Social and behavioural science education in UK medical schools: current practice and future directions

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INTRODUCTION The increasing importance accorded the social and behavioural sciences in medical education presents opportunities for developing new and innovative forms of teaching and learning in this field. Yet social and behavioural scientists often feel isolated and marginalized. This research was designed to build a network of such practitioners to share and compare current practice, and to develop better models and resources.

METHODS Questionnaire survey and workshop discussions describe current practice among social and behavioural scientists in UK medical education, and identify current and future issues.

RESULTS Most UK medical curricula feature a significant social and behavioural science component, often in multidisciplinary contexts. Questions of core content, and how this relates to desired learning outcomes, particularly in the attitudinal sphere, remain unresolved. Identity problems result from differing perspectives of medics and social and behavioural scientists, staffing constraints, assessment regimes, and relationships with external examiners.

DISCUSSION This project identified barriers and opportunities for providing adequate training in the social and behavioural sciences in medical schools. Some of the barriers are common to higher education generally. Through our network, a database of core cases and assessments can be developed that would be available to all for teaching purposes.

CONCLUSION Social and behavioural scientists involved in medical education show commonality and difference in the extent and scope of their input. While they have made great progress, there remains much to achieve.

KEYWORDS behavioural science, *education; curriculum; education, medical, undergraduate, *methods, standards; Great Britain; social sciences, *education.

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INTRODUCTION

The involvement of social and behavioural sciences and scientists in medical education in the UK has been diverse and dispersed. Over the past decade, however, the role of the social sciences and other non-biological and non-clinical disciplines has been brought more to the foreground within medical education, as part of a growing concern with what constitutes a good doctor and how such a person may best be trained.1–7 Our project brought together practitioners of social and behavioural sciences to discover what is currently happening in UK medical schools, to share good practice and innovations, to consider questions of course content and disciplinary identity, and to form a network for the support and development of the social and behavioural sciences in medical education.
This paper provides an overview of social and behavioural sciences in medical education in the UK based on a two-phased identification process involving a postal questionnaire survey of medical schools and a national workshop held at the University of Durham in June 2002. This two-day workshop helped to establish links between such teachers and promoted discussion of what is core material in this field. As a result of the findings of the questionnaire survey and the number of psychologists attending the workshop, the title and extent of our project has changed from Social Sciences in Medical Education – referring primarily to sociologists and anthropologists – to Social and Behavioural Sciences in Medical Education. However, what is covered by this additional term varies from medical school to medical school, and there are numerous examples of individual social and behavioural scientists, operating in relatively isolated and sometimes marginalized circumstances, reinventing the wheel; for example, in the production of teaching and learning materials and other aspects of course delivery. This paper provides an analysis of the results of the questionnaire survey as well as the additional information and insights gained during the discussions at the workshop.

Key learning points

- The increasing importance accorded the social and behavioural sciences in Tomorow’s Doctors needs recognition and action, such as sufficient provision of posts for suitably qualified social and behavioural scientists in medical schools.
- Social and behavioural scientists have traditionally been somewhat isolated and marginalized in medical schools.
- A network of social and behavioural scientists involved in medical education in the UK has been established to share experiences and examples of current and future good practice.
- There is need for further consideration of what comprises the core elements of the social and behavioural sciences that are relevant to medicine.

BACKGROUND

Over the past decade, starting with the publication of Tomorrow’s Doctors by the General Medical Council in 1993,1 programmatic recommendations for undergraduate medical education have increasingly highlighted the importance of components beyond the clinical and biological sciences in effective medical practice, and hence in medical training. Social and behavioural scientific knowledge has a central role if medical education is, in the words of the report [our emphases], to:

...foster the development of a caring, knowledgeable, competent and skilful medical graduate who broadly understands health and disease of the individual, the family and society, and who is able to benefit from subsequent medical education and adapt to future developments in practice.1

or one who has a spirit of:

...respect for patients and colleagues that encompasses, without prejudice, diversity of background and opportunity, language, culture and way of life.1

In its update of Tomorrow’s Doctors,2 the General Medical Council lists the social and behavioural sciences alongside the clinical and basic sciences among the disciplines now perceived as central to a good medical education, thus explicitly acknowledging their perceived necessity in the training of comprehensively skilled medical practitioners. The revised report calls for medical students to ‘work and learn with other health and social care professionals’ and to:

...interact with people from a range of social, cultural, and ethnic backgrounds. This might involve visiting families expecting a baby, visiting an elderly or disabled person, or taking part in community projects that are not necessarily medically related.2

The assumption is that through work experience with health and social care professionals, and by undertaking project learning with a range of people and groups in the community, medical students will develop an appreciation of social, cultural and economic diversity, in what Southgate calls:

...a radical overhaul ... the importance of the community and the health of the population has been emphasized, and there are moves to include
the assessment of these aspects of medicine into summative assessment.3

The involvement of social and behavioural scientists in medical education is nothing new. For example, in 1974 a two-day seminar was held in London on the topic of sociology as a discipline relevant to community medicine. This seminar was organized with the primary aim of enabling staff to consider and develop the curriculum of the Centre for Extension Training in Community Medicine at the London School of Hygiene and Tropical Medicine. It was the eminent epidemiologist Professor Archie Cochrane who suggested that ‘one of the series ... be concerned with sociology’.8 Medical sociologist Raymond Illsley, in his report on the Sociology in Teaching Community Medicine, part of the seminar, remembered:

The first meeting for the British Sociological Association when Sir John Brotherston told us a great deal about the enormous gains which would accrue to social medicine if it were prepared to absorb the perspectives of social science in its curriculum. It has taken a long time for moves to be made in that direction.9

Fifteen years later, not long prior to the publication of Tomorrow’s Doctors, Fox found that sociology was being taught at almost every UK medical school, although the extent and content of courses varied widely.10 However, while the involvement of social and behavioural sciences in the training of doctors has a long pedigree, recent developments in the formally sanctioned model for medical education outlined above invite new directions to be taken in its teaching.

We are aware, however, of the paucity of available data on the current and historical content of social and behavioural science components of the medical curriculum in the UK, and on the nature and extent of involvement of social and behavioural scientists in medical education. The project reported in this article begins to fill some of these gaps.

METHODS

Our project followed a mixed methods approach11 to the appraisal of current practice and future developments in the field of social and (latterly) behavioural sciences teaching in medical education. A two-phase approach was adopted. The first phase consisted of a postal questionnaire, using a mix of open and closed questions especially designed for this study, to elicit information on current social science teaching in UK medical schools. Questionnaires were posted to all 30 current and planned medical schools in the UK in May 2002. Returned questionnaires represented 17 institutions (Table 1), two of which (Peninsula Medical School and the University of East Anglia School of Medicine) were still under development at the time of the workshop, and one of which (the London School of Hygiene and Tropical Medicine) does not offer undergraduate degrees in clinical medicine.

Because of the limited response rate, bias among our respondents and hidden bias among non-respondents is undoubtedly present in our findings. However, as Table 1 indicates, the medical schools and faculties

Table 1 University faculties and medical schools responding and not responding to the questionnaire survey

<table>
<thead>
<tr>
<th>Responding</th>
<th>Not responding</th>
</tr>
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<tbody>
<tr>
<td>1. Aberdeen</td>
<td>1. Birmingham</td>
</tr>
<tr>
<td>2. St Bartholomew’s and Royal London Hospital, College and St Queen Mary’s College</td>
<td>2. Brighton and Sussex*</td>
</tr>
<tr>
<td>3. Bristol</td>
<td>3. Guy’s, King’s College and St Thomas’s</td>
</tr>
<tr>
<td>4. Cambridge</td>
<td>4. Imperial College</td>
</tr>
<tr>
<td>5. Dundee</td>
<td>5. Keele*</td>
</tr>
<tr>
<td>7. East Anglia*</td>
<td>7. Leicester –</td>
</tr>
<tr>
<td>9. Glasgow</td>
<td>9. Queen’s</td>
</tr>
<tr>
<td>10. Liverpool</td>
<td>10. Royal Free and</td>
</tr>
<tr>
<td>11. London University School of Hygiene and Tropical Medicine</td>
<td>11. Sheffield</td>
</tr>
<tr>
<td>12. Manchester</td>
<td>12. St Andrews</td>
</tr>
</tbody>
</table>

* New medical schools and programmes commencing in 2001 or thereafter.
responding to the questionnaire, like the medical schools and faculties represented at the workshop, are a representative cross-section of UK medical schools, including both old and new medical schools and faculties, and both metropolitan and regional centres.

The returned questionnaires were analysed using content analysis. They were analysed by hand because relatively low numbers (n = 17) were involved. The findings from the questionnaire formed the basis for a series of discussions at a two-day workshop for social and behavioural science teachers in medical education held at the University of Durham in June 2002. The workshop brought together 30 practitioners actively involved in this field, from 18 UK medical schools. The notes taken during the workshop discussion were also analysed using content analysis; in addition, the participants and group facilitators produced a number of overviews and summaries of key issues after several sessions during the workshop.

The methods used were designed to generate cross-sectional and discursive data and to identify good practice. The methods were also chosen to provide a quick and effective basis for further action. A report on the workshop has been produced and distributed, and a practitioners’ network developed. The following section presents findings relating to the main topic areas generated from the survey and workshop.

RESULTS: COMMONALITIES AND DIFFERENCES

Extent and scope of social and behavioural sciences in the medical curriculum

Courses with a social and behavioural science component appear in all the medical programmes reviewed. However, the extent and scope of the social and behavioural science teaching present varies considerably. It also proved difficult for respondents to estimate the relative proportion of social sciences in their curricula, particularly where problem-based learning is the major teaching style. Moreover, multidisciplinary teaching is often a key approach and, consequently, the boundaries both within and around the social and behavioural sciences are often unclear. Some medical schools still regard the social and behavioural sciences as a distinct entity, while others integrate them under pedagogic themes such as medical ethics, personal and professional development, whole person care, or health and normality. Such themes have to be set in the context of the final outcomes for medical education developed by (among other medical schools) Dundee in the UK, with their focus on what doctors should be able to do as a result of their training.

The lists produced highlight the attitudinal as well as behavioural and knowledge-based skills of the good doctor. Such a focus on what might be called the social and behavioural aspects of clinical work – communication skills, ethics, teamwork and multicultural sensitivity, for example – clearly also offers a larger role for the social and behavioural sciences in their development, often alongside other disciplines such as medical ethics or health economics.

Much social and behavioural science teaching takes place relatively early on in the curriculum, although some respondents stressed that their input can come at any stage of the 5-year programme. At later stages, students taking optional social and behavioural science courses may study alongside students from other disciplines. In addition to compulsory courses (where these exist), social and behavioural sciences are also included in some of the special study module options and in intercalated degrees.

The majority of institutions represented (11/17) describe their approach as integrative, systems-based or case-based. Seven are using problem-based learning methods, and seven describe their approach as community-based. These approaches are, of course, not mutually exclusive, and 10 institutions listed more than one. It was generally felt that a ‘spiral’ curriculum is the best approach to achieving the attitudinal learning outcomes of the social and behavioural sciences in undergraduate medical education. Opinions differ as to the relative merits of continuous drip-feeding of social and behavioural sciences versus short blocks of more intensive teaching.

Questions of content

The workshop participants recognized a tension between what academic social and behavioural scientists might regard as core content – fundamental topics that it would be essential to cover in any introductory course – within their own disciplines, and what they would identify as core topics and approaches needed to train the kind(s) of doctor
Ideally required in the UK today. Core content for medical undergraduates was viewed as difficult or impossible to define without taking into consideration the desired outcomes from medical education, although it was recognized that these outcomes would inevitably be a mixture of knowledge and skills, attitudes and values, and behaviour. Accordingly an attempt was made to define these outcomes at the workshop, and participants suggested that social and behavioural science teaching can help to deliver the following outcomes:

- Comprehending embodied individuals within society, and the nature of social processes.
- Understanding the influence of these social processes on health and illness.
- Open-mindedness and holistic thinking.
- Teamworking and collaboration.
- Respect for difference in both patients and colleagues.
- An inquiring mind: interest in finding out; critical thinking.

In the questionnaires, a similar diversity in responses to a question concerning the objectives of teaching social sciences to medical students was apparent. For one respondent, ‘to raise awareness of social issues and tensions and to meet the objectives of Tomorrow’s Doctors’ were key issues in teaching social and behavioural sciences to medical students, whereas several others mentioned wider, attitudinal goals, such as ensuring that ‘the student looks at problems holistically, does not look at diseases and body parts but thinks about the psychosocial and anthropological ramifications of health and illness’. Meanwhile, the priority for another was ensuring a ‘rigorous scientific base’.

Many of the above goals, such as teamworking and collaboration, or ensuring that students see health problems holistically, are not unique to the social and behavioural sciences but are equally apt as outcomes for clinical components of medical training. Indeed, it is only appropriate that different components of an interdisciplinary education share at least some desired outcomes. However, individual contributions must also have a demonstrable added value for them to be included within the curriculum. Perhaps the one common element in the rather diverse bundle of disciplines that go to make up the social and behavioural sciences is that they all deal, albeit in very different ways, with human attitudes, values and behaviour.

Values, norms and attitudes tend to have a common sense, taken-for-granted quality in that, unless specifically required to examine them, people (including medical students) tend to regard their own as self-evident and incontestable. An effective way of challenging assumptions in this regard is by teaching students to recognize their socially constructed character through the use of social and behavioural science insights and perspectives; for example, into the structural determinants of health inequalities or the cultural underpinnings of responses to death and dying.

In keeping with this observation, when asked what they regarded as essential content, most respondents mentioned the themes of inequalities in health and the social worlds of disability and ill health as key social science components that should feature in any medical curriculum. Table 2, collated from the questionnaire replies and workshop discussion, lists the key learning topics identified by participants at the workshop. The importance of demonstrating the relevance of the social sciences to everyday medical practice was emphasized by several respondents. Lack of vocabulary and conceptual tools among some students was also seen to be a problem, and many participants felt that this lack required some input and discussion of theory for its remedy. However, there seemed to be a general agreement and acceptance that clinical application is important rather than ‘theory for theory’s sake’.

It may be that this concern for practical use in meeting final outcomes is the reason so few respondents mentioned explicitly the role of the social and behavioural sciences in critiquing medicine. This applied orientation can be seen reflected in the topic areas considered important to include in medical education. Although power was identified as a key topic when considering the doctor–patient relationship and various dimensions of medicine as a dominant social institution (namely hierarchy, medicalization, and medical authority) were specified, relatively little emphasis was placed on the tradition of social sciences in deconstructing biomedicine as a social practice. Thus in this study, overall the major thrust of teaching may be described as that of the social and behavioural sciences in medicine rather than the social and behavioural sciences of medicine. However, despite this somewhat anodyne view of what the content of social and
behavioural sciences teaching in medical education should be, the next section suggests that many assumed the perspectives of social and behavioural scientists were inherently different from those of their clinical colleagues and that these differences are not sufficiently appreciated in the echelons of schools and faculties of medicine.

Identity problems

Identity problems can be summarized as the issues arising from differences of perspective between medics and social and behavioural scientists, staffing constraints, assessment regimes, and the relationship with external examiners.

Differing perspectives

Two questionnaire responses mention:

...a negative view of the social sciences held by some doctors involved in medical education who were themselves trained before the social sciences ever appeared on the medical curriculum. This negative view seems to get transmitted to students as they proceed through their training.

For another respondent, ‘most of the course is biomedical; it is difficult to challenge its dominance’. These comments relate in part to a hierarchical inequality that exists in the standing of the various disciplines contributing to medical training. When critical social science clashes with biomedical sciences, is this controversy going to assist deep-reflexive learning or simply going to create more confusions?’ asks one respondent, who suggests that the outcome of such learning may be dependent on the prior maturity of the students. As one person puts it, there is a need to ‘ensure sufficient content of social sciences within the curriculum is reaching all students, not just those with an interest’.

Staffing

Staff from a wide range of disciplinary backgrounds deliver social and behavioural sciences teaching in medical education, including sociologists, psychologists, anthropologists, public health physicians, primary care physicians, psychiatrists, health economists, communication specialists and philosophers. Most questionnaire respondents were social and behavioural scientists based in medical departments – primarily public health, community medicine or general practice – and their contact with disciplinary departments such as sociology was often limited; only one respondent’s main departmental affiliation was outside a medical school. This caused some to feel both isolated from disciplinary support and/or departments and marginalized within medical schools.

While the involvement of clinicians in social and behavioural science teaching helps with the issue of relevance (discussed earlier), it sometimes engenders the problem of how to train clinicians with no background or qualifications in the social and behavioural sciences to deliver the content. Few doctors would feel comfortable with the clinical elements of

Table 2 Social and behavioural science topics perceived as core in medical curriculum

- Social inequalities in health and their processes and links to individual and group behaviour (e.g. smoking); the community.
- Social categories: gender, ethnicity, race, social class; disability. Stereotyping (Goffman); prejudice.
- Lay and professional concepts and models of health, illness and the body. Different forms of knowledge; the social construction of ‘common sense’.
- Popular and medical culture (including evidence-based medicine); what is an anecdote?
- The doctor–patient relationship.
- Communication; social structure; power; emotional intelligence.
- Types of illness and illness behaviour; acute and chronic illness
- Paradigms of evidence; research methods – quantitative and qualitative
- Medicine in society: the role, structure and organization of the NHS; hierarchy, titles, uniform; medicalization and medical authority; health policy.

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the curriculum being taught by staff lacking medical qualifications or training. Reciprocally, if the social and behavioural sciences are to assume a core place in medical education on a par with the clinical medical subjects, and be treated seriously by the students required to study them, it can be argued that they should be taught by staff who have had formal training in the constituent disciplines. However, because some of the subject matter with which the social and behavioural sciences deal is perceived to have a ‘common sense’ quality, there is a tendency for medical educators to assume that they can be taught effectively by those without specialized knowledge or training.

Assessment

Assessment of the social and behavioural sciences has to fit in with the assessment model favoured by the medical school. Respondents reported having to produce social science–type questions for every possible type of assessment used in UK medical schools, from modified essay and multiple choice questions to posters and problem-based learning write-ups, as well as essays and project reports. Some felt that the assessment types favoured in their medical school (or particular year of the curriculum) did not necessarily do justice to the social sciences. While accepting that social and behavioural scientists need to work within existing mechanisms of assessment, the need was recognized to promote innovations such as portfolios and oral presentations. The latter were seen as more consistent in demonstrating whether the appropriate knowledge and skills, attitudes and values, and behavioural outcomes sought had been attained.

Christopher and colleagues highlight assessment as one of two recommendations in Tomorrow’s Doctors that medical schools have been slow to implement, although the Scottish Deans’ Medical Curriculum Group report looks at assessment in the basic, social and clinical sciences and provides examples of forms of assessment appropriate to different learning outcomes. While some new medical schools are experimenting with other innovative types of assessment, such as negotiated assessments and peer assessment, the appropriate weighting of social and behavioural science materials in assessment needs to be carefully considered. One proposal from the workshop was that a database of questions and exercises of different types that all can draw on and adapt to their purposes should be established.

External examiners

The importance of involving external examiners in the issues facing social and behavioural scientists in medical education was raised. With an integrated curriculum, many external examiners do not have a background in social and behavioural sciences and may need briefing on the subject matter and assessment issues. More importantly, they are powerful potential allies when addressing resource issues in a medical school. A widely supported view at the workshop was that social and behavioural scientists should be considered for external examiner duties on relevant modules within the medical curriculum.

Contexts of change

The recent major changes to many medical curricula have not come without their costs. In one respondent’s experience,

...redesigning the human science component of the curriculum from a ‘threads-based’ approach to a ‘system-based’ approach ... was crucial to the development of social science teaching in the medical school.

but it ‘has meant a huge administrative workload, planning, preparing and administering’.

Large student numbers can make participatory approaches difficult. One respondent talked about trying:

...to avoid being too didactic, and involving more student group participation in learning. But this is difficult in a department where resources for seminars are not forthcoming and hence delivery must be solely by means of lecture-based teaching.

Discussion: the way forward

The impetus seems to be towards incorporating an array of insights from the social and behavioural sciences and other contributory disciplines, with the ultimate aim of enhancing medical practice, and away from teaching concepts and theories specifically identified as medical sociology, medical anthropology or health psychology. In a crowded curriculum, it may be that this shift in focus necessarily results in less attention being given to the traditional role of, say, medical
sociology as a critique of medical power and practices, such as the role of biomedicine and doctors as agents of social control, the medicalization of deviance, or the socially legitimating function of the sick role.

Although the current climate particularly favours the development and expansion of the social and behavioural sciences in medical education, there is still a need for those teaching the disciplines to spend more time identifying which core aspects are relevant to *Tomorrow’s Doctors* and the appropriate learning outcomes deriving from them. Furthermore, we need to critically evaluate and monitor the assumption that courses with strong social and behavioural science inputs produce students who are better future doctors. We need to consider factors such as self-selection in addition to what is taught at medical school. Social and behavioural sciences may also fit in with the ethos of widening the criteria for admissions. There is need for more comparative evaluation of programmes to see whether such intuitions are reflected in reality.

The increasing importance accorded the social and behavioural science disciplines in medical education over the past few years should be reflected in the provision of more academic posts in medical schools for suitably qualified personnel. Training in the social and behavioural science disciplines that is necessary and sufficient to develop good doctors should be provided by staff possessing the formal skills and knowledge to be able to communicate the pertinence of their disciplinary contributions convincingly. This in turn requires adequate resources. While some problems highlighted are common to higher education in general – for example, balancing the demands of teaching with those of research and administration, increased student numbers, and lack of resources – some, such as the perceived isolation and marginalization, are more specific to the social and behavioural sciences in medical education.

Social and behavioural scientists need to be better represented in curriculum design teams in the development of innovative problem-based, community-based and information technology–based teaching and learning initiatives in medical education. Cases or problems in case-based or problem-based curricula need to be selected and developed with significant social and behavioural input if students’ views of health and illness are not to be distorted by overly medicalized approaches or those based on pedagogical convenience. Finucane and Nair, for example, point out that the neglect of chronic disease in the elderly in much problem-based learning teaching creates a misconception about the role of doctors and may contribute to ageism. Real-life accounts, as contained in much social science literature, can help in this task. Case design is very time consuming, and a database of core cases that could be drawn on by all medical schools for teaching purposes would be useful. A similar approach could be considered for the design and delivery of appropriate forms of assessment. These innovations would in turn release valuable staff time for more necessarily locally specific activities, such as community-based project development.

One immediate consequence of our workshop was the establishment of an e-mail discussion group for social and behavioural scientists involved in teaching medical students (see http://www.jiscmail.ac.uk/lists/MEDSOC-UK.html). It was also recommended that teaching and course materials be shared via this group and through on-line syllabuses to be included in the Medical Humanities Resource Database.

### CONCLUSION

Evans asks, in his reflections on the humanities in medical education, whether doctors are clinicians of the whole person because of, or despite, their traditional scientific training. We can pose the same question as a challenge to the greater incorporation of the social and behavioural sciences into medical curricula. Social and behavioural scientists involved in medical education demonstrate both commonalities and differences in the extent and scope of their input into medical curricula. They are involved in pushing forward the agenda: personal, pedagogic and professional. While the social and behavioural sciences in medical education have come far in the last half-century, there is still a long way to go.

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