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Embedding Behavioral and Social Sciences across the Medical Curriculum: (Auto) Ethnographic Insights from Medical Schools in the United Kingdom

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Abstract: Key concepts and theories that are taught in order to develop cultural competency skills are often introduced to medical students throughout behavioral and social science (BSS) learning content. BSS represents a core component of medical education in the United Kingdom. In this paper, we examine, through (auto)ethnographic data and reflections, the experiences of BSS in medical education. The empirical data and insights have been collected in two ways: (1) through long-term ethnographic fieldwork among medical students and (2) via autoethnographic reflexive practice undertaken by the co-authors who studied, worked, examined, and collaborated with colleagues at different UK medical schools. Our findings indicate that despite BSS constituting a mandatory, essential component of the medical curriculum, medical students did not always perceive BSS as useful for their future practice as doctors, nor did they find it to be clinically relevant, in comparison to the biomedical learning content. We suggest that it is paramount for all stakeholders to commit to cultivating and developing cultural competency skills in medical education, through robustly embedding BSS learning content across the undergraduate medical curriculum. We conclude with recommendations for a wide range of educational practices that would ensure a full integration of BSS in the medical curriculum.

Keywords: medical education; qualitative research; sociology; anthropology; psychology; curriculum development; health inequalities; critical incident; hidden curriculum; disciplinary knowledge

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1. Introduction

People do not go to their doctor and say: "Doctor, doctor, I've got health inequality".

This is a quote from a research interview Dikomitis conducted with a Director of Public Health working in the north of England, for a research project on health inequalities. Although "health inequalities" are not symptoms that patients report to their doctor, as this Director of Public Health aptly phrased it, the consequences of these inequalities constitute one of the most urgent health challenges in the United Kingdom. In a similar vein, medical students, certainly at the start of their training, rarely have "health inequalities" at the forefront of their minds. For instance, not many medical students would, spontaneously, bring up "health inequalities" to discuss in a small-group teaching session, nor would many medical students formulate a learning objective or a revision schedule around "health inequalities", unless they are specifically prompted to do so by their educators. We take "health inequalities" as an example here, but the same goes for many social concepts which matter in medicine and healthcare. There is now a consensus that medical students need to cultivate a sensitivity and sensibility for non-clinical factors which influence health and illness. In other words, from the start of their medical training, students are required to look *beyond* the body, to fully appreciate that a disease is more than a purely biological event.

It is never merely a pathological process deviating from the normal state which can be observed by signs or symptoms. A disease is always influenced by a wide range of social, cultural, behavioral, and economic aspects and factors; thus, it is a social construct. In order to understand this, and for medical students to be able to apply that understanding in their future clinical practice, we require medical students to develop a set of skills and a range of competencies they can embed in their routine clinical work.

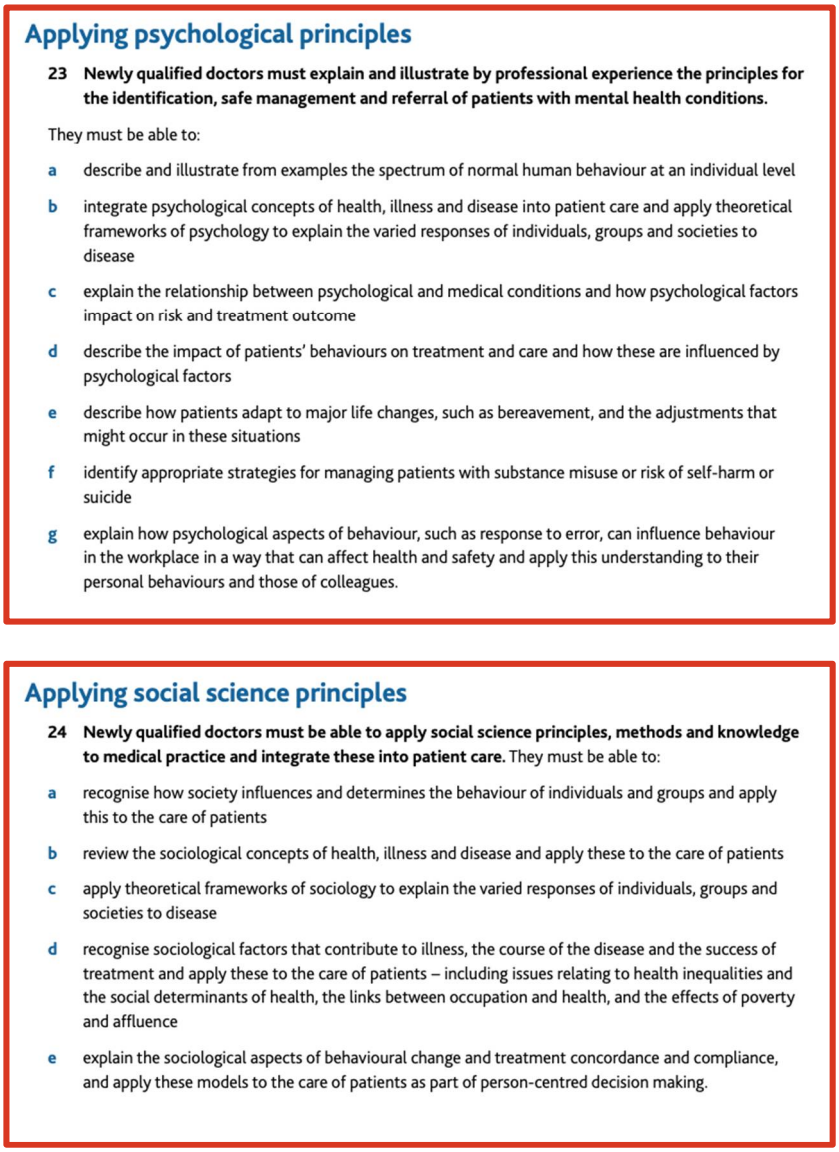
In medical education, this skillset is often referred to as "cultural competency", defined by the Association of American Medical Colleges as "a set of congruent behaviors, knowledge, attitudes, and policies that come together in a system, organization, or among professionals, that enables effective work in cross-cultural situations" [1] (p. 1). Cultural competence has been interpreted in a variety of ways, and although it is still the most commonly used term in medical education, it is not the only one. This concept has been adopted and adapted in various ways, each with their own distinct nuances. For instance, Tervalon and Murray-García [2] critiqued "cultural competence" as they felt it ran the risk of homogenizing entire groups of people based solely on their ethnic or cultural background. To mitigate the potential of using such an essentializing—and at times stereotyping—perspective, they proposed the concept of "cultural humility". For them, this "incorporates a lifelong commitment to self-evaluation and self-critique, to redressing the power imbalances in the patient–physician dynamic, and to developing mutually beneficial and non-paternalistic clinical and advocacy partnerships with communities on behalf of individuals and defined populations" [2] (p. 117). In this way, clinicians are not striving to achieve a level of competency in which expertise is reached, but rather, they are striving to recognize that cultures are dynamic and constantly in flux. Advocating a position of humility respects that this is a lifelong learning process, and that self-reflection is crucial, as is striving to create more equitable relationships.

A final, related concept we want to introduce is "structural competency". This concept has gained traction more recently [3–6]. Neff et al. [7] define it as "the capacity for health professionals to recognize and respond to health and illness as the downstream effects of broad social, political, and economic structures", (p. 2). Rather than advocating for a shift from cultural competency, as cultural humility does, structural competency instead seeks to build on not only cultural competency and cultural humility, but also the social determinants of health. It looks at both the historical and contemporary drivers of health disparities, and often employs notions of structural violence. Proponents of "*structural* competency" note that although "*cultural* competency" may equip medical practitioners with the skills to engage more fully with their patients and listen to their stories, it is still very much focused on the individual. Structural competency addresses and brings together the broader social, political, and economic systems that are causing harm to the patient [8]. This can be related to healthcare and food delivery systems, urban and rural infrastructures, zoning laws, and so on. [3]. One key component of this concept is "structural humility" [7,9]. Similarly to cultural humility, mentioned above, at its nexus is the acknowledgement that dynamic changes within these processes necessitate lifelong learning and adaptation.

Although the concept of cultural competency has been adapted and built upon, it nevertheless remains a core feature of medical curricula around the world. We view the debate on the different concepts of cultural competency as highlighting, rather than diluting, its importance [10,11]. Those who have offered alternative concepts do so because it is seen as such a crucial skill for the future clinical workforce. If anything, those offering alternative concepts fear that "cultural competency", as it is currently being taught, does not go far enough, as it may not fully address health and health disparities, or it lacks a suitably strong emphasis on the lifelong learning that it entails. Indeed, we agree with the assertions of Kleinman and Benson [12] (p. e294), who primarily take issue with the framing of cultural competency as a purely "technical skill" in which one can presumably develop expertise in much the same way as a medical student develops other skills, such as drawing blood or conducting an abdominal exam.

Key concepts included in cultural competency are often introduced to medical students through behavioural and social science teachings (from here on, BSS). All medical educators should strive for a practice that is underpinned by cultural competency; in this paper, we focus on BSS in medical education. This is usually taught by psychologists and social scientists, although colleagues from other academic disciplines (economics, demography, and public health) also teach BSS in medical schools [13].

In the United Kingdom (UK), the General Medical Council (GMC) regulates the knowledge, skills, and behaviors that students should acquire during their undergraduate medical training. In 1993, in one of the GMC's flagship documents, *Tomorrow's Doctors. Outcomes and standards for undergraduate medical education*, the GMC (the UK's medical regulatory body) stipulated for the first time that BSS should be included as a core component in all UK undergraduate medical curricula [14]. In the most recent version of the GMC's regulations, *Outcomes for Graduates* [15], that commitment to the inclusion and importance of BSS in undergraduate medical education is explicit (see Figure 1).



Applying psychological principles

23 Newly qualified doctors must explain and illustrate by professional experience the principles for the identification, safe management and referral of patients with mental health conditions.

They must be able to:

- **a** describe and illustrate from examples the spectrum of normal human behaviour at an individual level
- **b** integrate psychological concepts of health, illness and disease into patient care and apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease
- **c** explain the relationship between psychological and medical conditions and how psychological factors impact on risk and treatment outcome
- **d** describe the impact of patients' behaviours on treatment and care and how these are influenced by psychological factors
- **e** describe how patients adapt to major life changes, such as bereavement, and the adjustments that might occur in these situations
- **f** identify appropriate strategies for managing patients with substance misuse or risk of self-harm or suicide
- **g** explain how psychological aspects of behaviour, such as response to error, can influence behaviour in the workplace in a way that can affect health and safety and apply this understanding to their personal behaviours and those of colleagues.

Applying social science principles

24 Newly qualified doctors must be able to apply social science principles, methods and knowledge to medical practice and integrate these into patient care. They must be able to:

- **a** recognise how society influences and determines the behaviour of individuals and groups and apply this to the care of patients
- **b** review the sociological concepts of health, illness and disease and apply these to the care of patients
- **c** apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease
- **d** recognise sociological factors that contribute to illness, the course of the disease and the success of treatment and apply these to the care of patients – including issues relating to health inequalities and the social determinants of health, the links between occupation and health, and the effects of poverty and affluence
- **e** explain the sociological aspects of behavioural change and treatment concordance and compliance, and apply these models to the care of patients as part of person-centred decision making.

Figure 1. The behavioural and social science outcomes that medical students should meet upon graduation of a medical school in the United Kingdom [15].

Despite the recognition of BSS, also called social and behavioural sciences (SBS), as a core component of medical education, its importance is not always perceived as being

as useful or relevant as that of biomedical and clinical learning content [16]. Across UK medical schools, there are stark differences between how BSS is taught and assessed, as BSS educators often feel isolated, and medical students often perceive BSS learning content very differently to biomedical content [13,17–19]. This is the case in medical schools in other countries too; for instance, in Israel [20], in the Republic of Ireland [21], and in the US [22].

For our research, we advocate for the use of the concept "cultural competence" in the broadest sense of the term, including those conceptualizations described above: cultural humility, structural competence, and structural humility. Our understanding of "cultural competence" also includes those psychological and social science principles, concepts, and theories taught in UK medical education. For instance, the social determinants of health and illness, in addition to an intersectional approach to medicine, discrimination, stigma, disability, gender, and so on. A good reference work for a summary of the BSS learning content are the two core curricula developed by the UK's Network for Behavioural and Social Science Teaching in Medicine [23], for both psychology [24] and sociology [25]. We examine, through (auto)ethnographic data and reflections, the experiences of BSS in medical education. Moreover, we suggest, through examples of our own educational practice, a number of recommendations as to how cultural competence can be developed and cultivated through embedding BSS learning content *across* the undergraduate medical curriculum.

2. Methods

The empirical data and insights upon which this paper is based have been collected in two ways: (1) through long-term ethnographic fieldwork among medical students, and (2) via auto ethnographic reflexive practice by the four co-authors who studied, worked, examined, and collaborated with colleagues at different UK medical schools.

2.1. Ethnographic Study among Medical Students

Dikomitis collected data for her ethnographic study through several qualitative research data collection methods [26] (p. 25). Here, we outline the five data collection methods used during Dikomitis's ethnographic fieldwork at the North England Medical School (NEMS) (a pseudonym), between 2014 and 2016.

2.1.1. Participant Observation among Medical Students

Dikomitis observed NEMS students in PBL sessions, during clinical and community placements, in a range of lectures (clinical, biomedical, and BSS lectures), and during assessments (for instance, during objective, structured clinical examinations (OSCEs)). She also conducted participant observation in her own medical classroom when she was employed at NEMS, at the start of her fieldwork. She taught a total of 63 NEMS students for two optional modules, which are called Student-Selected Components (SSCs) in medical education [27–29]. Dikomitis also taught the "Health Inequalities" (3 terms) SSC and the "Introduction to Medical Anthropology" SSC (1 term). Teaching these SSCs allowed her to get to know the NEMS medical students very well, as this was small-group teaching, with 6 to 19 students in a group, through intensive, highly interactive sessions which were 1.5 to 3 h each. It was important to conduct fieldwork beyond the medical classroom [30]. She interacted with NEMS students outside of the scheduled teaching activities (during office hours, at local conferences, and during non-mandatory educational events), and Dikomitis got involved in extracurricular activities that NEMS students organized, such as debate evenings and charity events. After her employment at NEMS finished, she kept in touch with "key informants"—as anthropologists coin ethnographers' main study participants—via email, text messages, and catch-up meetings. Dikomitis made notes during participant observation, where appropriate, or shortly after the events [31].

2.1.2. Critical Incident Questionnaires

Dikomitis adapted Stephen Brookfield's Critical Incident Questionnaire (CIQ) [32] and asked NEMS students to complete a CIQ after each SSC module session. "Critical incidents"

do not constitute dramatic or unusual events during a teaching session, but everyday occurrences, which, when analysed critically, can improve future teaching sessions [33]. The purpose of such a CIQ was to capture, as Keefer [34] (p. 1) puts it, "critical moments, experiences, or "vivid happenings" that occur in a learning episode". The adapted CIQ had the session title and date in the header, and it contained 5 questions (see Figure 2).

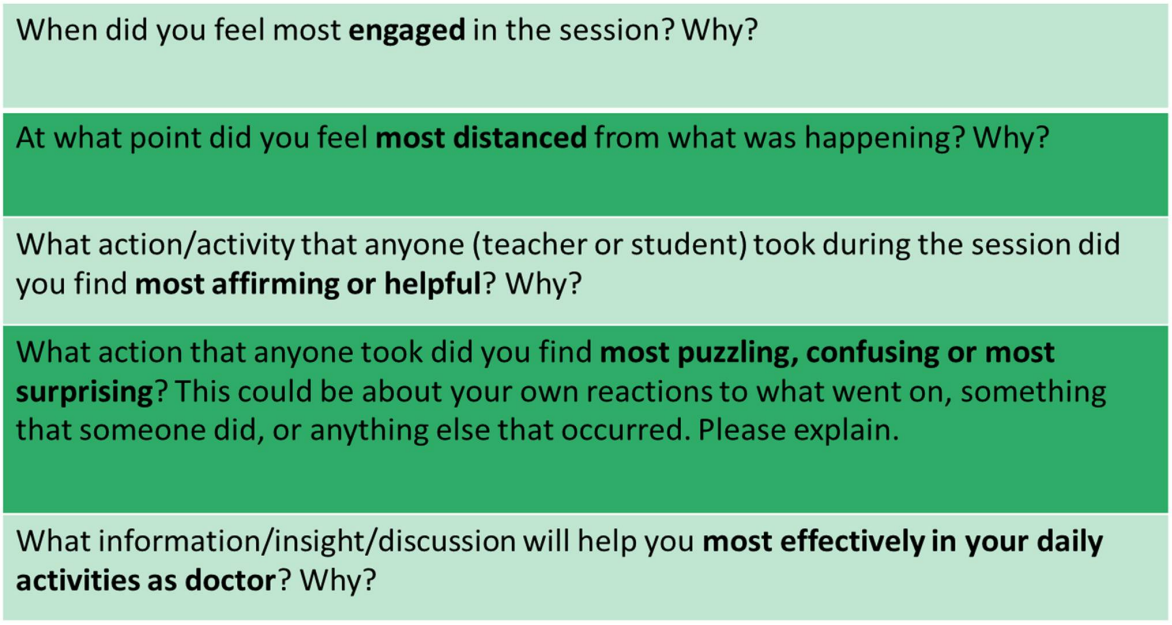


Figure 2. The CIQ completed by medical students after each SSC session, adapted from Brookfield [32].

NEMS students completed a CIQ before they left the session, and the answers were usually two to three lines long. A total of 184 CIQs at the NEMS were collected.

2.1.3. Essays and Reflective Statements

Nineteen students who took the "Introduction to Medical Anthropology" SCC wrote a reflective text at the beginning of the SSC (about the reasons they chose to study medicine) and at the end of the two-week intensive module (about their perceptions of anthropology in medical education). NEMS students have also regularly sent Dikomitis unsolicited lengthy emails about the modules. These emails have been anonymized, and they constitute part of the data set.

2.1.4. Focus Group

Upon the request of the 11 students who chose the "Health Inequalities" SSC as one of their optional modules, Dikomitis organized a focus group after the last teaching session. Students had the option to opt out of participation, but all 11 students in the SSC cohort participated.

2.1.5. Interview Study

The interview study constituted the second phase of the ethnographic fieldwork and had two objectives: (1) to collect views of NEMS students who had not been taught by Dikomitis and (2) to triangulate the insights she gathered during participant observation. She contacted 34 NEMS students who had indicated that they would be interested to participate in the interview study, and 12 students she had not taught, whose contact details were provided by the medical sociologist that was teaching at the NEMS. Students were approached via a personalized email with the study information and consent form. A total of 11 students agreed to take part in the study (see Figure 3 for details).

Number	Pseudonym	Gender	Age	Year of study	Other degree	Taught by Dikomitis
1	Charlotte	Female	26	Year 4	Biochemistry	Health Inequalities
2	Ben	Male	21	Year 3	No	No
3	Ashak	Male	22	Year 2	Medical Sciences	Health Inequalities
4	Hope	Female	19	Year 2	No	Medical Anthropology
5	Claudia	Female	20	Year 3	No	No
6	Stephanie	Female	21	Intercalating	No	Both courses
7	Liz	Female	26	Year 3	Biochemistry	Medical Anthropology
8	Angela	Female	21	Year 3	No	Health Inequalities
9	Beckie	Female	20	Year 2	No	No
10	James	Male	23	Year 4	No	No
11	Tom	Male	26	Year 4	Marine biology	No

Figure 3. Characteristics of the 11 interview participants.

The interviews, which had an average length of 46 min, were structured in accordance with five broad themes: (1) student background and profile; (2) views on medical students and other students; (3) views on medical education; (4) teaching (PBL, lectures, placements, and SSCs) and assessment methods; and (5) social sciences in the medical curriculum. All interviews were recorded and transcribed verbatim.

2.2. Turning the Ethnographic Gaze on Our Educational Practice

The four co-authors have worked together in medical education on different educational and research projects. Dikomitis brought this research team together for the purpose of collaborating on medical education research, with a focus on BSS; this paper is the first output of our collaboration. The autoethnographic insights were collected throughout the period wherein the co-authors collaborated. The research team is representative of a mixture of different educational backgrounds, and it brings together a wide range of experiences at different medical schools, as follows: Dikomitis is a social and medical anthropologist and has been teaching at different medical schools in the UK, she currently works as Professor of Medical Anthropology and Social Sciences at the Kent and Medway Medical School. Wenning is a medical anthropologist and full-time researcher who taught experiential learning sessions to undergraduate medical students in Keele's School of Medicine where she was also involved in postgraduate medical education, mainly through supervising clinicians carrying out medical education projects. She currently works at the Kent and Medway Medical School where she continues to engage in medical education research. Ghobrial was a medical student between 2011–16 at the Hull York Medical School, and he continued postgraduate education at the London School of Hygiene and Tropical Medicine. He is undertaking specialist training in internal medicine in London and is pursuing research interests alongside his clinical work. Adams is a psychologist and has been working in medical education for over a decade. She currently leads the BSS team at Keele's School of Medicine and is engaged in medical education research concerning interdisciplinary team teaching and innovative ways to integrate BSS into medical education.

Dikomitis has systematically kept a field diary since the start of the study. Such autoethnographic practice facilitated reflection on her own educational practices, and on how her teaching was perceived by students and colleagues [35]. All co-authors had regular meetings during the collaborative period to reflect on their disciplinary positions in medical schools and to share their experiences. For instance, co-marking students' knowledge assessments provided opportunities to discuss student performance, in addition to enabling the consideration of teaching and assessment effectiveness. These meetings were not systematically recorded until work on this project began, but traces of conversations (on

WhatsApp and MS Teams, Dikomitis's field notes) were revisited during data analysis for this paper.

2.3. Data Analysis

All interviews and focus group recordings were transcribed ad verbatim, field notes were typed up and organized into different electronic files, and CIQs were typed up and collated for each SSC session. Dikomitis carried out data analysis throughout the ethnographic fieldwork, and presently, she continues to revisit the datasets. She applied a reflexive, thematic analysis to the dataset, which involved cyclically coding data and using principles of constant comparison to analyse the different data types [36,37]. Dikomitis engaged in an ongoing iterative process, which involved going back and forth between herself, the study participants, and the stakeholders. These included both her NEMS and current medical students, NEMS medical educators, and colleagues at other UK medical schools. This process facilitated writing up the interim findings into reports, the conference presentation, and later, the production of resources for workshops on BSS and academic outputs.

For the purpose of writing this paper, all co-authors had access to the interview data, focus group data, and CIQs. These were independently read by each co-author and discussed in meetings and through various online platforms (MS Teams, WhatsApp, and email). These back-and-forth discussions constituted a fresh analysis of the datasets, with reflective memos constantly added to the datasets. After several discussions and meetings, we reached analysis saturation.

The study was conducted in accordance with the consolidated criteria for reporting qualitative research (COREQ) [38].

2.4. Ethical Considerations

Details of institutional approvals from institutional ethics review committees are included in the ethics statement below. This was considered a low-risk study, and the main ethical challenges revolved around safeguarding the participants' privacy and being aware of power dynamics, which are always present when one conducts research at one's own institution [39,40]. NEMS students were repeatedly assured that their participation in the study would have no influence on their marks. Dikomitis taught SSCs at the NEMS where SSC assignments do not carry any marks, but students have to engage with them as part of their undergraduate coursework portfolio. All interviewees gave their explicit written informed consent for inclusion before they participated in the study. Dikomitis sought explicit additional consent when she wanted to use students' anonymous written material, such as email communications, written session feedback, and short essays which were produced for the SSC modules.

All names of individuals have been pseudonymized. NEMS students who participated in the interview study chose their own pseudonym.

2.5. Limitations

Though we have tried to demonstrate a wide range of student perspectives, we are aware that the "sample" is not as representative as the samples in quantitative studies. As we engaged with those who chose the "Introduction to Medical Anthropology" SCC and the "Health Inequalities" SSC, it is possible that they were more inclined to view BSS content favorably as they already had a baseline interest. The objective of ethnographic research is to achieve a contextually grounded understanding of a community (here, medical educators and students). On the whole, ethnographers work with smaller samples in comparison to quantitative researchers, and thus, ethnographers do not quantify the "sample" of research participants. Moreover, the individuals included in the ethnographic fieldwork would not be counted or seen as a unit of analysis. The interview study had 11 participants: 7 women and 4 men (see Figure 3). This roughly reflected the gender composition of the NEMS student cohort at the time the research was conducted.

3. Results

The majority of our data were collected at UK medical schools with five-year integrated Problem Based Learning (PBL) curricula. The integrated medical courses were underpinned by a blended learning approach that combines PBL, lectures, workshops, practical classes, and SSCs. BSS, along with other subjects, was integrated across the course, rather than delivered in discrete modules. The medical schools where we collected our data, and in those where we work(ed), all offered early clinical experience (i.e., medical students had placements in primary and secondary care from the beginning of their first year in medical education). BSS, as regulated by the GMC, was present in all curricula as a core component (see Figure 4).

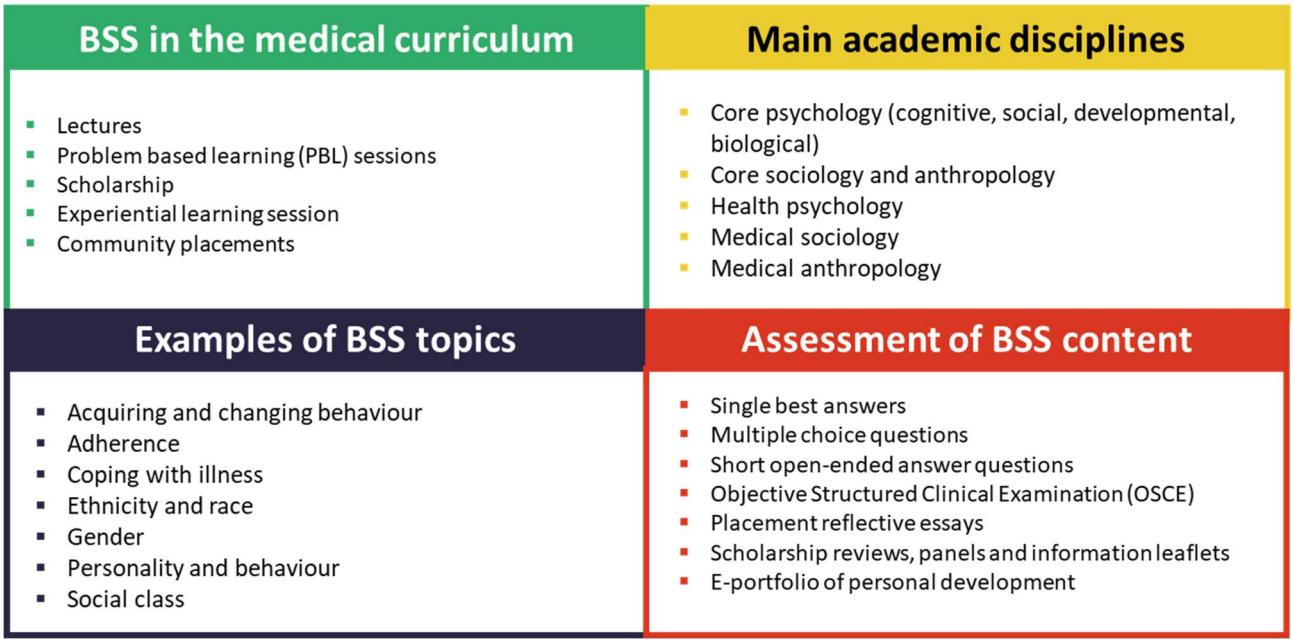


Figure 4. Behavioural and social sciences in the undergraduate medical curriculum.

Despite BSS constituting a mandatory, essential component of the medical curriculum, medical students did not always perceive the BSS learning content as useful or relevant in comparison to the material they studied in biomedical disciplines, such as biology, anatomy, and physiology; however, this perception was not always clear-cut, and we gained an understanding of how the hidden curriculum operated in terms of strengthening negative perceptions of BSS content. After data analysis, we identified four overarching themes, as follows:

1. Perceptions of the behavioural and social sciences in the medical curriculum;
2. Experiences of teaching, learning, and assessing BSS;
3. Culture surrounding the formal and hidden curriculum in relation to BSS;
4. Relevance of BSS to clinical practice.

We provide details of each theme below, using descriptions of the data and our own experiences.

3.1. Perceptions of Behavioural and Social Sciences in the Medical Curriculum

Most medical students admitted that they were largely unfamiliar with the social and behavioural sciences prior to their medical training. As many pointed out, entry requirements for UK medical schools exist for subjects such as biology, maths, and chemistry. One student revealed that the reason she went on to study medicine was, in her words:

> Because I was very good at sciences, I was top of my year and so because if you're top of your year in sciences everyone said you had to do medicine. (Liz)

For her, "sciences" referred primarily to maths and physics. It certainly did not extend to BSS. Many students echoed this sentiment, pointing to the importance of classes such as chemistry and biology in order to enter medical school. Such experiences and perceptions ran throughout the data. Although students were superficially familiar with psychology, other disciplines, such as anthropology and sociology, were more difficult for them to define. Angela remarked that, for her, BSS "*incorporates everything that's not science*", by which she meant "*everything that's not directly about how the body works and how it functions*". Even those students who had previously engaged with courses that were more closely related to a social science or health systems approach, and thus, had a concrete idea of what it entailed, admitted that they did not fully engage with the topic, as they found it quite "*dull*" at the time. It appeared that certain topics, when they were introduced, may have unfavorably shaped their perceptions of BSS, thus initially discouraging some medical students from fully engaging.

There was a lot of slippage between the different disciplines that comprise BSS. Medical students, in addition to biomedical and clinical educators, did not understand the disciplinary boundaries regarding the contributions of each discipline. Students, and colleagues who are medical educators, implicitly knew that anthropology has something different to offer than, for instance, psychology, but not many could articulate the distinct contributions that each discipline made to medicine.

The relatively low importance that students attached to BSS was reflected in the language students used—often referring to BSS as the "*wishy washy*", "*fluffy*", or "*waffly*" stuff. Although all students acknowledged that BSS learning content was important, they felt it did not require as much of their time as other components of the curriculum. It was described as including "non-clinical" knowledge, and because of this, it was often considered to be a low-priority component of their studies, given that it was seen as largely "common sense" knowledge. In fact, some students expressed surprise that so much emphasis would be placed on it, with Beckie even exclaiming:

> Obviously I know there would be a bit of it but the fact that there was like a whole exam on it and lectures on it and learning outcomes and everything, I didn't realise it would be such a big part.

Many students had simply not considered that their medical curriculum would place such an emphasis on concepts and principles from BSS. The reflective statements, written at the end of the optional Anthropology module, revealed the invisibility of BSS; as one student wrote, "*If I am honest, I did not even know the meaning of anthropology*". Moreover, their ignorance surrounding the contribution and relevance of BSS to their future clinical practice also highlights BSS' invisibility: "*I had no idea what medical anthropology was or how it could be useful*".

3.2. Experiences of Teaching, Learning and Assessing BSS

The second overarching theme in the dataset concerned how both students and staff experienced teaching, learning, and assessing this core component.

3.2.1. BSS Teaching

Although BSS is taught across different teaching activities (see Figure 4), students primarily recalled the BSS lectures in interviews, informal conversations, and reflective writing. From the students' perspective, the lecturers' attitudes were crucial. Many complained that the lecturers who taught their BSS components were not very engaging. This was coupled with what students considered "*dry lectures*", which are lectures that are devoid of humor. Charlotte struggled with feeling as though she was being "*talked at*", coupled with an inability to ask questions or to ask the lecturer to slow down. Stephanie similarly struggled to engage with the topic, noting that it would be more beneficial to move from a lecture format to a tutorial or seminar, in which students could engage in a discussion on the relevant topic. As interviews with medical students showed, the teaching style of the BSS lectures affected their levels of engagement. There were also positive appraisals

of lectures and whole-cohort BBS lectures, but more clearly for lectures in the specialist SSC courses that were delivered to a small group of students, which often rendered these lectures into very interactive sessions in which students felt more comfortable to ask a question (which rarely happens in a lecture delivered to two-hundred students in a year group). Here are two CIQ answers which illustrate this:

From the SSC "Health Inequalities":

> Throughout the session I felt engaged in the discussions. I enjoyed exploring the underlying causes of ill health and their relation to inequality. I felt that the lecturer and all the students made interesting and thought-provoking points.

From the SSC "Introduction to Medical Anthropology":

> Talking about structural violence in the lecture was really engaging and allowed us to draw in our personal experiences.

Across the dataset, it is clear that PBL cases, in all medical curricula, contain plenty of BSS material. PBL tutors facilitate two three-hour sessions each week. Tutors are responsible for ensuring the balanced discussion of clinical, biomedical, and BSS learning content during PBL sessions. This happens through formulating specific, intended learning outcomes after reading and discussing the PBL case (i.e., a real-life scenario) during the week that the PBL case opened. After a few days, the PBL group reconvenes, and students discuss the outcomes they formulated—having looked up material and revised content for each learning outcome. Our analysis of the data, which reflect our own experiences with PBL, reveal that BSS-related learning outcomes were routinely, quickly, and often superficially discussed, typically either at the beginning of a session or the end of a session. Claudia reflected on her PBL tutor: "I got the impression that they did prefer to talk about the sciencey stuff but they knew that we had to talk about the other things [BSS]." Dikomitis's fieldnotes reveal that PBL tutors themselves do not always feel comfortable engaging with BSS content during PBL sessions. Here, we paraphrase what PBL tutors, with a clinical or biomedical background, told Dikomitis during a workshop on how to integrate BSS content in PBL: "*I was not taught social sciences when I was at medical school*", "*There are textbooks on BSS in medicine?! I did not know that*", "*Students just use their common sense, they do not know where to find BSS resources*", and "*As a PBL tutor I am aware that what I say in session will influence them and I do not want to say the wrong thing*".

> Medical students are often reticent during placements when supervising clinicians encourage them to engage with BSS learning, or students do it as a "tick box" exercise. When students are on a hospital ward taking a clinical history and they forget to ask about "ideas, concerns, and expectations" (they remember it as "ICE"), this is when they might roll their eyes or make a noise and say "oh and I forgot to ask about ICE". As if it does not really matter as much, because they can still formulate the diagnosis without asking about the issues they consider "peripheral". (From reflective note by Ghobrial)

Students explained that they were "*getting bored*" during a unit with a lot of BSS content. It should be noted that this negative perception is not uniform across medical schools. For instance, students can go into excellent detail when applying psychological models to patients in PBL cases, including clear considerations of how behavioural and social factors may lead to different health outcomes.

3.2.2. Learning BSS Content

In general, our data show that medical students felt, quite simply, overwhelmed with the amount of information they had to learn. As Tom explained, "*you need to know all these topics [. . .] so you need to cover all of medicine and they don't say how much depth you need to cover it in*". The breadth of their learning meant that BSS content was often not prioritized. In fact, the majority of students either revised BSS material first to move through it quickly, or they saved it for last as they felt the majority of it was "self-explanatory" and largely

"common sense"; thus, not only was it situated within what many students felt was an overloaded curriculum of necessary topics, but it was also seen as already being largely self-evident. Claudia, for instance, was laughing shyly when she illustrated how she ranked learning content:

> What the lungs do and what goes wrong with the lungs would be my top priority, but the impact of lung disease on the patient? That goes a bit lower down, I don't really have to know much about this now, it seems too far in the future [that she would treat a patient with a lung problem]. I'll do it when I've made sure I've done everything else I need to do, so it can end up being quite a quick job.

Some students expressed frustration *not* at having to learn the material, but rather at *how* to learn the material. Much of the biomedical learning content—anatomy, physiology, and so on—focused on concrete pieces of knowledge to commit to memory. The learning content that would develop their cultural competency skills, however, took a different approach. As Stephanie described it: "*It's not something that you can outline as fact and it's not something that you can sit down and learn as fact*". Ashak felt it even went beyond that:

> I think we're all becoming doctors because we are actually people who want to get up and do something and when you present us with just questions and questions and problems without even, without skills to know how to solve these or even just discuss a solution, then I think we all become cynical.

For him, the format of questioning and reflecting, did not fit with what he thought was a more appropriate approach to learning; as Stephanie described it, an approach that is focused on providing students with concrete, actionable points and solutions—or "facts". This reflects a discrepancy between the expectations of BSS lecturers and PBL tutors on the one hand, and students on the other.

Medical students often ask what the "correct answer" is as they prefer to study neat overviews of factual content. Indeed, CIQ answers revealed that students are often afraid to say the "wrong" thing: "*The lecturer made it clear no idea or point was incorrect/wrong, made it easier to participate and helped open discussion*". A comment in this vein was noted down after almost every SSC session. This can be interpreted in two ways: students are afraid of being incorrect, or students are afraid of saying something that is offensive or not socially acceptable. Learning content from the behavioural and social sciences is often seen as political, and it is strongly associated with debates concerning identity politics. Many medical students are apprehensive of fully engaging in such discussions.

3.2.3. Assessment of BSS Content

When it came to revising BSS for exams, students felt that it required less of their time and energy in comparison to revising other learning content. Many commented on their desire to pass their exams and progress to the next year. In order to do so, they focused their attention on the topics that they perceived they needed to know to pass the often-rigid exam structure. For them, BSS content did not constitute essential exam knowledge that needed to be learned, nor continuously revised throughout the year, and intensively revised before an assessment. One student even claimed it consisted of "*all the stuff that you can blag or sort of make up in an exam*", further relegating it to the periphery. Another student specifically bemoaned that it was a "*scary thing*" that exam questions on BSS topics were weighted the same as questions on biomedical or clinical topics.

Other students echoed their surprise over their assessments. As they described it, learning and being assessed on the BSS components of the curriculum were two very different things. Many admitted that they did find it interesting, particularly when they could discuss the topic during more in-depth group work, when they felt comfortable to do so. This did not necessarily translate to enthusiasm to prepare for exams. As one student admitted with a laugh, "*I find having discussions about it interesting, but to study, it's just, it's an, a bit of a nuisance.*" Although BSS comprises engaging topics of discussion, the BSS assessments were not seen as intensive topics for revision.

3.3. Culture of the Formal and Hidden Curriculum in Relation to BSS

Many students remarked on the perceived importance of the BSS within the medical curriculum. One commented that the teaching of these components was "*almost like a second thought*", whereas another claimed it was not properly taught at all, with students instructed instead to "*go away and look them up in books and do it yourself*". Even the term "*fluffy stuff*", used in one medical school to refer to BSS, was first heard by some students from their PBL tutor. Such events further cemented rather negative perceptions of the importance of BSS in medicine. This was reinforced by other educators, with Tom admitting: "*when everyone [at NEMS] talks about the fluffy stuff [. . .] it essentially just excludes everything that is non-clinical*". These perceived attitudes toward developing cultural competency skills were apparent to students, and they reinforced a perceived hierarchy in terms of the importance of this knowledge compared with other skills that they were learning.

Among medical students, peer influences produced the hidden curriculum that reinforced, in contrast to the formal curriculum, that the "*social stuff*" is easier, of less importance, and is less relevant to medical training and practice. One student, for example, noted that she was "*kind of teased*" for not only checking out biomedical textbooks from the library, but also social science textbooks. Though she claimed it was done in a "*good natured way*", she nevertheless highlighted the disjunction between how students perceive biomedical subjects versus BSS subjects.

Our joint reflections, based on our experiences of teaching BSS and from sharing experiences with clinicians, lead us to wonder, to coin the GMC's well-known title of the UK's regulatory medical curriculum framework, who are the role models for "*Tomorrow's Doctors*"? [14] Are they today's doctors? If so, what can we expect of future clinicians if the doctors, whose careers they follow, have an inadequate understanding of BSS? Clinical placements take place in hospitals or primary care settings, and the cardiologist, for example, who might give a student one or two lectures, will be the cardiologist who teaches them during their placement. In these instances, there is a follow-up on the lectures and some pressure to have an understanding of their subject expertise. If students want to emulate qualified doctors, then students will learn everything that has been taught by them, and they will also set aside everything that the qualified doctors regard as irrelevant or not important. Our analysis highlights how medical students often compartmentalize learning content. Angela put it like this:

> If your tutor is a heart surgeon, they're not really going to be that fussed about like talking to you about like what that patient's going to do when they get home, like they're more interested, in, like the anatomy of the heart.

3.4. Relevance of BSS to Clinical Practice

Students frequently reported that they found the discussions on health inequalities not only informative, but relevant to their future daily activities as doctors. Although many noted a broader awareness of the significance of social and cultural factors—or as one wrote, they learned that "*a lot of inequalities come from people's social background and how they are brought up affects their views*"—some students did reflect on concrete changes. Several commented on how BSS learning would change their interactions with patients. More specifically, they emphasized that they would engage in discussions with patients that went beyond merely the disease presented. Others felt that, more fundamentally, their understanding of their own role had actually shifted.

It was often after small-group teaching (e.g., SSC and PBL sessions) that students interacted frequently and more directly with the BSS expert and fellow students, and subsequently, the clinical relevance of the theory, methods, and concepts from the behavioural and social sciences became clear to students. This is reflected in the following CIQ answers to the question asking them what they think will help them most effectively in their daily activities as a doctor:

From the SSC "Introduction to Medical Anthropology":

> This [anthropology content] is helpful because it makes me more aware of people's opinions and cultures.
>
> Anthropological research—understanding why certain cultures behave the way they do—will help me understand certain health behaviors and be better prepared to address them.
>
> All the discussions—how to deal with other cultural beliefs (e.g., religious beliefs and beliefs in witchcraft) and the importance of using anthropology to inform policy.
>
> Discussion regarding beliefs surrounding health, and similarities between what we see as normal (e.g., Christian religion) and abnormal (e.g., witchcraft).
>
> *From the SSC "Health Inequalities":*
>
> Realizing that a biomedical attitude to everything often needs a social perspective to make a difference.

4. Discussion

4.1. Embedding BSS in the Undergraduate Medical Curriculum

BSS is expected, by the UK's regulator of medical education, to be fully incorporated into the medical curriculum [15]. Medical students often perceive an overarching tension between the behavioural and social sciences on the one hand, and the biomedical and clinical sciences on the other hand [21,41,42]. Although BSS is now institutionalized in the formal medical curriculum, our central findings note that (1) medical students, educators, and clinicians combine everything into the "social stuff" or the "psychosocial", and (2) they perceive this learning content to be "fluffy", meaning that it is easier, requires only common sense, it is of less importance, and is less relevant to medical training and practice [17,43–45]. Through the production of the hidden curriculum, in which junior colleagues adopt the attitudes and opinions of more senior colleagues who may cultivate a culture in which these subjects are categorized as "wooly", BSS topics often remain peripheral, and this is reflected in how students approach BSS [46].

We have seen that medical students often feel uncertain, and discussions of inequality, race, gender, social class, and health inequities are often emotionally fraught; thus, many medical students fear engaging in them [47]. Medical students should be equipped with the tools to manage such uncertainty, both around biomedical and BSS theory and their related concepts [48,49].

Ultimately, medical students are not studying to become psychologists or sociologists. Blonder [50] (p. 275), who refers to medical students as "practitioners in the making", writes about how students desire their education to be "clinically-oriented". It was interesting to analyse how students hold the misconception that clinical experts only need to consider their biomedical expertise (regarding the above quote concerning the heart surgeon who only needs to consider anatomy). Emphasizing the relevance of BSS topics to clinical practice will prevent students compartmentalizing learning content, and as a consequence, often deprioritizing BSS topics. A real, combined approach of behavioural, social, biomedical, and clinical sciences is paramount. One pioneering example of such integration, bridging core sociology with medical education, is the problem-based approach to social sciences as applied to medicine by Constantinou [51].

The limited exposure that medical students have to clinicians who refer to BSS topics during their placements propagates misconceptions concerning the relevance of BSS. This makes a case for placements in other environments, wherein clinicians, among other professionals, more ostensibly implement an understanding of BSS topics; for example, a placement with a local public health agency. The access to such role models, and participation in practical or placement-based applications of behavioural and social sciences, can demonstrate the relevance of BSS topics in clinical practice, as well as demonstrating how they are specialist fields in their own right. This gives medical students an idea of the depth of understanding that is required when they go on to practice as doctors, in addition

to showing them the value of a broader network of other disciplines that are part of "the bigger picture".

4.2. Implications for Medical Education

In the following, we share three examples of successful approaches to educational practice in order to embed BSS into the medical curriculum: (1) BSS curriculum development, (2) how to integrate teaching from disciplines across the behavioural, social, and biomedical disciplines, and (3) an innovative way to assess BSS content.

4.2.1. Curriculum Mapping: From Session Aims to Graduate Outcomes

Developing and reviewing a medical curriculum requires consideration of multiple factors in conjunction with each other. During a recent curriculum review at [UK medical school], the BSS content of the first two years of the five-year course, called "Phase 1", was evaluated to ensure that the coverage was still relevant and contemporary. In this example, we focus on psychology. We wanted to ensure that the psychological topics are selected for their relevance to medical education and clinical practice, and that they were guided by our "inclusion criteria", as set out by the UK's core curriculum of psychology in undergraduate medical education [24]. During this curriculum review, we noticed gaps in the representation of understanding social group processes and decision making. The psychologist in the BSS team identified relevant units where these identified concepts would fit, and they worked closely together with the research leads when embedding the new learning content into their units. This resulted in the development of a new lecture which outlines how different psychological factors impact an individual's decision to take risks. To ensure the new material was coherent and relevant, PBL cases were revised to include appropriate cues for students, and additional information was provided for the PBL tutor's notes, including prompts for them to ask students to extend discussions. Tutors were also provided with details of relevant prior learning in the curriculum so that they could push students to make links and build on their existing knowledge.

Individual sessions, such as lectures, support students' learning with weekly PBL cases. Here, we provide an example of learning content that concerns "risk" (See Figure 5).

Session aims	Unit ILOs	Phase ILOs	BeSST psychology curriculum	GMC Graduate Outcomes

▪ What do we mean by risk?
▪ What influences our 'risky' decision making?
  ▪ Cognitive (personality, thinking processes, perception)
  ▪ Biological (neurotransmitters, genetic burden)
  ▪ Developmental (exposure to risk, play)
  ▪ Social (group identity, influence)
  ▪ Interdependence of factors
▪ How can we better communicate risk?
	▪ Explain why people engage in risky behaviour and understand the impact of these behaviours on health
	▪ Explain how health related behaviours are acquired (learning theory, social learning theory and the importance of modelling)
	▪ Describe the principles of health promotion and disease prevention in relation to smoking
		▪ Discuss the acquisition and maintenance of eating, drinking and smoking behaviours
		▪ Discuss human behaviour with regards to diet, exercise, smoking, alcohol and substance use
		▪ Explain why people engage in risky behaviours and understand the impact of these behaviours on health
		▪ Outline the principles of psychological and behavioural interventions to change people's behaviours in relation to exercise and diet, and use of alcohol and cigarettes
			▪ Cognitive functioning in health and illness
			▪ Psychological factors in health and illness
			▪ Psychology across the lifespan
			▪ Clinical reasoning and decision making
			▪ Human communication and communication skills training
			▪ Social processes shaping professional behaviour
			▪ Leadership and team working
				▪ Describe and illustrate from examples the spectrum of normal behaviour at an individual level
				▪ Explain the relationship between psychological and medical conditions and how psychological factors impact on risk and treatment outcomes

Figure 5. An example of how specific BSS learning content concerning "risk" is mapped across different levels of intended learning outcomes (ILOs).

Lectures include session aims—the knowledge and understanding that students should achieve the given aims during a session. The aims of the session feed into the unit level learning outcomes—these are what students should be comfortable with by the end of the unit, in this case, a three-week unit on lifestyle and health. The phase level learning outcomes are what students are expected to know and understand by the end of year 2 (the pre-clinical phase). The final overarching level is the GMC graduate outcomes.

4.2.2. Multidisciplinary Co-Teaching

From our experience, jointly delivering lectures and workshops, with colleagues from diverse academic disciplines, enhances student learning and the medical school's commitment to patient-centered education [52]. Co-teaching with colleagues from across biomedical, behavioural, and social science disciplines, provides an effective delivery method for medical students that has several advantages. A multidisciplinary teaching approach can improve the ability of students to integrate their learning, and it provides an explicit model of how biopsychosocial factors are interdependent and cannot be considered in isolation [53–56]. Furthermore, it may change the wider culture in which different disciplines are placed hierarchically, thus influencing the hidden curriculum to view BSS content as less "fluffy" or "wooly". We share two examples here. Firstly, a lecture on eating behaviors, which was co-taught by a psychologist and a physiologist in order to promote the consideration of eating from a biopsychosocial perspective. The lecture considered how eating is regulated, how and why food preferences may develop, and factors that can lead to unhealthy eating. The co-presentation had wider benefits, enabling medical educators and students to better appreciate the multidisciplinary links in medical education. It also provided valuable opportunities for staff to act as role models for students, in terms of demonstrating how behavioural and biomedical sciences can be integrated. The second example is of a workshop delivered by a medical anthropologist, a parasitologist, and a dermatologist, who created, together with the medical students, the biopsychosocial model of cutaneous leishmaniasis, a neglected, potentially highly stigmatizing, skin condition.

The material presented to the students came from a major research programme which was co-led by an anthropologist and a parasitologist [57]. The students were keen to work with data from a "live" research project. The questions that students asked, and the topics discussed during the workshop, covered a wide range of disciplines that students could draw from, including microbiology, pharmacology, anthropology, and psychology. When co-creating the biopsychosocial model of cutaneous leishmaniasis (see Figure 6), each factor was discussed with a special emphasis upon the interactions between the biological and psychosocial aspects of the disease.

Students provided positive feedback, especially with regard to the fact that they were able to discuss both physical and mental health aspects in one session.

In educational activities that are co-delivered or facilitated by educators from different disciplinary backgrounds, students develop the skills they will need as patient-oriented practitioners, and in doing so, they will positively appraise the psychosocial aspects of health and healthcare. Through such a multidisciplinary educational approach, all of the people involved, including both the educators from different disciplines and the medical students, become members of one community of practice, which breaks down hierarchies between disciplines [58].

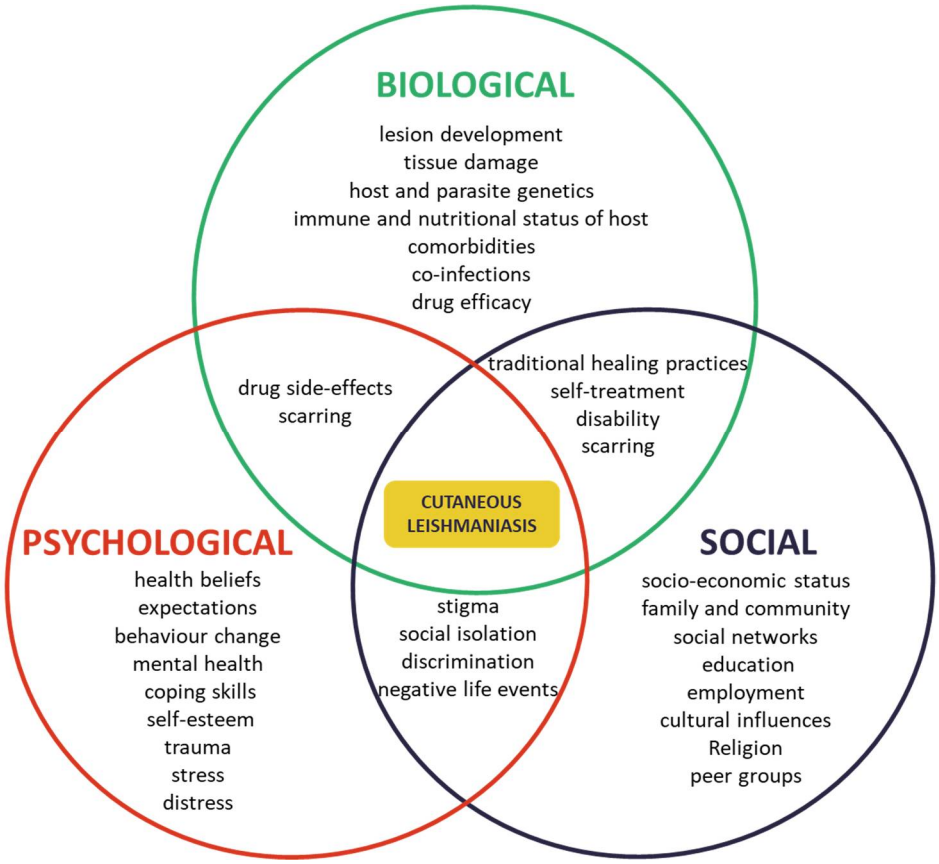


Figure 6. The biopsychosocial model of cutaneous leishmaniasis.

4.3. Innovative Assessment of BSS Content

At the end of the SSC "Introduction to Medical Anthropology", students worked in groups to prepare a grant application for an ethnographic research project on a clinically relevant topic of their choice. They presented this to a mock funding committee body. Students had to demonstrate that their proposed research was:

(1) theoretically underpinned by anthropological concepts introduced in the SSC;
(2) methodologically sound and used appropriate methods. They were encouraged to use examples discussed in the course;
(3) impactful and able to improve the health outcomes of the population or community they proposed to study.

Students presented their proposal to a panel which was composed of BSS, biomedical, and clinical colleagues from the medical school, and students imagined that the panel members were representing a large funding body (such as the UK's National Institute of Health Research or the Medical Research Council). The student feedback for this assessment was overwhelmingly positive. We have since adapted this assessment, with students making patient leaflets, proposals for clinical committees, and commissioning bodies.

5. Conclusions

In order to recall where we started, with the concept of "cultural competency" in its broadest sense, and to connect this to the wider theme of this special issue of *Cultural Competence in Healthcare and Healthcare Education*, we conclude with some suggestions and recommendations for medical educators who are committed to cultivating and developing cultural competency skills in their medical students through robustly embedding behavioural and social sciences in their medical curricula. Our suggestions and recommendations broadly fall into three main categories: multidisciplinary collaborations in education, scholarship, and research and resources.

Multidisciplinary collaborations in education

- It is important to ensure the visibility of the behavioural and social scientists teaching medical students, regardless of whether these BSS experts are based in medical schools or in other departments. Our experience shows that when BSS colleagues are offered the same opportunities, with regard to educational leadership roles and responsibilities, they feel valued, and they become respected members of medical educational teams;
- Educators in medical schools should be encouraged to explore opportunities for multidisciplinary team teaching. This enables the wider educational team to have a better appreciation of each discipline's distinct contributions to medical education, and it facilitates concrete subject integration for students to model in their own learning;
- Team meetings to discuss how both positive and negative perceptions of BSS content are reinforced by each student cohort, and how BSS is incorporated into the formal curriculum that is producing a hidden curriculum with, for instance, negative institutional slang concerning BSS;
- Exploration into different examination strategies for BSS topics to ensure that the application of knowledge can be assessed more reliably.

Scholarship and research

- BSS educators should be familiar with the medical education curriculum, and they should appreciate the demands that are required of medical students, which are very different from those required of social and behavioural science students. One could, for instance, carry out a small autoethnographic project by becoming a student in one's own medical school, attending a wide range of clinical and biomedical teaching activities in order to observe different teaching and assessment strategies. This is particularly valuable for BSS experts who are sometimes "parachuted" in from other departments in order to deliver teaching;
- We strongly encourage reflexive educational practice, bringing an ethnographic lens to one's own medical classroom and developing communities of practice in places where these do not exist in order to facilitate discussion, reflections, and peer reviews.

Educational resources

- Ensure clear signposting to relevant, appropriate, and readily available academic resources that support the BSS teaching content. These should be highlighted to both staff and students, and the importance of using resources produced by BSS experts, rather than relying on quick internet searches, should be emphasized frequently;
- Course materials should be reviewed regularly to ensure BSS concepts and theories are current, in addition to being represented in a valid and coherent way, rather than being tokenistic and "shoe-horned" into "empty" curriculum slots. Any significant curriculum development should be evaluated using CIQs to assess what works well and what does not;
- Experience is often an underused resource, and many staff and students have personal and professional experiences concerning gender, race, age, behavior, or inequalities. PBL tutors should be encouraged to prompt students to share relevant experiences, offering them support when doing so, and they should discuss how their BSS knowledge can be applied in order to consolidate learning. After all, we want medical students to become reflective practitioners.

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Data Availability Statement: The interview data, CIQ results, and ethnographic field notes are available upon request. Due to the ethnographic and participatory nature of the study, it is not appropriate to publicly archive this dataset.

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