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RESEARCH ARTICLE

Social connections and social identity as a basis for learning and support: Experiences of medical students with minoritised and non-minoritised ethnic identities

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Abstract

Background: Social connections between medical students provide a key basis for learning and support. These connections, and associated social identity, may be patterned by ethnicity, and students often perform similarly academically to those they connect with. The mechanisms that underpin the formation of these connections and the role that they play are not fully understood. This study explored how medical students connect with each other, and the potential impact of this on their academic attainment and well-being, with a focus on students with minoritised ethnic identities.

Methods: A mixed methods study combining (1) a survey to establish the number and strength of connections formed by Years 1 and 2 medical students with both minoritised and non-minoritised ethnicities and (2) semi-structured interviews to understand how connections were formed, whether this was shaped by ethnicity and the role of connections in supporting students with their learning and well-being.

Results: One hundred fifty-one students (15.5% response rate) completed the survey. Students connected regularly with three to four peers with the goal of supporting learning and 71.9% of students reported a sense of social identification with this group. There was no statistical difference between ethnically minoritised and White students on either of these measures ($t = 0.1$, $p = 0.92$, $\chi^2 = 2.9$, $p = 0.56$). Interviews with 19 students found that social connections were shaped by perceptions of their self-identity and the need to find 'equilibrium' by forming relationships with compatible others. The education environment, including its ethnic diversity, impacted on the opportunities to make connections. Students who were ethnically minoritised reported encountering challenges, especially in the clinical environment, and described the burden of these for them.

Discussion: Curriculum designers should consider the time and space that is afforded to student interaction during course development, as finding compatible others with whom students can socially connect is important to balancing well-being with academic performance.

1 | INTRODUCTION

Social connections formed between medical students provide a key basis for emotional support during training.[1–4] Connecting with peers allows students to deal with stress, relax and maintain a positive outlook on their studies.[1–5] Social connections also provide students with the opportunity to learn from each other through informal teaching interactions.[1] The protective effect of creating social connections may be particularly important for medical students, who are at high risk for having mental health problems.[6] Up to 27.3% of medical students in one meta-analysis reported depression or depressive symptoms,[6] which underlines the importance of supporting medical students' well-being as much as possible.

As well as impacting well-being, social connectedness has been demonstrated to be related to academic performance, with students who connect as friends performing similarly academically.[7] The reasons for this are not well understood.

Findings related to the positive benefits of being socially connected resonate with a broader body of research that has examined the relationship between social group membership on health. Drawing on social identity and self-categorisation theories,[8,9] the social identity approach to health considers the important impact of group membership on health and well-being[10] and indicates the important basis of social group membership on motivation and efficacy beliefs, normative values and behavioural decision making. Central to the theory is the principle that 'a person will generally experience the health-related benefits or costs of a given group membership only to the extent that they identify with that group'.[10]

It is clear that the motivations and behaviours of medical students will impact their academic performance. This provides one possible mechanism through which social connectedness and developing a shared social identity could link to academic attainment.

There is also significant evidence supporting a link between positive well-being and high academic performance[11,12] with people who perform poorly in medical school exams reporting a complex interplay of academic, social, personal and mental health issues.[13] Given the importance of social connections in maintaining and supporting well-being, it is possible that social connectedness could impact academic achievement via this mechanism as well. This has not been fully explored previously, and understanding how these connections form and how they relate to well-being and attainment could help educators to optimise the learning environment for students.

A further area of ongoing interest within the medical education sphere is the attainment differential between Black, Asian, Minority Ethnic (BAME)* and White medical students[14–16] with the reasons for BAME medical students being awarded lower grades on average being poorly understood.

There is, however, evidence of a link between ethnic identity and well-being, with students who formed their self-identity with lower regard to their minoritised ethnicity being less likely to experience depressive symptoms in their first year of medical school in the United States of America than their peers who paid their ethnicity higher regard.[17] There is also evidence that the social connections formed by students may be patterned by ethnicity[7,16] and that ethnically minoritised medical students may feel excluded from potential sources of connection, such as academic societies that feature the consumption of alcohol.[18]

Given the importance of social connections in maintaining academic performance and positive well-being, the different social connections created by BAME medical students could contribute to the attainment differential, and understanding this link may help educators work towards addressing it.

In summary, there is evidence to suggest links between ethnicity, social connections, well-being and attainment for students studying medicine. However, the interplay between these factors is unclear. Developing a fuller understanding of these relationships could support educational institutions to cultivate social and learning environments that allow students to perform better and thrive at medical school. Further, this understanding may ultimately help institutions address the awarding gap and support medical student well-being.

The aim of this study is to explore how medical students connect with each other, the number and the strength of those connections and the impact of this on students' academic achievement and well-being. In particular, we are interested in the experiences of students that are ethnically minoritised. Through the lens of social identity theory, we will consider how these vital connections form, with the hope of gaining a fuller understanding the role that social connection may play in relation to attainment and well-being. The goal is to improve the standard of medical education by supporting the development of conditions that are required for all students to perform and thrive at medical school.

2 | METHODS

2.1 | Study design

A two phase mixed methods approach was taken. Phase 1 comprised a survey to address the question 'how many, and how strong are the social connections formed by both White and ethnically-minoritised students?' Phase 2 involved the use of semi-structured interviews to address the question 'what factors determine how connections between students form and how do these connections support students with their academic performance and well-being (with a particular interest in the experiences of ethnically minoritised students)?' Triangulation occurred when both datasets had been analysed independently and it informed our interpretation of the findings.

*We acknowledge the limitations of the term BAME when describing people from different ethnic backgrounds and do not endorse that the experiences of 'BAME' individuals can be homogenised. We use the term BAME either to provide an accurate reflection of the work of others or to comply with the ethical permissions provided for this study. The stakeholder group involved in this study also found the term limiting, and hence, the term 'ethnically minoritised' (i.e. students whose ethnicity is related to power imbalances, that results in dominance of some social groups over others)[19] is used wherever possible.

2.2 | Study context

The research was conducted in two universities in different geographical areas of the United Kingdom. Students were in their first 2 years of undergraduate medical training. The study was first conducted between January and March 2021 and repeated between January and March 2022. This was during the COVID-19 global pandemic when restrictions on movement and social contact were in place. Between January and March 2021, teaching and learning was occurring mainly online and students were restricted to socialising within their household, or with a maximum of two people, outside of their household, in an outside space.[20] Between January and March 2022, face-to-face teaching was largely restored, and restrictions on social contact were being relaxed.[21]

In 2021, 30% of 462 students in University A and 67% of 700 students in University B identified as BAME. In 2022, 39% of 496 students in University A self-identified as BAME. Data were not recorded for University B in 2022 as the survey was not deployed at this institution during that year.

At University A, all students spent their first year in one geographical location and then were split between two campuses which were 90 miles apart in the second year. In University B, students spent their first and second year in the same geographical location.

2.3 | Stakeholder group

A stakeholder group ($n = 9$) of students, academics and clinicians, who identified as having an ethnically minoritised backgrounds and were affiliated to University A ($n = 6$) or B ($n = 3$), contributed to the research. Their voices were particularly important, as five members of the six-member research team identified as having a White ethnicity. Student stakeholders were recruited to the group via institutional advertising and all student applicants that provided a short-written statement expressing their interest in the project were invited to join the group. Academic and clinical stakeholders were invited to join the group based on their involvement in equality, diversity and inclusivity initiatives within their institutions. Stakeholders met with members of the research team (S.B. and R.T.) in five 1-h group meetings and were involved in developing the interview questions and exploring the meaning of the findings from the second phase of the project.

2.4 | Reflexivity

The research team recognised that they would bring their own perspectives to the research, and these were discussed throughout the research process. S.B. and R.T. led the analysis of the qualitative data. S.B. is a non-ethnically minoritised academic providing education for Years 1 and 2 medical students. R.T. has an academic background in psychology and is interested in exploring the views of underrepresented participant voices. Her ethnic background is mixed. The wider research team (N.R., D.C., M.T. and G.C.) were involved in interpreting the study findings. N.R. has expertise in assessments, D.C. in well-being and the promotion of equality and diversity in work organisations and M.T. in understanding group processes. G.C. is early career doctor, interested in understanding the discrimination faced by international medical students and graduates.

2.5 | Ethical considerations

Ethical approval was granted from University A (reference: Feb22/D/254Δ4) and University B (EERRP2021-058). Participants gave informed consent to participate in the research.

2.6 | Phase 1

A questionnaire (Table 1) was designed to collect information on the students: self-declared ethnicity (dichotomised to BAME or White), the number of peers that they connected with to support their learning and how closely students identified with their peers (utilising a validated single item measure of social identification[22]). The survey was open between January and March 2021 and between January and March 2022. Students also gave permission for the researchers to access their academic performance records (both knowledge and clinical skills). Data analysis was performed by N.R. using R Statistical Software.

2.7 | Phase 2

Students who had participated in Phase 1 of the study were invited to take part in an individual, semi-structured interview, approximately 1 h in length. A topic guide (Table 2) was used to guide exploration of the factors that determined how social connections between students were formed, how these connections support learning and well-being and the role that ethnicity may play in the formation of these connections. The topic guide was used in a way that enabled exploration of the issues that were pertinent to the participants, in relation to the study questions, while maintaining a focus on the research aims.

TABLE 1 Survey questions to explore students' identification with their peers for the purpose of supporting their learning.

1. In terms of your ethnicity, please identify which group you identify with most: White or BAME (Black, Asian or Minority Ethnic).
2. Please provide a list of the students you interact with regularly in activities that support your learning (such as social study groups) outside of formal curriculum time. Include members of formal groups only if you also interact with them outside of these contact hours. Please only include students from your year group on your course.
3. To what extent do you agree with the following statement with regards the group of students that you have listed above: 'I identify with my group'? strongly disagree, disagree, neither agree nor disagree, agree, strongly agree.

TABLE 2 Topic guide to explore the factors that determined how connections between students were formed, how these connections support students with their academic performance and well-being and the role that ethnicity played in the way that medical students connect with each other.

Area of interest	Main question	Prompt questions
Student's perception of themselves	Can you tell me about your background and the journey you have taken to study medicine?	What part does race and ethnicity or any other aspects of your background play in your role as a medical student? Do you think this helps or hinders you in anyway?
The role of connections in supporting student learning and well-being	Can you tell me the people that you interact with regularly, in your own time, that support you in your learning?	What do you do to support each other's learning/well-being? What is it that makes these connections work well, do your goals, values and attitudes align? Are these connections stable or flexible in their membership? Would you say that your connections are diverse (and if so what does that diversity bring)? Are there times when you change who you connect with or when you decide to work differently? How do the connections that you form to support you with your learning differ from other groups of people that you interact with regularly?
The factors that influenced the connections that medical students formed	Thinking about your socio-academic networks—can you describe how they formed?	What drew the group together? Did anything about your course/learning/living environment influence this? What role, if any, does ethnicity play in the connections/networks that you have formed? Would you have liked to have made any other socio-academic connections/networks (and if so, what do you think stopped you)? Do you think there could be more support to help you form socio-academic networks?

Recruitment was purposive, aiming to achieve a breadth of participants from the University settings and across BAME and White ethnicities.

Interviews were conducted online (Microsoft Teams) between April and July 2021 and April and July 2022 by R.T. Interviews were audio recorded, transcribed verbatim by a professional transcription company and anonymised prior to analysis. Thematic analysis was conducted using the steps of data familiarisation, coding and creation of themes.[23] Four researchers (S.B., R.T., G.C. and S.S. [see acknowledgements]) independently and inductively coded up to five interview transcripts. They initially immersed themselves in the data, reading the transcripts noting initial impressions. They then independently generated codes that focused on the unique aspects of the participants experiences, using the coding software NVivo for this process. Researchers (S.B. and R.T.) then worked collaboratively discussing and reviewing the codes and creating themes that captured insights from the data. One researcher (R.T.) then coded the remaining transcripts. The researchers (S.B. and R.T.) met regularly over a 2-month period to refine the themes and write descriptors. They frequently revisited the participants' data to ensure that participants' voices were being represented. Once the initial thematic analysis was complete, it was shared with the stakeholder group. Stakeholders commented on the choice of language in the descriptors, assisted with choice of illustrative quotes and considered how the themes spoke to their own experiences. While the analysis was inductive, researchers were alert to the relevance of social identity theory[8] during data analysis.

3 | RESULTS

3.1 | Phase 1

Seventy-two of 462 students completed the survey in 2021 (Table 3) from University A (a 15.6% response rate) and 14 of 700 students from University B (a 2% response rate). No analysis of the survey data for University B in 2021 was performed due to the low response rate and in 2022 the survey was only sent to students in University A, due to the low response rate from University B in the previous year. Seventy-nine of 496 students completed the survey from University A (a 15.9% response rate) in 2022.

The respondents to the survey in University A were broadly representative of the student population at this institution in terms of their ethnicity (27.8% of respondents self-identified as BAME in 2021 compared with 29.7% in the study cohort and 29.1% in 2022 compared with 38.9% in the study cohort). The average number of peers that students connected with regularly for the purpose of supporting their learning was 3 in 2021 (range 0 to 11) and 4.4 in 2022 (range 0 to 22 in 2022); 70.6% of respondents agreed that they identified with their peer group in 2021 and 11.8% disagreed, with similar proportions in 2022 (73.1% and 12.8%, respectively). There was no statistical difference between BAME and White students in either the number of people they connected to for the purpose of supporting their learning ($t = 1.2$, $p = 0.24$ in 2021, $t = -0.5$, $p = 0.62$ in 2022) or their perceived level of identification with those people ($\chi^2 = 4.3$, $p = 0.37$ in 2021, $\chi^2 = 1.2$, $p = 0.87$ in 2022).

TABLE 3 Descriptive data from the survey in Phase 1 of the study and analysis of outcome data from participants that identify as BAME and White.

	Survey data from first and second year medical students at University A at different time points		
	2021	2022	2021 and 2022 data combined
Number of students completed survey	72	79	151
Number of students that identified as having BAME ethnicity	20 (27.8%)	23 (29.1%)	43 (28.5%)
Number of students that identified as having White ethnicity	52 (72.2%)	56 (70.9%)	108 (71.5%)
Mean number of students that they interacted with regularly from their year group in activities that supported their learning outside of the formal curriculum	3	4.4	3.7
Mean number of students that BAME students interacted with regularly from their year group in activities that supported their learning outside of the formal curriculum	2.5	4.7	3.7
Mean number of students that White students interacted with regularly from their year group in activities that supported their learning outside of the formal curriculum	3.2	4.2	3.7
Test for difference between the mean number of students that BAME and White students interacted with regularly from their year group in activities that supported their learning outside of the formal curriculum	$t = 1.2$, $p = 0.24$	$t = -0.5$, $p = 0.62$	$t = 0.1$, $p = 0.92$
Agreement (agree/strongly agree) with the statement 'I identify with the group I interact with regularly to support my learning'	48 (70.6%)	57 (73.1%)	105 (71.9%)
BAME agreement (agree/strongly agree) with the statement 'I identify with the group I interact with regularly to support my learning'	6 (46%)	16 (70%)	28 (78%)
White students' agreement (agree/strongly agree) with the statement 'I identify with the group I interact with regularly to support my learning'	36 (73%)	41 (75%)	77 (74%)
Disagreement (disagree/strongly disagree) with the statement 'I identify with the group I interact with regularly to support my learning'	8 (11.8%)	10 (12.8%)	18 (12.2%)
BAME students' disagreement (disagree/strongly disagree) with the statement 'I identify with the group I interact with regularly to support my learning'	2 (15%)	3 (13%)	5 (14%)
White students' disagreement (disagree/strongly disagree) with the statement 'I identify with the group I interact with regularly to support my learning'	6 (12%)	7 (13%)	13 (13%)
Test for difference between BAME and White students' views on whether they strongly disagreed with the statement 'I identify with the group I interact with regularly to support my learning'	$\chi^2 = 4.3$, $p = 0.37$	$\chi^2 = 1.2$, $p = 0.87$	$\chi^2 = 2.9$, $p = 0.56$
Number of BAME students in the highest quintile for medical knowledge	1	2	3
Number of White students in the highest quintile for medical knowledge	12	16	28
	$\chi^2 = 17.3$, $p = 0.002$*	$\chi^2 = 11.2$, $p = 0.02$*	$\chi^2 = 24.5$, $p < 0.001$*

(Continues)

TABLE 3 (Continued)

	Survey data from first and second year medical students at University A at different time points		
	2021	2022	2021 and 2022 data combined
Test for difference between the number of BAME and White students in the highest quintile for medical knowledge			
Number of BAME students in the highest quintile for clinical skills	1	4	5
Number of White students in the highest quintile for clinical skills	12	18	30
Test for difference between the number of BAME and White students in the highest quintile for clinical skills	$\chi^2 = 17.1$, $p = 0.002$*	$\chi^2 = 15.0$, $p = 0.005$*	$\chi^2 = 19.2$, $p < 0.001$*

Note: The agreement/disagreement percentages are calculated excluding students who did not answer this question.
*Statistical significance.

An attainment gap was observed between BAME and White students for both medical knowledge and clinical skills assessments, with fewer BAME students attaining grades in the highest quintiles ($\chi^2 = 24.5$, $p < 0.001$, $\chi^2 = 19.2$, $p < 0.001$).

3.2 | Phase 2

Interviews with 19 students (five male and 14 female) were conducted. Fourteen interviews took place in 2021 and four in 2022. Seventeen students were interviewed from University A and two from University B (a similar percentage of participants who completed the survey agreed to be interviewed, but there were far fewer participants completing the survey from University B). Nine of the 19 students self-identified as having BAME ethnicity. Quotes are labelled with the University that the participants were studying at (A or B) and the participants' ethnicity (BAME or White).

Three interconnected themes, (1) Identity, (2) Equilibrium and (3) Environment, were developed from the interview data.

3.2.1 | Theme 1. Identity

This theme described the students' description of their personal view of themselves in relation to becoming and being a medical student. Participants felt that there was a specific social identity associated with being a medical student compared with being a student studying for a different degree. This was only one part of their self-concept and sat alongside other intersecting parts (e.g. their ethnicity, personality traits and prior life experience)

> the whole concept of the identity as a medical student feels a bit odd to me in the sense that I don't know how much that diverges from your self-identity it's a little piece of it, but I think being a medical student- at least to me, doesn't feel like it's a main part of my identity I think there's so much more to everyone, being a medical student is just an extra little interesting fact.
>
> (B, BAME, 02)

Participants described how the different parts of their social identity compared with that of other students and that this impacted upon the relationships they formed:

> I was very pleased to find I wasn't the only graduate student, I wasn't the only one from a non-science background, I think that's probably what drew me towards other graduate students, that shared experience.
>
> (A, White, 11)

> People are naturally more comfortable with backgrounds that they're familiar with, so you often see people from similar ethnicities and similar cultures bond together and even if they're not exactly the same. I think it is also the case with the social class you come from, I've noticed that people from richer backgrounds tend to stick with each other and I guess there's more of an understanding of what it's like to … have had different lives.
>
> (B, BAME, 02)

> I would definitely describe myself as a massive introvert … so, coming to university, that was of a terrifying moment not knowing if I would fit in but also you know wondering if people are going to accept … how I am.
>
> (A, White, 04)

3.2.2 | Theme 2. Equilibrium

This theme related to an equilibrium, which appeared to be sought by students, to support their ability to balance their learning with their well-being. Students expressed that studying with other medical students can create stress. Hence, when making choices of who to connect with participants sought out peers with whom they were emotionally and socially compatible. Some students expressed a preference to study alone and also alluded to this as being a cultural trait.

> If someone's talking about medicine 24/7, I wouldn't associate myself with that person as much. I wouldn't mind being around them, I wouldn't mind going on placement or doing clinical skills with them, but I probably wouldn't choose to work with them [outside of taught sessions].
>
> (A, White, 02)

Friendships out-with medicine were also described as being important for support and balance.

> A lot of my life is outside of medicine and I'm really happy with that … that was my choice and one I would continue to make. But I also want to be a bit more involved with my degree and work a bit harder.
>
> (A, BAME, 06)

Diversity and difference were highly valued features underpinning student connection. It firstly enabled students to find others with whom they shared experiences:

> I would find it a lot harder [to adjust to medical school] if I was in a group that wasn't as diverse … I don't feel isolated and I can relate to people at an easier level.
>
> (A, BAME, 13)

But students also identified a benefit in terms of the diversity helping them to learn, reflect and develop as individuals and as future doctors.

> I think for me personally I find it really interesting to mix with people who've had kind of different background to me, I think it's just- it makes me a more well-rounded person and it makes me a lot more aware as well which I think is obviously vital if you're going to something like medicine.
>
> (A, White, 08)

3.2.3 | Theme 3. Environment

This theme described the academic parameters which potentially facilitated or curtailed the way students were able to seek out and develop relationships for balancing their learning and well-being. This may be either enhanced or limited by features of the formal curriculum, such as allocation to geographically dispersed campuses or different study groups within the taught curriculum.

> [Cohort splitting across campuses in Year 2 of study] the fact that they're in [a different geographical location] and I am not with them anymore, they're not here next year either, did make me feel a bit isolated. I think the friends that I made, all them seemed to go to [a different geographical location].
>
> (A, White, 11)

Students also described serendipitous opportunities, not necessarily sought out, but utilised to the student's advantage, for example, meeting people through living arrangements, or chance meetings in academic or social settings, and recognised the need to react to imposed opportunities and barriers, especially during the restrictions imposed by the COVID-19 pandemic.

> The people that support my learning are mostly friends that I made I'd say in the first term of first year, people that I met, just by being outside the lecture hall, just talking to people in free time.
>
> (B, BAME, 02)

Participants described experiences in relation to visible aspects of having a minoritised ethnicity as requiring additional effort or work. This was spoken about mainly in the context of the clinical learning environment and in relation to interactions with patients and clinicians.

> I think its not just BAME students [who are treated badly whilst on clinical placement], but we just have a little more to worry about.
>
> (A, BAME, 14)

While infrequent, acts of ethnic discrimination between medical students were also mentioned. For example, one participant had experienced racism from a peer but was also supported by others in the cohort.

> [In response to the use racial language being used by a peer] I was like 'actually that makes me really uncomfortable, could you stop', and after saying that a couple of times I … went 'no, I'm not going to sit here' … and then my friends also left … I felt quite supported in that.
>
> (A, BAME, 06)

Participants from minoritised backgrounds often described the additional work that they felt was required for self-protection and in order to avoid negative stereotyping.

> I don't want to come across as an angry black woman so I make myself extra friendly, that sort of thing.
>
> (A, BAME, 05)

4 | DISCUSSION

This study explored the social connections formed between medical students and the role of those connections in supporting student learning and well-being. On average, students connected with three to four peers for the purpose of supporting their learning outside of the formal curriculum, and two thirds of those students identified strongly with those selected peers. In accordance with the social identity approach that framed this investigation, these connections were often formed and reinforced by making intergroup comparisons, and such judgements can be seen as motivated by the need to positively establish one's own social group membership. Such identification has been recognised as a key mechanism by which the positive benefits of group membership are realised.[10]

The number of peer connections observed here was fewer than found in a previous UK study[16] which may in part relate to the restrictions on social contact that were in place because of the COVID pandemic, rather than reflecting a real difference in 'typical' peer group composition. Nonetheless, the social identity approach posits that social group membership exerts positive health and other impacts principally to the extent that the group is psychologically meaningful to the members—that is, that they identify with the group. Accordingly, the lower number of connections identified in the current study should not be viewed as a cause for concern; indeed, participants in our study talked favourably about their sense of connection to their peers, indicating that they derived psychological meaningfulness from those connections beyond the absolute number of connections formed.

The number of connections and strength of social identification was comparable for students who self-identified as White and as BAME. It is unknown whether students with minoritised ethnicities were connecting more frequently with those who share the same identity, but the qualitative data suggested that participants were seeking connections with others with whom they shared characteristics and felt compatible. This was discussed not only in the context of ethnicity but also in terms of other characteristics. For example, mature students reported forming connections with other mature students, and students who described themselves as 'introverts' sought out other introverts with whom they could connect. Mixing with people from 'different backgrounds' while still having similarities in common was spoken about positively, enabling students to learn, reflect and develop as individuals and as future doctors. Thus, participants described their identities in ways that were multiple and complex: Minoritised ethnic identity could not be regarded as the sole determinant of social connections formed. Intersectionality should, therefore, be considered and at the forefront of endeavours to create inclusive cultures and environments.

Extending this point, the importance of social connection and having a strong sense of shared social identity may help students counteract 'negative cultures' that were mentioned in the participants' narratives, such as the culture of overworking and the culture of unfairness experienced by those that were ethnically minoritised. Identifying with a social group can provide a sense of unity and help students to feel less isolated in their experiences and perspectives. Students reported striving to achieve a sense of 'equilibrium' between their academic performance and their well-being by deliberately seeking connections with compatible students whom they perceived could provide them with this balance.

The academic environment plays a critical role in shaping opportunities for students to meet with others and to make these 'compatibility judgements', both through the way medical courses are designed and delivered and through ensuring that there is adequate cohort diversity. Physical spaces for students to meet informally and socialise may assist students to find compatible others. This has been found in other settings, with positive outcomes of improved well-being.[24–26] Having diversity within the academic environment means that students have more opportunities to meet people with whom they may meaningfully connect.

Beyond enabling students to achieve a sense of equilibrium, the study indicated that being socially connected to others may given students access to emotional support. The sense of well-being that can come from belonging and feeling connected to a social group is well evidenced[10] and appears to be of key importance as levels of mental health illnesses are known to be high in students studying medicine.[6] Numerous challenges are faced by students who are 'other' than the majority and this has also been recognised in the published work of others.[27–29] Minoritised participants in our study described steps they took to either avoid behaviours or situations that may either reinforce a negative stereotype or to protect themselves from encountering negative experiences. The emotional energy required to conceal parts of one's identity or to 'fit in' can hinder well-being,[30] and an experimental study has shown that where self-regulation processes are occupied in controlling feelings, the resources available for cognitive tasks are reduced.[31]

Our stakeholder group commented that those responsible for the structure and creation of the medical schools' learning environments should be responding to and pre-empting challenges that may be felt by any students who feel minoritised. It is therefore essential to understand the role that these additional challenges may be playing in differential attainment and reinforces the need to continue actions that focus on equality, diversity and inclusion, in the clinical training environment and beyond.

4.1 | Study strengths and limitations

A strength of this work is the range of professional roles and identities represented within the authorship team and involvement of a stakeholder group. This enhanced the quality of the questions asked of

participants and interpretation of the findings. The length and approach taken in the interviews allowed participants to share what was important to them in terms of their identity and the purpose of the connections that they had formed.

While the study took place across two University settings, one setting was underrepresented, and exploration in a greater number of settings would also have been beneficial, especially as the study is time-stamped by the COVID-19 pandemic.

When this work was first conceived, it was hoped that we could explore whether students' connections were structured around the construct of ethnicity using social network analysis and through the qualitative analysis. However, the survey response rate was too low for this analysis to be conducted. Likewise, the survey response rate meant that the statistical analysis was underpowered and should be interpreted with caution. The sample achieved, however, was representative of the population surveyed in terms of ethnicity.

A further limitation of this work is related to the categorisation of participants as BAME and White. Despite numerous discourses about the intersectionality of identity, collection of data and analyses are still frequently conducted using ethnicity labels. While a limitation in this study, it has been able to highlight that future academic work must recognise to a greater extent that identity arises from multiple intersecting characteristics, some of which are not overtly visible. Would asking students about the level of burden experienced, rather than their ethnicity, be beneficial?

5 | CONCLUSIONS

Students in this study reported establishing social connections with others with whom they felt compatible. This provided them with a balance, allowing them to perform academically, while also maintaining their well-being. These connections, and associated social identities, were not necessarily defined by ethnicity but rather were defined according to social categories that were salient and meaningful to individual students at that time. We suggest that the academic environment shapes the opportunities to develop connections and can be instrumental in the building of relationships with others. Given the documented relationship between social identity, health and well-being, a careful consideration of the time and space for connection and to issues related to inclusivity and diversity should be a priority when designing curricula. Through such considerations, we may be able to support development of meaningful student connections that can promote student well-being and optimise learning.

AUTHOR CONTRIBUTIONS

S. Bull: Conceptualization; investigation; formal analysis; funding acquisition; project administration; writing—original draft; methodology; data curation; supervision; writing—review and editing. **R. Terry:** Investigation; formal analysis; project administration; methodology; writing—review and editing. **Neil Rice:** Formal analysis; funding acquisition; methodology; writing—review and editing. **Daniele Carrieri:** Conceptualization; writing—review and editing; methodology; funding acquisition. **M. Tarrant:** Conceptualization; funding acquisition; methodology; writing—review and editing. **Gerens Curnow:** Conceptualization; investigation; funding acquisition; writing—review and editing; methodology.

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CONFLICT OF INTEREST STATEMENT

None.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

Ethical approval was granted from University A (reference: Feb22/D/254Δ4) and University B (EERRP2021-058). Participants gave informed consent to participate in the research.

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