactively optimised. (7) Physical or social impediments to rapid recovery are assessed and a plan for perioperative anaesthesia and postoperative analgesia is formulated (Figure 1). (4, 13)

2. The Perioperative Phase

Perioperative considerations are factors that inhibit prompt rehabilitation including: pain, stress response, nausea and vomiting, hypoxaemia, fatigue, immobilisation and drains (Figure 1).

Broadly speaking, the use of regional rather than general anaesthesia is a crucial component of ERAS. (4, 6, 10) In addition, perioperative local anaesthetic infiltration around joints reduces pain and facilitates prompt ambulation. Hence, early discharge can be achieved without risking adverse outcomes. (4, 9-12) Opioid analgesics should be rationed at all stages of the pathway, due to their side-effect profile which can delay rehabilitation. (5) The gold standard for lower limb arthroplasty is a spinal block lasting up to 4 hours. (13) This ensures that mobilisation on the day of surgery is an achievable goal. This is essential because failure to mobilise on the day of surgery results in abandonment of ERAS in up to 80% of arthroplasties. (1, 4, 5, 14) Finally, adopting minimally invasive techniques and reducing operation times can minimise the inflammatory response, resulting in reduced pain, morbidity and length of stay. (7, 9)

3. The Postoperative Phase

From postoperative day 2 onwards, recovery relies on resolving pain and fatigue. Therefore, postoperative hospital stays should be minimised as they are associated with fasting, sleep deprivation and immobilisation. (5) During the post-operative period, compliance can fall from near 100% to as low as 20%. (2)

Proactive postoperative mobilisation within 3-5 hours promotes early discharge in addition to reducing muscle wasting and venous stasis. (3-5, 10) However, only 33% of total knee arthroplasty patients mobilise on the day of surgery. Hence, round-the-clock physiotherapy should be available to facilitate mobilisation. (9) Additionally, prompt re-establishment of enteral nutrition correlates positively with swift post-operative recovery, through aiding recovery from the surgical stress response and maintaining muscle mass and strength, enabling early and sustained ambulation (Figure 1). (4, 7, 10)

Evidence Supporting ERAS

Enhanced recovery represents a shift towards a "well-patient" model in elective surgery. (1, 6) The largest observational study into ERAS showed a reduction in the mean length of stay from 8.5 to 4.8 days, with no significant change in readmission rates. (6, 9, 10, 12) Translating this to UK orthopaedic practice, this could potentially free up almost 5,500 bed days. If scaled up to the whole NHS, this could save over 430,000 bed days per year, enabling more procedures to be carried out without increasing capacity, and creating an annual saving of £118 million. (10) There is also evidence that ERAS results in reduced death rates postoperatively at 30-days (0.5%-0.1%) and 90-days (0.8%-0.2%). (10) However, as previously posited, the evidence base is limited with a lack of data focusing on quality of life outcomes, resource use and cost-effectiveness. (13) Furthermore, evaluation of whether accelerated discharge simply shifts the burden of postoperative care from the hospital to the rehabilitation-setting is an essential avenue for investigation. (4)

ERAS: An Orthopaedic Perspective

Osteoarthritis currently causes pain and disability in at least a third of the adult population and over 120,000 primary hip and knee replacements are performed annually in the UK. (9, 12) In the coming years, demand for joint replacements is likely to rise with a trend toward increasingly elderly patients with multiple comorbidities (a mere 12.7% of elective arthroplasty patients have no comorbidities). (14) Currently, the average length of stay in Europe for elective arthroplasty is 6-11 days (11), hence, there is a real need for optimisation of current techniques to maximise patient outcomes and increase capacity. (14) Restructuring surgical pathways to reduce patient length of stay can be advantageous for both holistic and financial reasons. (9, 15)

Identifying and optimising high-risk patients preoperatively can safely reduce length of stay. (5, 11, 14) It is also worth noting that orthopaedic patients are generally considered more high-risk because of their age demographic. (15) However, a number of other factors can impede recovery following arthroplasty including: pre-existing mobility issues, post-operative loss of quadriceps function (by 30-80%), orthostatic intolerance and organisational issues. (3, 11, 15) A pre-emptive multimodal and multidisciplinary protocol can be effective in negating factors that hinder recovery. (1, 6) Therefore, ERAS is particularly applicable to orthopaedic surgery, where the multidisciplinary team (MDT) has been integral for many years. (3, 4, 12) This well-integrated multidisciplinary structure is highly advantageous, as ERAS depends upon a pro-active - not reactive - response to potential hindrances at all stages of the patient journey. (6)

CONCLUSION

ERAS programmes streamline the surgical pathway, facilitating rapid rehabilitation. The preoperative period and attitude of the MDT are fundamental in providing patients with confidence to mobilise and psychologically cope with surgery. (9) Positive interaction with health professionals – including trainees - and pre-emptive medical interventions modify the patient's adoption of the sick role. Hence, an MDT approach with full commitment to the programme is an absolute prerequisite for success. (6)

Evidence demonstrates that enhanced recovery almost halves the duration of hospitalisation, whilst having no impact upon readmission rates. (13) The evidence base is presently of low fidelity with a real need for high-quality studies. However, in an environment with increasing demand, ERAS has the potential to maximise efficiency and patient satisfaction. Hence, it is highly likely that its utility is yet to be fully realised.

FIGURES

Figure 1: A simplified enhanced recovery pathway highlighting key considerations throughout the surgical pathway. Also references standardised examples of interventions used in elective arthroplasty patients undergoing surgery via an enhanced recovery protocol.

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Education

How is the role of the tuberculosis nurse pivotal in the multidisciplinary team?

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ABSTRACT

Summary

This report explores the significance of the tuberculosis specialist nurse, the numerous individuals that cohesively work alongside them, and how some of the difficulties that are encountered in multidisciplinary teams (MDTs) can be approached.

Relevance

The UK has the second highest rate of tuberculosis (TB) amongst Western European countries. This makes it a topic which students should be aware of, in terms of how to manage the infection and the team that is involved in the care. Many specialist nurses work in the hospital environment, thus it is crucial to appreciate the roles they perform and where they stand within the MDT, to increase effectiveness when working alongside them. Learning about the range of professionals involved can help shape the skills required to work within the MDT. This report explores the role of the TB nurse within a MDT, which can be of use to students who are yet to enter the clinical years.

Take home messages

The MDT consists of a multitude of professionals, in addition to the patient and their family, so it is fundamental to have clear communication and collaboration. The TB nurse's role is pivotal in leading the MDT, being an advocate for the patient, maintaining continuity of care and educating those involved in the patient's care.

INTRODUCTION

Tuberculosis (TB) is a notifiable infection caused by Mycobacterium tuberculosis, which frequently affects the lungs, but can also affect other organ systems. (1) The most common route of transmission is through inhaling infected air droplets. Once infected, TB can manifest as latent or active; latent TB can progress on to become active TB in a proportion of people. (2) Latent and active TB treatment require different lengths of treatment time and drug regimens. (3) Risk factors for TB include being homeless, immunocompromised or in close contact with an infected person. (4)

Over the past four years, the incidence of TB in England has plummeted by a third, with 5,758 cases in 2015. However, the UK still has the second highest rate of TB in Western Europe. (5) Despite this reduction in the overall number, the proportion of these cases with social risk factors (homelessness, drug or alcohol misuse or imprisonment) has 'increased from 9.8% in 2014 to 11.8% in 2015'. (6)

This report will aim to emphasise the role of a MDT, the challenges faced and how the TB nurse works with the team.

ROLE OF THE MDT

A MDT consists of professionals from different specialities, to provide high quality care for patients. (7) The team aims to provide personalised care for patients through an abundance of expertise and skills in numerous disciplines.

Safety Net

The MDT approach forms a safety net to prevent errors – if a patient's symptoms are not recognised by one member of the MDT, then another member can still identify them. Unfortunately, due to lack of leadership, members of the MDT may not feel permitted or able to voice their thoughts. For example, if the patient mentions symptoms they've been experiencing to their radiologist, the radiologist may not feel responsible for acting. Therefore, to provide safe care, each member should assume the role of a leader when required. (8) The patient should also be included in this team, and be directed to speak to the case manager for any concerns.

Continuity of Care

Although MDTs allow patients the flexibility to express their concerns with particular members, it can be difficult to build a rapport with each individual. Continuity of care can be achieved by ensuring that each role is carried out by the same member of the team every time, (9) such as having the monthly review for TB treatment with the same nurse. Through using this approach, issues such as patients refusing treatment for latent TB can be tackled, as the nurse can explore their reasoning and work with them. Patients may refuse treatment if they are asymptomatic and do not understand the possibility of progression to active TB, and the severity of this. In these situations, a good nurse-patient relationship can be beneficial when explaining the risks of not starting treatment.

Communication

The MDT ensures each member is not overloaded with work and has a well-defined, important role. This large team of people can cause the patient to feel frustrated, having to continually repeat their story to each member of the team. Potential ways to overcome these challenges include regularly communicating findings and investigations with the rest of the team, and scheduling MDT meetings to inform each member about the plan for the patient. The TB nurse can often organise these meetings, particularly when they take on the role of the case manager.

An example of the MDT approach being used can be seen in London's 'Find & Treat' service. It is a specialist outreach team which screens for tuberculosis and provides treatment for people with social risk factors. The team consists of TB specialist nurses, social and outreach workers, radiographers, expert technicians and TB patient peer advocates. They currently screen almost 10,000 people each year. (10)

ROLE OF THE TB NURSE IN THE MDT

There is no set route to becoming a TB nurse, however, most of them have worked in respiratory medicine prior to specialising. Whilst there are no specific training courses, there is the option to attend courses. (11) Specialist TB nurses cover all aspects of patient care, from treating the patient, to helping achieve targets for Public Health England (PHE). Each patient has a case manager who works with the MDT to ensure that the patient is receiving the care and treatment that is required. This role is often taken up by the TB nurse, due to their high level of medical knowledge and skills that have been acquired through their work. They are able to take control of various aspects of the patient's care and communicate with the team, patient and patient's family, with their excellent use of compassion and communication.

Diagnosing the Patient and Working with PHE

Diagnosing a patient requires work from the consultant, TB nurse, radiologists, radiographers, lab technicians and microbiologists. Many of this team are involved in performing vital tests, such as X-rays and baseline blood tests, including testing for Hepatitis and HIV. During every review, the patient will have further blood tests to ensure their liver and kidneys have not declined from their baseline results. The case manager takes on the role of working together with this team to ensure each step is taken and that the results are communicated amongst the team.

Once a diagnosis of active TB is made, TB nurses are required to inform PHE and attain key personal information from the patient, such as if they've lived in another country for more than 3 weeks. (1) PHE strives to protect the public against TB, by setting aims such as: increase the uptake of the BCG vaccine, reduce drug-resistant TB and implement latent TB screening. (12) Although not solely responsible for these aims, TB nurses often engage in working towards them. For example, NICE guidelines suggest nurses can provide home visits to explain the importance of immunisations to those who are disadvantaged. (3)

Screening Contacts

At times, patients are diagnosed with TB whilst admitted to a hospital ward. In these situations, the TB nurse seeks advice from infection control about the steps that need to be taken, as other patients in the ward may have been in close contact. Patients in that ward may need a symptoms screen and tuberculosis screen. (13) One reason that nurses are involved in this care could be due to Principle C, by the Royal College of Nurses, stating that they should 'manage risk, are vigilant about risk, and help to keep everyone safe in the places they receive health care.' (14)

TB nurses are involved in contact tracing for close or regular contacts of the patient, due to the risk of them having caught the infection. (15) The nurses work with the consultant to conduct investigations for the patient, and if required, initiate treatment. It is therefore invaluable to have a good relationship with the patient's close contacts, as the contacts' adherence can be more easily achieved if they are diagnosed with TB.

Initiating Treatment and Conducting Reviews

Prior to initiating treatment, TB nurses often consult pharmacists to ensure there are no drug interactions. They will be able to explain the benefits and risks of the treatment with other regular medications or illnesses and advise on what the best course of action would be. (16) For example, when treating patients with both HIV and TB, rifampicin cannot be given with nucleoside reverse transcriptase inhibitors, so the pharmacist can aid in the decision making for this case.

The TB nurse will then implement the management and have regular reviews with the patient (17), to assess adherence to treatment and review any side effects of medication. This includes assessing the health of the patient's eyes if they're on Ethambutol, Voractiv or Isoniazid. (18) Involvement of the eye unit is therefore vital in the treatment. For this reason, many nurses liaise with the eye unit to pre-book appointments for the days when they have TB clinics running, so patients can have their eyes checked on the same day.

The patient's ability to cope with their diagnosis and treatment will also be assessed during a review, and those who are struggling will be referred to the clinical psychologist who will assess the patient's emotion and behaviour. They can reduce their psychological distress by providing therapies such as Cognitive Behavioural Therapy, which has shown to also improve adherence to treatment. (19)

Patient Adherence – Education, Building Relationships and DOT

It is common for patients to not adhere to treatment for tuberculosis, and there are many reasons for this. (20) Adherence may be an issue due to the stigma that is attached to tuberculosis, as it is often associated with people who live with social risk factors, e.g. being homeless, imprisoned or misusing drugs. (21)

TB nurses work with patients in many ways to promote adherence, such as teaching them and their family about the infection. The TB nurses are very knowledgeable and can answer patient and family queries and clarify common misconceptions. Their knowledge is also shared through teaching other healthcare professionals, such as student nurses, medical students and junior doctors, as well as presenting lectures at regional conferences aimed at professionals, such as occupational health staff.

A study conducted in the USA has shown that a nurse case-managed (NCM) programme can improve adherence for latent TB treatment in the homeless. The study had a control group, which used their normal method of care, and a NCM programme, which included other interventions, such as "changing context activities related to self-esteem". (22) One of these interventions was educating the patients about TB. The study found 64% of patients in the NCM programme completed their treatment, with just 42% in the control group. This was a significant increase in adherence for treatment, however, it is difficult to deduce what caused this increase as there were many interventions in this programme.

Another method of increasing adherence to treatment is through building strong relationships with the patient. Some nurses do this by providing their phone number to patients as a point of contact for uncertainties, to ensure there is always someone present to answer questions (23). The nurse-patient relationship is enhanced through the emotional support provided by nurses throughout the treatment, such as breaking down stigma faced from the patient's family. (24) Nurses also provide guidance about the available support groups, such as TB Action Group and The British Lung Foundation, (2) where the patient can share their experiences with other members in similar positions.

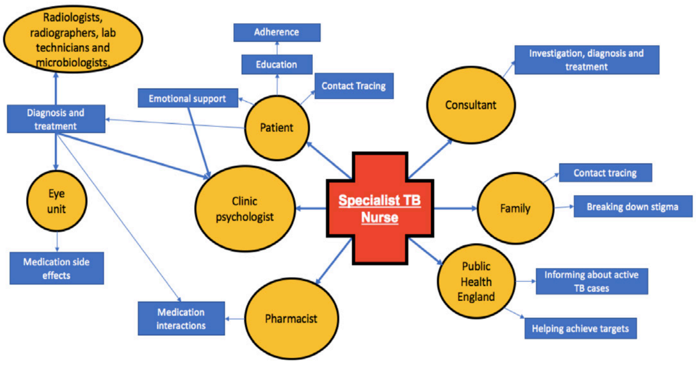
Non-compliant patients with active TB require Directly Observed Treatment (DOT), implemented by the TB nurse, who ensures that patients attend to take their medication. DOT implementation ensures safety for everyone around the patient, by preventing the infection from spreading. It is recommended to use 'the most effective standardized, short-course regimen, and of fixed-dose drug combinations' to prevent drug resistance and improve compliance. (25)

CONCLUSION

This report has marked the importance of the role of tuberculosis nurses in the multidisciplinary team and some of the challenges that may be faced using the MDT approach. The role of the TB nurse is multi-faceted, having to communicate with the entire MDT as required, whilst also remaining the advocate for the patient, who may struggle to cope with the complex team. In such a large team, it is essential for the TB nurse to gather information from different members and communicate effectively with the patient throughout their diagnosis and treatment. The TB nurse is a pivotal part of the team due to the breadth of the skills they showcase - they have the medical expertise to treat the patient, essential communication skills to lead the team, and compassion to be able to care for patients as an individual.

FIGURES

Figure 1: The Importance of the Specialist Nurse in the MDT



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Reflections

Leading change as a student in medical school – our reflection

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In June 2015, we independently attended a talk from Dr Kate Granger, who founded the '#hellomynameis…' campaign after being diagnosed with terminal cancer. As her role changed from being the doctor at the end of the bed to a patient lying in one, she realised that few healthcare professionals introduced themselves. She found this isolating, and created '#hellomynameis…' to prevent other patients having similar experiences. (1) An emotive afternoon inspired us both to contact members of the medical school, expressing our desire to champion the campaign and implement change. We considered an act which is so simple to reduce the isolation and fear patients experience, a powerful tool. A little over a year on, we take time to reflect on how our campaign has evolved.

Our initial contact came after we were introduced to each other via the medical school; we then sat and brainstormed what we felt personally were the goals of our campaign. We decided that we needed to raise awareness as a team and implement changes in the curriculum to embed the message.

Our initial meetings coincided with the start of interviews of applicants to Cardiff University School of Medicine. This provided an opportunity to reach large numbers of students, academics, doctors, the administration team, and prospective students. This intervention received positive feedback and we were pleased with the large impact the badges made. Following this success, the logo has been used once more in the most recent cycle of interviews by the admissions team, thus showing the campaign is sustainable. We then highlighted areas of the formal curriculum which we wanted to engage with; clinical and communication skills were considered ideal areas in which to start. Current medical students are taught the importance of introductions, however we believed having Dr Granger's story to place the teaching in context, would give added meaning allowing for more effective teaching. We reached out to these departments and planned how we could work together, as it is vital to involve, motivate and mobilise the relevant people. This has been re-emphasised throughout our project, and should be considered by any student looking to make a change. We were greeted with enthusiasm that helped push the campaign, and motivated us to continue. Following our discussions, we were able to get the '#hellomynameis…' logo added to the badges worn by students and staff in communication and clinical skills sessions. The next big step in our mission is to create permanent badges to ensure student names are more visible on placement. At present, students in Cardiff wear their university card as ID; the name on these can be difficult to read. As this card is the only thing patients could use to identify students, it is vital they clearly state name and status.

We have focused on ways to raise awareness of our campaign. We have written articles for the Cardiff University Medical School magazine, a rapid response in the BMJ (2) and have submitted a piece for the journal Academic Medicine. This was important for the campaign but aided our personal development in understanding about writing for publication, selecting appropriate journals, and the power of one's voice on these platforms. We have used social media to inform individuals and in the future, will look to use these platforms to recruit a larger team of students. Social media is an important tool to utilise for those considering implementing change. We have realised that explanation and reasoning is critical for promotion and recruitment in any campaign. We targeted the student body, but without an appropriate background message, students could have been unwilling to listen and remain unaware of the campaign. We are teaching students a lifelong culture, and want to utilise deep-learning. Therefore, students need to actively participate, understand the reasons behind the campaign and hopefully share an enthusiasm for it.

It was important for us to realise that to progress our campaign further, we decided that an evidence base needed to be produced. Therefore, a cross-sectional study, mobilising the student body to aid in our data collection is being undertaken this year. This data collection will provide baseline data which we can use to analyse the impact of our quality improvement project. When attempting to implement change within a large organisation, we recognised the need to respect the current approach, and would highlight this to those considering their own projects. The evidence we are hoping to produce will provide a valid argument for change, and will allow us to progress and implement it appropriately.

When we truly began to reflect on our achievements with the campaign, we were pleasantly surprised. It is easy to forget lunchtime meetings or the seemingly small encounters which have had larger effects. When we wrote down what had been put in motion, the list grew surprisingly long. We did not recognise the potential our project had, nor the work that would be involved! However, if you have a desire for change then the hard work is worth it. We were re-enthused when we received an email from Dr Granger encouraging us to continue and to think big by approaching other medical schools.

We both agreed that patience was key. Change is slow in a big institution and time is needed to make sure changes work at every level of the medical school and within the curriculum. Our advice is to be resilient in your approach; we have found early initial success in some aspects of our campaign, whilst others are still ongoing. Feedback is vital even if it can feel demoralising at the time, for example we have had letters and articles which were rejected for publication. All feedback should be considered as others helping your campaign; always have gratitude for the people who take the time to analyse and feedback on your ideas.

If you have a passion or a cause which you want to push, then our advice is to go for it. It could be a push for consistent handwashing in clinical practice, or a quality improvement project; it takes just one person to make a stand, and others will join. The student body are powerful, motivated, and passionate. Many are just waiting for a 'good cause' to support. We all came into medicine for different reasons, so remember and utilise these. We highly recommend approaching your medical school or hospital to inform them and ask for their support. It can be difficult to know exactly who to approach. We found success with lead tutors in clinical and communication skills, who copied in relevant individuals to emails. We are currently a keen team of three, including Cardiff University Professor David Wilson, Director of Admissions, whom we have been in contact with since the start of our project. On reflection, we should have sought more help earlier on and will look to social media and the student body to form a larger team. Recruiting enthusiastic colleagues from across the years may have aided in the work load and our overall impact.

Looking towards future clinical practice, we feel more confident in addressing issues and now have an increased awareness of how to action change. Medical school offers a fantastic opportunity to get involved in similar projects, we urge readers to take effect.

We would like to thank Professor David Wilson and Dr Steve Riley, the Dean for Medical Education at Cardiff University, for their continued encouragement and support. This campaign would not have been possible to do it without the wide-ranging support we have received. Dr Granger had every reason to be proud of '#hellomynameis...'. She raised a fundamental issue we can all learn from. We are determined to keep her campaign alive well into the future, and invite you to join as well.

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Response to: "Why mindfulness matters in medical education"

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Conflicts of Interest: Dr Craig Hassed has worked with us closely to deliver the Health Enhancement Programme at the University of Leicester. He also gave us a great deal of personal advice for the best delivery of the programme.

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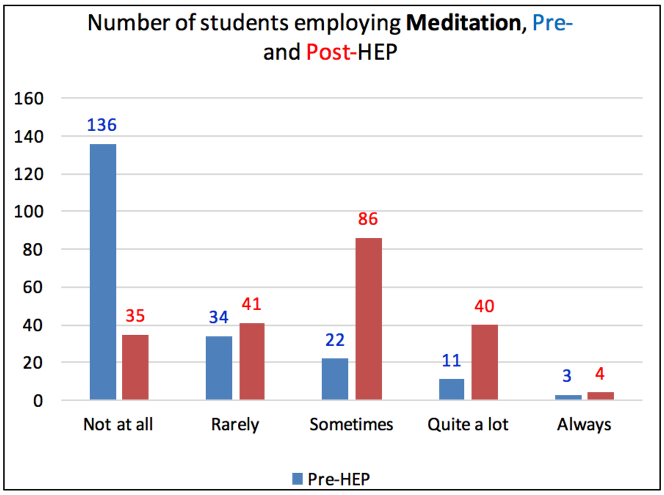
Dr Craig Hassed's paper (1) makes a compelling case for the introduction of mindfulness to medical curricula and proposes that the question, "Why not teach mindfulness?" has more rational support than its counterpart, "Why teach it?". The evidence continues to mount; Galante et al. (2) studied 616 Cambridge University students demonstrating significantly reduced, self-reported psychological stress during the exam period in the group receiving a mindfulness skills course plus normal support, compared with those receiving normal support alone. Several UK medical schools offer mindfulness training on an elective basis whilst Leicester and Warwick have introduced it as core curriculum. Leicester has just completed its second delivery of Dr Hassed's mindfulness-based, Health Enhancement Programme (HEP) which his team has been teaching for 16 years. We contacted Dr Hassed in light of papers showing positive impact of the HEP. He has advised at universities in Australasia as well as at Harvard, McGill and Toronto and visited us at Leicester, delivering masterclasses to staff and generously giving us his HEP manuals and lectures. We were suddenly in possession of a tried and tested mindfulness course and of ongoing expert advice. With an enviable decisiveness, Leicester's Head of School, Prof London, instructed that the HEP be delivered to our first semester medical students. Nearly thirty staff, some already mindfulness practitioners, volunteered to train in HEP delivery. In house mindfulness teaching was arranged for staff, some choosing to supplement this with external courses, and with the excellent, free Monash mindfulness MOOC. (3) Quantitative, post-HEP, Leicester student feedback has demonstrated a statistically significant, positive correlation between self-perceived employment of mindfulness and eight, self-perceived indicators of wellbeing (improved mood, level of anxiety and general level of energy, as well as the abilities to manage stress, to relax, to keep stress in perspective, and to communicate and problem solve).

Figure 1. Number of students employing meditation, pre and post-HEP.



It is hard to overestimate what the staff at the University of Leicester have learned about mindfulness delivery through Dr Craig Hassed's brief pivotal visits. His own engagement with mindfulness began intuitively as a first year Melbourne medical student and was later enriched by awareness of what science and the wisdom traditions have to say about it. His masterclasses and personal example helped us to teach it by being present, letting go, respectfully accepting whatever genuine response our students brought to the group, and by welcoming resistance. We learnt to value our students' informal mindfulness practices, however brief, and that we need not labour the formal sitting meditation, despite its value. We learnt the importance of providing the scientific evidence base for mindfulness but also the value of understatement and how giving our students the space to learn from each other's experience can be much more effective than our own 'answers'. We learnt that being flexible with the form, but faithful to the philosophy of mindfulness, is an important underpinning and that having a personal mindful practice is essential. In a gentle way, Dr Hassed knows that what he promotes is good for medical students, doctors and their patients; he may endeavour to come to your medical school should you ask him to do so.

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