Medical students and acupuncture: a short sharp placement experience!

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ABSTRACT

Background Acupuncture and other complementary therapies (CTs) have become increasingly popular, with patients calling for more integrated care. It is questionable whether doctors know enough about these therapies to provide balanced and informed advice to patients and, given that most will come across patients accessing CTs, this is an area of concern.

Method This was an exploratory study of 40 students attending a placement at a CT service within an acute hospital trust in the UK. A questionnaire was given at the start of placement to record their scepticism towards CTs on a 0–10 scale and again, on placement completion.

Result Of the students attending, 73% (n=29) completed the questionnaire. There was a statistically significant reduction in scepticism scores assessed before and after placement (p<0.001). Of the respondents, 90% (n=26) were shown or attempted acupuncture. 76% of students reported that the placement would definitely influence the rate of CT referrals in their future practice.

Conclusion The placement experience provided students an opportunity to reconsider their attitudes towards CTs. The study was limited to one site and students independently elected to participate in the experience. Similar exposure could be of value to the wider medical student population, ultimately leading to more informed advice available to patients. Future research should include greater numbers, which could include a multi-site study.

INTRODUCTION

There has been a growing interest in acupuncture from the public and healthcare professionals in recent years, and it has become the most often used complementary therapy (CT) within the NHS.1 The term CT is used throughout this paper to refer to interventions provided as ‘complementary’ rather than ‘alternative’ to conventional medical treatments. Traditionally, parts of the medical profession have debunked all complementary and alternative medicine (CAM) with claims of ‘unscientific’ or ‘quackery’.2 Recently, this antipathy led to a group of prominent doctors publicly voicing their concerns around integrated medicine by writing an open letter to a well-known newspaper.3 Much of the criticism surrounds issues of underpinning evidence and funding allocation, which are valid concerns; however the integration of specific therapies like acupuncture seems unlikely to be deterred. Calls have come from within the medical profession for acupuncture to be made available through NHS services4 and a burgeoning interest from the public will maintain this pressure on health providers as patient choice is made central to commissioning. Estimates on the prevalence of CAM use within the UK range from 10%5 to 20%,6 while approximately 40% of the population will have accessed a CAM intervention at some point in their lifetime.5 In Europe, the uptake of CTs in oncology settings has been found to be as high as 36% of patients.7

Only three decades ago a medical practitioner risked being struck off the professional register for referring patients to a complementary therapist. Reilly8 conducted the first study into medical attitudes on CAM, finding that young general practitioners held positive views toward therapies like acupuncture, hypnosis and osteopathy and that 20% of those surveyed already incorporated these interventions into their clinical practice. Similar positive attitudes were found within general practice a few years later by Wharton and Lewith9; however these findings were undermined by the British Medical Association (BMA) report10 criticising the techniques and claims of CTs. This antagonistic report was superseded by Complementary medicine—new approaches to good practice11 in which the BMA seemed to change their official stance on CAM but still recommended more education and research. Astin et al12 searched available surveys on medical attitudes to CAM; they found that acupuncture comprised the majority (43%) of referrals from mainstream physicians and that 51% of them believed in the efficacy of the treatment.

This evolution of attitudes towards CTs led Coulter and Willis13 to conclude that conventional medicine now sees CAM as being gradually incorporated, rather than viewing it with hostility. This is evidenced by the inclusion of acupuncture in the newly released National Institute for Health and Clinical Excellence guidelines for low back pain.14 Further to this, it has been recognised that doctors will undoubtedly continue to come across patients accessing CAM treatments.15 As this becomes more common, doctors’ knowledge of CTs will be increasingly important. For a general practitioner to refer a patient to a therapist, or even advise them if enquired upon, they should possess an adequate level of knowledge. Doctors and medical students do need more education surrounding CAM; a training need which they have identified and are receptive towards.16,17 While they desire a level of knowledge that will assist them in advising patients,18 it will also help to build lines of communication with complementary therapists.

Mackereth et al19 describe a CT service within an acute hospital trust that has become recognised within the wider multidisciplinary team setting. As this trend continues in time, a more efficient and fruitful dialogue between the professions should be
strived for; given that current collaborative efforts seem to struggle through poor communication.20,21

The challenge is how to roll out a programme of CT education to the wider medical community. Including classes within the postregistration education programme would serve to inform mostly junior doctors while missing consultants, who are ultimately accountable for patient care. However, eventually those junior doctors will become consultants. Similarly, medical students are tomorrow’s doctors. This presents the convenient option of a bottom-up approach in integrating CAM education within medical training. Therefore, this study was conceived with the aim of evaluating the usefulness of a teaching intervention in moderating students’ preconceptions towards CAM.

METHODS
Medical students in their fourth year of training at a local university were given the choice to attend a placement with the CT service at an acute cancer care hospital. None of the students were known to the service prior to their arrival, other than telephoning in advance to arrange a date, which they did independently.

The placement was intended as a tutorial for the type of work carried out within the hospital and consisted of half a day. The service has been offering acupuncture, reflexology, hypnotherapy, massage and relaxation techniques to patients for a number of years19 in order to achieve better symptom control. To reflect the predominance of acupuncture as a therapy within the NHS, it was made the central theme of the placement. During their time with the service, the students shadowed complementary therapists providing treatments on the inpatient wards, a drop-in acupuncture clinic and a relaxation class for inpatients, outpatients, carers and staff members. The latter two aspects of the placement were based within a physiotherapy gymnasium. A number of treatment contexts were demonstrated to the students—from simple foot massage for patients on the wards to hypotherapeutic interventions to manage needle phobia/anxiety in outpatient chemotherapy services or claustrophobia during the moulding process for radiotherapy masks. In clinic time, acupuncture is employed to tackle varied symptoms including peripheral neuropathy, xerostomia and hot flushes. The students were able to discuss CT practice with the therapists and to evaluate the effects that the treatments have by speaking directly with the patients. They were also given the opportunity to observe acupuncture during the clinic, to attempt basic needling under supervision and to receive an acupuncture treatment themselves to give them some insight into the patient experience.

A de novo questionnaire was devised to assess their experience and included fields listed in box 1.

This questionnaire was internally piloted with the first two placement attendees before being rolled out to all students. It was distributed to all students during the placement. Before any students were approached to complete the questionnaire, approval was sought and granted from the director of medical education at the hospital. It was informally hypothesised that attendance of the placement would lead to a reduction in students’ feelings of scepticism towards CTs.

Table 1 Preplacement and postplacement scepticism (scale 0–10)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Respondents</th>
<th>Mean preplacement scepticism (SD)</th>
<th>Median preplacement scepticism</th>
<th>Mean postplacement scepticism (SD)</th>
<th>Median postplacement scepticism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>11</td>
<td>5.00 (SD = 1.79)</td>
<td>4.50</td>
<td>3.36 (SD = 2.58)</td>
<td>3.00</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>4.39 (SD = 2.62)</td>
<td>4.50</td>
<td>1.78 (SD = 1.56)</td>
<td>2.00</td>
</tr>
<tr>
<td>All</td>
<td>29</td>
<td>4.62 (SD = 2.32)</td>
<td>5.00</td>
<td>2.38 (SD = 2.11)</td>
<td>2.00</td>
</tr>
</tbody>
</table>

From the students on placement, the proportions for gender, reason for attending, whether receiving/attempting acupuncture and influence on future referrals, were calculated. The mean score for usefulness to learning was also derived. Having calculated the median scores for preplacement and postplacement scepticism, non-parametric testing was used to ascertain the significance of any differences between the scores. A breakdown of the type of CAM treatment taken up by the students was also calculated.

RESULTS
Forty students completed the placement and all were given a questionnaire in at least one format; 73% (n=29) responded. From the respondents, 38% (n=11) were male and 62% (n=18) were female, while the reasons for attending were given as curiosity (n=25) or prior interest (n=4). The gender breakdown is comparable to that of all the students on placement within the hospital, where 64% (n=90) were female and 36% (n=50) were male.

Forty-eight per cent of respondents (n=14) reported accessing a CAM treatment prior to the placement and the therapies they had tried were massage (eight), acupuncture (four), reflexology (one) and relaxation training (one). During the placement, 79% of respondents (n=23) took up the offer of receiving a treatment. The highest proportion of students opted for acupuncture (n=12) while others chose to receive massage (n=8), hypnotherapy (n=1), reflexology (n=1) and relaxation training (n=1). Those who received a treatment were also asked to rate the experience in relation to its usefulness to their learning on a 0–10 scale. The mean score for this was 7.13 out of 10 (SD=2.83).

While on placement, 90% (n=26) of respondents were either shown acupuncture or attempted it under supervision.

Table 1 displays the mean and median scores for preplacement scepticism and postplacement scepticism. These scores show that the students reported a reduction in their scepticism towards CTs as a result of the placement. A Wilcoxon matched pairs test was used to establish the significance of this reduction. A statistically significant difference was found between preplacement scepticism scores (median=5) and postplacement (median=2): Z=−3.731, p<0.001.

From the students, 76% (n=25) reported that this placement would ‘definitely’ influence their CAM referrals in the future.
while 17% (n=2) said ‘maybe’; two students did not answer this question.

**DISCUSSION**

It was anticipated, although not formally assessed, that working alongside well-trained and professional complementary therapists would challenge students’ assumptions that all CT/CAM practice is ‘quackery’ or indeed provided by ‘quacks’. Similarly, observing the effects that therapy has for patients was thought to be an important part of the learning experience for the students. A combination of this may have been at work; leading to the reduction in scepticism scores before and after placement. This result strongly suggests that exposure to CTs can lead to a better and more informed view. It can therefore be argued that negative attitudes towards CT interventions within the medical establishment may be borne out of limited or no exposure to professional CT practice. However, this change in attitude may have been transient and it would be helpful to follow this up further down the line. It is important to remember that there is a difference between being sceptical and cynical. People who are sceptical remain open to altering their opinions, much like the students taking part in this placement experience. Further education and training in CT/CAM may lead to dispel some of the negative propaganda purported by cynical objectors.

As the integrated use of acupuncture was the central theme surrounding the placement, it was offered to students as a treatment for them to experience, with many taking up the offer. The students that received acupuncture as a therapy found that it was useful to their learning. All students were given the opportunity to observe needling or to practice under supervision, and almost all participated in this. CT team members volunteered for this so that patients were not being needled by the students. Anecdotally, we are aware of two students who attended the placement who went on and completed the British Medical Acupuncture Society Foundation Course. They then returned to placement who went on and completed the British Medical Acupuncture Society Foundation Course. They then returned to

The overall response rate from this questionnaire was less than reported in previous studies into medical students’ attitudes towards CAM.22,23 This may be because the other studies distributed and collected questionnaires within lecture settings while this one was to be completed within the practical setting. Some students may have felt that they had achieved their objectives during the placement and simply wanted to go home at the end of the day, rather than filling in a questionnaire. Although less than in other studies, the response rate is sufficient. As Greenfield et al24 suggested, females are more likely to access CT/CAM teaching and this is supported by the gender breakdown noted in this study although this difference does not reach statistical significance. The ratio on this placement reflects that of all the students within the hospital fairly accurately.

It could be argued that students attending this placement were more likely to provide positive questionnaire results through a prior interest; however this may not have been the case. Curiosity was the reason that the majority of students attended while the remainder came out of a prior interest. Curiosity is biased neither way and indicates a more investigative approach. Given that there was no significant difference between previous CT/CAM treatments, that would not seem to be a mediating factor.

A successful and popular programme of CAM education has been rolled out across many US medical schools by the American Medical Students Association.24 A similar effort is underway in Canada, however it has been observed that the integration of CAM awareness into medical education relies heavily upon the right people with influence to push it forward.25 Here the placement opportunity was suggested by the medical director and information given at an induction event. Some medical students already recognise that many UK doctors are referring their patients to acupuncturists and other therapists.26 Providing CT information and training to students during their clinical placements can therefore help them to arrive at a more rounded picture of integrated health. This, in turn, should enable medical students, once graduated, to advise, inform and refer patients to suitably skilled CT practitioners. Indeed, most of the students who answered the question said that the placement experience would definitely lead them to consider referring patients for CT/CAM treatment, where appropriate. A high proportion of hospices and cancer care centres offer CTs27 and they have the potential to become placement areas for medical students.

It has been shown that students’ attitudes towards CTs remain the same over time28 if not exposed to a teaching intervention. Other research has demonstrated that completing a web-based course on CAM can modify student attitudes when compared to no intervention29; leading to increased confidence discussing CAM, better knowledge of information resources and an appreciation of how the discipline can play a part in integrative care. The findings of our study align easily to this research suggesting that teaching interventions, whether web-based course or elective placement, can modify student attitudes and equip them with the knowledge necessary for discussing CAM in a meaningful way with their patients.

**LIMITATIONS**

This was a single-site project with a small number of students electing to both attend the placement and complete the questionnaire. Therefore the findings cannot be generalised to all medical students on placement. Although positive changes in attitude reached statistical significance, the small sample size leads to a low power for this calculation.

**RECOMMENDATIONS**

Future studies should recruit high numbers of students, possibly accessing multiple sites. The students’ experience of CTs was short and so their acquired knowledge of CAM during the placement may not be sufficient for them to adequately change their attitudes. While a short exposure to CT practice did appear to make a difference to the students’ views, it would be of interest to evaluate the impact of a longer placement. It would also be of interest to interview students who elected not to take up the placement to find out why not.

**CONCLUSIONS**

This exploratory study aimed to gather information about medical students’ perceptions towards CTs before and after their attendance at a placement within an integrated CT service in an NHS setting. This was primarily proposed as a means of evaluating this experience, delivered for the first time by a CT team. Although there have been previous surveys on the attitudes of medical students towards CTs, this is the first study examining whether such attitudes are moderated by a clinical placement. Interest in CT/CAM from patients, the public and
some healthcare professionals is rising and so including CT placements within the medical preregistration programme may be a good strategy to dispel myths, raise the profile of acupuncture and to increase the use of medical acupuncture.

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Competing interests None.

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Detail has been removed from this case description/these case descriptions to ensure anonymity. The editors and reviewers have seen the detailed information available and are satisfied that the information backs up the case the authors are making.

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