



23 **Abstract**

24 **Background:** Black, Asian and Minority Ethnic (BAME) medical students and professionals  
25 frequently underachieve when compared with their White counterparts not only in the United  
26 Kingdom, but across the globe. There is no consensus for the definitive causes of this  
27 attainment gap, but suggestions contributing towards it include: increased feelings of  
28 isolation as a member of a minority culture or religion; a poorer higher education (HE)  
29 experience compared with White counterparts; and stereotype threat, whereby students  
30 underperform in exams from the stresses of fearing confirming to a negative-stereotype.

31 **Methods:** The aim of this study was to gather qualitative data on HE experiences of medical  
32 and biomedical science students to explore factors contributing to the attainment gap. Audio-  
33 recorded, semi-structured interviews and a novel approach for this research area of  
34 ethnically-homogenous student-led focus groups, were held with students and staff at a  
35 healthcare-based university in London, where lower attainment, slower rates of degree  
36 completion and lower levels of satisfaction with HE experience were identified in BAME  
37 students compared with White students. Thematic analysis was used to manage, summarize  
38 and analyse the data.

39 **Results:** Forty-one students and eight staff members were interviewed or took part in focus  
40 groups. The student data were best explained by two main themes: social factors and  
41 stereotyping, whilst staff data were also best explained by two main themes: social factors  
42 and student and staff behaviour. Social factors suggested ethnically-defined social networks  
43 and the informal transfer of knowledge impacted academic performance, isolating minority  
44 groups from useful academic information. BAME students may also be at a further  
45 disadvantage, being unable to attend social and academic functions for cultural or family

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46 reasons. Black students also mentioned changing their behaviour to combat negative  
47 stereotypes in a variety of contexts.

48 **Conclusions:** This study suggests that forms of discrimination, whether conscious or  
49 unconscious, may be negatively impacting the abilities of BAME students both in  
50 examinations and in coursework choice. It highlights the importance of social networks for  
51 the transfer of academic knowledge and the impact ethnicity may have on their formation,  
52 with issues around segregation and the sharing of information outside defined groups.

53 **Keywords:** attainment gap; Black, Asian and Minority Ethnic; ethnicity; medical student;  
54 biomedical sciences student; university; undergraduate; qualitative research  
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## 67 **Background**

68 Black, Asian and Minority Ethnic (BAME) medical students and professionals frequently  
69 underachieve when compared with their White counterparts over their education and career  
70 trajectories not only in the United Kingdom (UK) [1] [2], but across the globe [3] [4], even  
71 when other demographic variables have been adjusted-for [5]. Indeed, similar disparities in  
72 achievement can also be found for many other courses [6] [7] [8] [9].

73 There is no consensus as to the definitive causes of the BAME attainment gap, but some  
74 suggestions as to what may contribute to it include: increased feelings of isolation due to  
75 being a member of a minority culture or religion [10] [9]; being less satisfied with their  
76 higher education (HE) experience than their White counterparts [11]; stereotype threat, where  
77 those from negatively-stereotyped groups can feel so anxious at the possibility of conforming  
78 to a stereotype that they underachieve in examinations [12] [13]. There is consensus that  
79 direct discrimination and examiner bias are unlikely to be sole causes, as anonymously-  
80 marked multiple choice examination results have shown similar disparities between White  
81 and BAME students [1] [14]. Thus research into this area increasingly focusses on  
82 understanding the students' experiences and opportunities [2].

83 We sought further contemporary data at a healthcare-based university in London (hereafter  
84 referred to as 'the University'), where consistent with other institutions in the medical HE  
85 sector (e.g. [15]), lower attainment, slower rates of degree completion and lower levels of  
86 satisfaction with their HE experience have been found for BAME students compared with  
87 White students. The design of the study replicates previous peer-reviewed research into this  
88 issue and also extends this research with a novel approach, by including ethnically-  
89 homogenous student-led student focus groups.

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90 **Methods**

91 **Aim**

92 The aim of the study was to gather qualitative data, via audio-recorded, semi-structured  
93 interviews and focus groups, with students and staff at one London, UK healthcare-based  
94 university in order to explore their perceptions of factors contributing to the attainment gap  
95 found between White and BAME students.

96 **Design**

97 A qualitative descriptive methodology was chosen, allowing an exploratory, in-depth and  
98 non-hypothesis-driven approach to eliciting a rich description of experiences and events  
99 relating to individual students and staff. A combination of focus groups and one-to-one  
100 interviews was chosen to allow student participants to choose whichever they preferred, due  
101 the potentially sensitive nature of discussing personal experiences. Focus groups were led by  
102 student members of the research team and were ethnically-homogenous (albeit in terms of  
103 broad ethnic categories) on account of findings that individuals appear to feel more at ease  
104 and are more likely to share controversial views relating to ethnic differences in groups of  
105 homogenous ethnicity than when with a mix of ethnicities [16]. Exclusively one-to-one  
106 interviews were chosen for staff due to opinions expressed at a research planning meeting  
107 with staff, who felt they would be more open when alone than with colleagues.

108 **Participants**

109 An invitation to participate in the study was emailed to all ‘home’ students (ordinarily  
110 resident in the UK and with British citizenship) on undergraduate biomedical sciences and  
111 medicine courses (n=1862) at the University, with some recruited through direct contact with  
112 a member of the research team, student union representatives, and members of University  
113 societies who advertised the research. Overseas, non-home domiciled and other healthcare  
114 course students were excluded due to the potential for identification given the small number

115 of such students. Participants for six focus groups were purposively recruited by Asian/Asian  
116 British ('Asian'), Black/African/Caribbean/Black British ('Black') or White:  
117 English/Welsh/Scottish/Northern Irish/British ('White') ethnicities, with one-to-one  
118 interviews offered as alternative to a focus group. Academic and administrative staff were  
119 emailed on an individual basis having been selected due to having regular, direct contact with  
120 students. Among the academics, these included a range of roles, from lecturers to deans. The  
121 invitation provided contextual information for why they were being contacted and explained  
122 that the research was being conducted to try and find out potential causes of the gap in  
123 student attainment between students of different ethnicities and that their participation was  
124 entirely voluntary and any information shared would be kept confidential. Students were  
125 offered an incentive for taking part of either 10 points towards an institutional academic  
126 award scheme or a £10 gift voucher. Those expressing interest were sent a participant  
127 information sheet explaining the purpose of the research, their freedom to withdraw at any  
128 time and the confidential nature of the interviews and focus groups. Those agreeing to  
129 participate were asked to complete a written consent form at the focus group or interview and  
130 a voluntary demographic information sheet.

### 131 **Interview topic guide and procedure**

132 Topic guides for all semi-structured student focus groups and interviews and semi-structured  
133 staff interviews included a combination of open-ended and closed questions developed by the  
134 researchers through consultation with students and senior academic and widening  
135 participation staff, as well as through referring to literature on the BAME student attainment  
136 gap (e.g. [15]). These were not pilot tested. The theory of stereotype threat [12] [13] informed  
137 the content and wording of several questions. The student topics included: influences to study  
138 their chosen course; how they found integrating at the University; how they found interacting  
139 with students and staff; whether they thought their course's content was appropriate; and

140 whether they were aware of any discrimination or prejudice against themselves, other  
141 students or staff. The staff topics covered: awareness of any discrimination towards students  
142 or staff; personal biases or prejudices that may impact interactions with students; and  
143 awareness of any ethnic differences in learning practice and academic performance (see  
144 Appendix 1 for the full Student and Staff Interview Topic Guides).

145 One researcher conducted the student and staff interviews, which were all one-to-one, and  
146 was present for all the student-led focus groups (HC, male, 27 years-old, White ethnicity,  
147 master's degree, researcher in public health, with experience of interviewing and focus  
148 groups), who was not known to the students prior to their interview invitations and had no  
149 vested interest in the research topic. HC introduced himself as a University researcher and  
150 participants were asked not to repeat anything discussed outside of the group. The focus  
151 groups were led by SL (female, Black African, 20 years-old, 2<sup>nd</sup> year biomedical sciences  
152 student, trained in leading focus groups, known to the participants) and KS (female, Asian  
153 other, 21 years-old, 3<sup>rd</sup> year biomedical sciences student, trained in leading focus groups,  
154 known to the participants). The interviews and focus groups took place in a private room in  
155 the University, were audio-recorded and transcribed verbatim by an external transcriber and  
156 subsequently anonymised. HC also made field notes during the focus groups and interviews.  
157 Transcripts were not returned to student participants for comment or correction, however  
158 some staff participants requested having advance sight of the context of their quotes if they  
159 were used. Interviews for staff and students were continued until data saturation was reached,  
160 which we were able to ascertain as thematic analysis was ongoing throughout the study, thus  
161 enabling us to note that similar points and issues were being raised with no new themes  
162 identified in the final few interviews. Ethical approval was granted by the University's  
163 Research Ethics Committee. The Consolidated Criteria for Reporting Qualitative Research

164 (COREQ) tool was used to ensure comprehensive reporting of the methods and findings [17]  
165 (see Appendix 2).

## 166 **Analysis**

167 Thematic analysis was used to manage, summarize and analyse the data [18]. This enabled  
168 the researchers to gain insight into the views and experiences of each participant, while also  
169 identifying differences between participants. Thematic analysis was ongoing during the study  
170 [18]. Initial coding was undertaken independently by two researchers (HC, MU), who read  
171 and familiarised themselves with the transcripts and assigned initial codes and categories,  
172 similar codes were grouped and combined to create themes. Themes were reviewed, refined  
173 and labelled through discussions (HC, MU) to ensure that they accurately reflected the data.  
174 A hybrid of both inductive and deductive approaches was used, as the topic guide influenced  
175 the data collection and subsequent analysis, whilst the open-ended nature of the questions  
176 enabled the participants to share experiences beyond the areas covered in the topic guide.  
177 Software was not used to aid the analysis.

## 178 **Results**

179 A total of 39 biomedical science students and 44 medical students expressed an interest in  
180 taking part, with 64 subsequently arranging an interview or focus group. However, for 23 of  
181 these, either no suitable interview time could be arranged or no further responses were  
182 received, resulting in a total of 41 student participants with mean (SD, range) age = 21 (2.78,  
183 18 to 31). Interviews were conducted with 24 students (12 female, 12 male, nine biomedical  
184 sciences, 15 medicine), with the following from each ethnicity: Asian: Bangladeshi (1),  
185 Chinese (1), Indian (5) Pakistani (3) and Other (2); Black: African (2) and Caribbean (1);  
186 White: (8) and Irish (1) and recordings lasted for a mean (SD; range) of 33:06 minutes  
187 (11:25; 11:41 to 51:32). Two focus groups (one of six female biomedical science students of  
188 Black ethnicity, and one of five female medical students of Black ethnicity) were led by SL



189 and one focus group (six biomedical science students of Asian/Asian British ethnicity, one  
190 female and five males) was led by KS. SL and KS were known to their respective focus  
191 group participants. The three remaining focus groups (for Asian medical students and White  
192 biomedical science and medical students) were abandoned due to insufficient participants.  
193 Some anecdotal evidence suggests that some students did not wish to take part in the research  
194 because of concerns about confidentiality, despite being reassured of the anonymity of their  
195 contributions. Focus groups lasted for a mean (SD; range) of 71:42 minutes (20:08; 49:44 to  
196 89:48). Eight staff were interviewed (six female, two male, five academic, three  
197 administrative) with the following from each ethnicity: Asian: Chinese (1), Pakistani (1);  
198 White British (3) and the remainder did not wish to specify. Staff interviews lasted for a  
199 mean (SD; range) of 29:05 minutes (09:32; 17:10 to 44:00).

200 Following discussion between HC and MU, it was agreed that the student data were best  
201 explained by two main themes, which are described below: (i) social factors and (ii)  
202 stereotyping. Staff data were best explained by (i) social factors and (ii) student and staff  
203 behaviour (see Figure 1). It is clear that the topic guide structured the data collection,  
204 meaning some of the identified themes were fairly closely related to the areas covered in the  
205 topic guide. However, the open-ended nature of the questions enabled the participants to  
206 share experiences beyond the areas covered in the topic guide, allowing them to bring up  
207 topics of particular importance to themselves. To maintain participant anonymity, individual  
208 student age and precise staff University positions cannot be provided. The quotes are tagged  
209 with information on the participant who provided it, with the first character identifying  
210 whether it was in a focus group (F) or interview (I) setting; the second, third and fourth  
211 characters showing the course of the student or if staff whether they were academic or  
212 administrative (Med for medicine, Bio for biomedical sciences, Aca for academic staff, Adm  
213 for administrative staff); the fifth character in superscript shows whether female (<sup>f</sup>) or male

214 (<sup>m</sup>); and the sixth character in superscript applies only to students and identifies whether the  
215 student self-identified as of an Asian (<sup>a</sup>), Black (<sup>b</sup>) or White (<sup>w</sup>) ethnicity. Therefore, the tag  
216 ‘IBio<sup>fw</sup>’ is a quote from an interview with a biomedical sciences student who is female and  
217 White, and the tag ‘IAdm<sup>m</sup>’ shows an interview with an administrative member of staff who  
218 is male. We have not indicated more specific ethnicity subgroups as no marked differences  
219 were noted between these subgroups.

220 [Figure 1: Mind map of themes and codes]

## 221 **Results for student interviews and focus groups**

### 222 *(i) Social factors*

223 Data relating to social factors covered two main issues: social networks and the informal  
224 transfer of knowledge, and the influence of family.

225 Student networks appeared to have both social and academic impacts, with social integration  
226 limited either by individuals being actively excluded by members of a group or through  
227 individuals assuming they cannot be part of the group due to perceived differences. Academic  
228 knowledge appears to be informally transferred between students based around, often,  
229 ethnically defined social networks. Students outside of these networks can feel excluded and  
230 actively biased against:

231 *FBio<sup>fb</sup>: ...obviously in every uni certain groups have more access to certain things than*  
232 *others... [religious student society] also have a lot of access to a lot of things and for me*  
233 *that's fine, if everyone is willing to share, and people are just not!*

234 *FBio<sup>fb</sup>: Yeah, and I think in terms of academics, they're [religious student society] such a*  
235 *tight knit community, they share all their resources together...we've only got the little trickles*  
236 *that have come out, so imagine how much they've got within that community.*

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237 Many students mentioned that, whilst the University is very diverse, they felt integration was  
238 difficult due to apparent ethnic divisions, and this was seen in both social and academic  
239 settings:

240 *IBio<sup>fb</sup>: I found people weren't so open to, like, let's say, make friends outside of their cultural*  
241 *groups [background and religion]. Yeah, and that's just how it's been ever since... I just*  
242 *found it was quite cliquey in a sense with their cultural groups*

243 *IBio<sup>fa</sup>: there is definitely: like, the White people sit in one corner, the Black people will sit in*  
244 *another corner and then the Brown people just sort of disperse between it.*

245 Some students also felt that they were treated differently by other students because of their  
246 ethnicity, but couldn't be certain of it:

247 *IMed<sup>ma</sup>: ...sometimes you just noticed certain kinds of groups of people are not really*  
248 *interested in that [having lunch with you], or treat you a certain way, or might be a little bit*  
249 *more cold or harsh, or not even kind of acknowledge you, kind of thing... sometimes it is*  
250 *quite hard not to wonder whether it is due to something as simple as skin colour or race, or*  
251 *even the way you speak or whatever.*

252 Due to their ethnicity, some students felt uncomfortable about attending events, such as  
253 lectures and revision groups, organised by student societies, and widely regarded as  
254 considerably better than those offered by the University:

255 *IBio<sup>mw</sup>: It is my personal belief of a kind of education being secular to an extent, because the*  
256 *[student society] does inherently great things and stuff with the power that they have, but it is*  
257 *still...quite closed off. I wouldn't dream of going to a social [student society] event so much.*  
258 *Or I might but I would go in there knowing that I'd be the only White person there!*

259 Family was mentioned as a motivator for choosing medically-related degrees for a variety of  
260 reasons, including having parents in medically-related fields, or due to exposure to medicine  
261 through family illness:

262 *IMed<sup>ma</sup>: I think my parents really influenced me a lot. They've probably influenced me since*  
263 *I was a kid; it's just something like bringing in topics, "Oh, so what do you want to be when*  
264 *you're older? You should be a doctor!"*

265 *IMed<sup>mw</sup>: ...my uncle...similarly my best friend was treated for some quite serious things,*  
266 *when I was choosing what I wanted to do with my life, and so it seemed that a lot of people*  
267 *who had helped me, and my friends and family in my life, were part of the medical profession*  
268 *and that's seemed like something I wanted to do as well.*

269 However, not all family influences were seen as positive. Family responsibilities were  
270 thought to impact the amount of time students are able to attend the University, due to caring,  
271 chores or curfews, and this seemed to impact both their social and academic lives:

272 *IBio<sup>fa</sup>: Well, I was a commuter, so I had to work extra hard to try and make my group of*  
273 *friends...and also I had curfew because Asian parent problems...by the time I get home, I'm*  
274 *just really sleepy and then I don't have time to, or the effort to just continue with my work.*

275 Some Asian students mentioned feeling that family responsibilities are not the same as for  
276 other ethnicities, particularly White students, but they're seen as normal for Asian students:

277 *FBio<sup>ma</sup>: During term time, I went home as often as I could...I guess I have responsibilities*  
278 *that they don't see that I have at home...*

279 *FBio<sup>fa</sup>: And you don't realise how much responsibility you have because it's just normal. So*  
280 *like looking after my sister, I do the shopping, cleaning the house, sorting my mum out when*  
281 *she needs it, things like that are really normal...*

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282 *FBio<sup>ma</sup>: Any other person, if that was a White parent for example, they would have demanded*  
283 *something, but for me it's just like actually having to do this.*

284 *(ii) Stereotyping*

285 This included experiencing or witnessing stereotyping and prejudice by other students, by  
286 University staff and on clinical placements, as well as issues with course content and includes  
287 perceived or anticipated stereotyping.

288 Behaving 'professionally' when on clinical placement or during assessments with patient-  
289 actors was only raised by Black students, perhaps using it as a means of counteracting  
290 anticipated negative stereotypes:

291 *IMed<sup>mb</sup>: ...the best way for me to deal with it [racial prejudice] is just let's keep it business,*  
292 *let's keep it professional. You know, what do we need to do today? OK, what do you need*  
293 *help with in that setting?*

294 Changing their behaviour to combat stereotypes was highlighted repeatedly by Black students  
295 in a variety of contexts, such as having to work extra hard just to be seen to be equally as  
296 capable as their non-Black peers. This is may lead to increased stress and unrealistic  
297 workloads:

298 *IMed<sup>mb</sup>: ...I always feel that anyway generally in life and OSCEs [Objective Structured*  
299 *Clinical Examinations] and assessments that I'm very conscious that I'm Black, and I'm very*  
300 *conscious that I have more to prove...Because I'm Black...I have to work two, three, four,*  
301 *five, ten times as hard to make sure that I'm seen on the level [as others]*

302 *FMed<sup>fb</sup>: ...you have to be exceptional to be considered average!*

303 *FMed<sup>fb</sup>: ...you just have to fight back much harder [than White male students] to get the*  
304 *learning that you need.*

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305 *FMed<sup>fb</sup>: I have learnt to try and almost manage myself and manage it so that people aren't*  
306 *offended by who I am. And I think you have to do that a lot more in medicine....as a Black*  
307 *woman, than you do as any other!*

308 This behavioural change extended to some Black students adopting the behaviour of White  
309 male students:

310 *FMed<sup>fb</sup>: ...if you consider yourself to be Tom and Luke, if you get knocked back, you get up*  
311 *because that's the stereotype, like a middle class White boy will get things wrong a million*  
312 *times, but you can't tell him he's got it wrong, because he'll just give you another answer!*

313 Consciously being quieter than usual was raised by Black female students as a means of  
314 combatting the perceived 'angry Black woman' stereotype. They also mentioned being afraid  
315 to complain because of that stereotype:

316 *FBio<sup>fb</sup>: That angry black woman stereotype (murmurs of agreement) it really, really annoys*  
317 *me because it's like sometimes I have a legitimate reason to be upset or angry with what*  
318 *you're saying and it's like, oh, there she goes again! And it's so dismissive of the feelings and*  
319 *it's like, what's the point then? (murmurs of agreement)*

320 *FBio<sup>fb</sup>: I think that's when it's hard to speak up because I don't think anyone ever expects a*  
321 *Black woman to feel bullied, they would see her as the bully.*

322 *IMed<sup>fb</sup>: ...just because I'm from South London and I'm Black, it doesn't mean I'm going to be*  
323 *really rude or stand-offish. And I have to be very open and very nice and polite, and avoid*  
324 *conflict with staff and with peers.*

325 These students also mentioned trying to dress smartly to dispel perceived scruffy stereotypes  
326 and feeling they have to put more effort in to their hair and general appearance than other  
327 ethnicities:

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8 328 *IBio<sup>fb</sup>: ...there may be stereotypes linked to Black people that...we're just a bit scruffy or not!*

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10 329 *So I just know for myself, I like to make sure that I combat that stereotype by looking*

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13 330 *presentable...*

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16 331 It was also clear that some students who perceived being negatively stereotyped also

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18 332 stereotyped other students:

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21 333 *FBio<sup>fb</sup>: Iranian students are actually very much a certain type of way as well, and they shout*

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24 334 *over...they're very rich, fair skinned so they can just go through this world not really thinking*

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27 335 *about their actions and the wider world.*

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29 336 Some students had also been made aware by members of staff that they were potentially

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31 337 being marked-down on account of examiners' lack of awareness about different ethnicities'

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33 338 reaction to stressful situations, such as it being harder for some to detect blushing in non-

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35 339 White students:

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37 340 *FMed<sup>fb</sup>: I get really anxious during OSCEs and my personal tutor said to me, "I remember*

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39 341 *when you are anxious, you look blank to a lot of people." So because I'm not bright red and*

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41 342 *presenting anxiety...in the way they're used to seeing anxiety, they don't see me as anxious...*

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43 343 *they just see you as cool or like cut off or distance. And that affects the mark...we're never*

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45 344 *going to be able to walk into an OSCE and look bright red; it's just not going to happen.*

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47 345 There were several instances where racially prejudicial behaviour was noted as being

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49 346 between students, including:

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51 347 *IBio<sup>fa</sup>: ...one of the girls in my year who wears the hijab but is clearly more practising than I*

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53 348 *am, made a comment about me not wearing the hijab, therefore I'm not a real Muslim, and*

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55 349 *therefore anything I was saying about Islam is just not relevant and not accepted...when*

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57 350 *you're a Muslim and you don't wear the hijab, or you do certain things that aren't Islamic,*

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59 351 *you get put into a category by fellow Muslims, and then that can lead to stereotyping in a*

352 *certain way, like that kind of coconut example, like, “Oh, she’s a coconut!” that kind of*  
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5 354 Offensive behaviour by some students towards BAME staff was recounted by one focus  
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11 356 *FBio<sup>fb</sup>: The way that other students treat [two Black lecturers], they’re so disrespectful...and*  
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13 357 *they make fun of their accents.*

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16 358 *FBio<sup>fb</sup>: And then when [Black staff member] left they started making fun of her, being like,*  
17  
18 359 *“Oh, she’s so angry!” and they made fun of her accent again.*

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22 360 Some offensive behaviour was noted as coming from staff to students:

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25 361 *IMed<sup>fa</sup>: ...with [Pakistani student] he went, “What’s your real name?” and [Pakistani*  
26  
27 362 *student] was like, “My name is [name]” And he was like, “No, no, no, what’s your real*  
28  
29 363 *name?” because of his skin colour.*

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33 364 *IBio<sup>fa</sup>: ...he did complain a lot about the Asian kids [at child’s school] doing certain subjects*  
34  
35 365 *as opposed to others, because of parental influence and stuff, and then he complained about*  
36  
37 366 *how he thinks [area] is now full of Asian people...*

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41 367 Course content was also raised as a way in which stereotypes were observed, such as through  
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43 368 the language used when describing certain ethnic groups and the examples used for ‘typical’  
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45 369 cases for certain, often negatively-perceived, medical conditions:

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49 370 *IMed<sup>mb</sup>: Well, let’s put it this way, when you’re in an exam and you see a mental health*  
50  
51 371 *patient who is Caribbean, there’s only one diagnosis you’re thinking of...you know you pick*  
52  
53 372 *schizophrenia every time. Or you know as soon as you’re reading the vignette, you know it’s*  
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55 373 *going to have Caribbean, Black, weed/cannabis...I know there are a lot of people who come*  
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57 374 *to uni who are not necessarily from diverse places... they’ve not...interacted within that*  
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375 *diversity. So that doesn't do anything to challenge prejudices or stereotypes, it only supports*  
376 *it.*

377 **Results for staff interviews**

378 *(i) Social factors*

379 Family was often raised as having a potentially negative academic impact on students,  
380 encouraging students to study courses they otherwise would not have chosen. This was  
381 especially thought to be the case for families of Asian ethnicity:

382 *IAcad<sup>f</sup>: Particularly those from Indian, Pakistani and maybe Bangladeshi backgrounds where*  
383 *either because the family are from a medical background...so I think it's a combination but*  
384 *they seem to feel a bit pressured.*

385 However, staff emphasised that family pressures could also be found in other groups, and  
386 were uncomfortable with assigning specific issues to specific ethnicities:

387 *IAdm<sup>m</sup>: But then I can think that there's also White students who say that [i.e. family pressure*  
388 *to study medicine], so every time you generalise, you think of an exception, where the family*  
389 *have the same sorts of prejudices.*

390 Some staff were aware that students have many family circumstances that could potentially  
391 have a negative academic impact, and some of these could be related to ethnicity:

392 *IAcad<sup>f</sup>: There are other factors, such as if your parents don't speak English and then your*  
393 *parents get ill, and then you need to go and translate at hospital appointments and things like*  
394 *that, that might be pulling people away from the course as well.*

395 However, this member of staff felt that family responsibilities should not necessarily receive  
396 special dispensation from the University due to the types of jobs the students are being  
397 trained for:

398 *IAcad<sup>f</sup>: I think there is a need from the university to kind of set boundaries really because it's*  
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3 399 *about modelling professional practice in future. And trying to facilitate students making*  
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5 400 *choices about to what extent they should be spending their time supporting the family and to*  
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7 401 *what extent they should be on the course...So I think there is some tension between being*  
8  
9 402 *endlessly flexible and producing safe healthcare practitioners.*

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13 403 Some staff also felt that the University isn't really structured around students from a diverse  
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15 404 range of backgrounds and the different demands these differences place on students:

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18 405 *IAdm<sup>m</sup>: I think we make assumptions based on the fact that we've got White 22 year olds in*  
19  
20 406 *training to be medics, as opposed to a whole bunch of different people from a whole different*  
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23 407 *range of backgrounds*

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26 408 This could result in those from non-White backgrounds having fewer opportunities to  
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29 409 socialise with both students and staff:

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32 410 *IAdm<sup>m</sup>: I think it's particularly difficult for students who don't drink in terms of social*  
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34 411 *opportunity via the SU [Student's Union], who are very keen to have a scholarly post-work*  
35  
36 412 *pint in the bar or one of any number of places nearby, which really does exclude a whole*  
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39 413 *chunk of students from coming out... I think when you've got very senior academic staff who*  
40  
41 414 *have spiders on their tie, or cobras on their tie [drinking society ties] ...I think it probably*  
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44 415 *sends a message...that there is something fundamentally [University] about being a member*  
45  
46 416 *of Cobras, and there's something fundamentally other-ing about not.*

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50 417 Further challenges facing non-White students and their social and academic support networks  
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52 418 was raised, with privately-educated White students seen as the most able to join a variety of  
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55 419 social groups, with other students at a distinct disadvantage:

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58 420 *IAcad<sup>f</sup>: So, there's something about if you've been at a White grammar school or a White*  
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60 421 *public private school, then you know how to join 'the club' and what to do, and that there*

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422 *doesn't seem to be that same support network necessarily for Black and Asian students.*

423 *Although I would say that the Muslim student network ISOC [Islamic Society] is now*

424 *emulating that very well...I think that Black students are much more isolated...because what*

425 *they talk to me about is the fact that they don't feel as comfortable because their experiences*

426 *of their networks have often been church, and their White counterparts are kind of slightly*

427 *dismissive of religion and church. So they're not sure then where they fit in, so it's a matter*

428 *of kind of trying to find their support network.*

429 This ethnic separation of students was also noted in lecture settings, but in the form of self-

430 segregating by ethnicity, although it was also sometimes by course too:

431 *IAcad: ... You can see the friends groups are maybe perhaps different... Well, it's broken down*

432 *by ethnicity but then also I do lectures that are mixed, sort of inter-professional in the sense*

433 *of different degree courses, and you can sometimes see them slightly, occasionally segregated*

434 *[by course]*

435 However, another member of staff mentioned that in discussions with other staff, student

436 segregation was more down to which students were immediately and more obviously

437 identifiable, rather than necessarily by ethnicity:

438 *IAcad: ...when you talked more to them [staff] about who those cliques were, the cliques were*

439 *women wearing hijabs. So the cliques are the 'other' that we can see, so therefore there*

440 *weren't White students being talked about as cliques, but people often who all play rugby will*

441 *all sit together weren't being described in that same pejorative way.*

442 The University's student population was frequently described as very diverse, but this was

443 not seen as the case for the staff population, leading to a feeling that perhaps students from

444 certain ethnicities do not have enough role models in senior positions at the university:

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445 *IAcad*: I would say it's a particular issue for people of Black Caribbean heritage, because  
446 traditionally they've come from lower socioeconomic classes, so there's intersectionality  
447 around class and ethnicity as well, which means that it's very difficult for them to have  
448 existent role models, and it would be really nice to have more of those in university.

449 (ii) Student and staff behaviour

450 Student ethnicity was seen as impacting behaviour in a variety of ways in different academic  
451 settings. A member of staff how some BAME students change how they speak during  
452 evaluations in order to try and seem more 'like a doctor' in the eyes of the examiner, but this  
453 negatively impacts them as it causes communication issues:

454 *IAcad*: And in working with Black students too, what I've noticed is that their perception of  
455 how to be a good student is to use complex English language that will make you sound more  
456 important and make you sound more like a doctor should, and then that trips them up.

457 Other ethnic differences in behaviour were noted in small group work, such as certain ethnic  
458 groups being quieter than others; however, it was emphasised that it was not limited to just  
459 this group:

460 *IAcad*: I have noticed a couple of cases where particularly Oriental students...tended to have  
461 a slightly different character. They sometimes struggle with some of the group work, but that  
462 might just be their personality though, they could be shy. So there are some elements of  
463 cultural difference that I see, but otherwise, it's just individuals I think.

464 Religious duties such as set prayer times, often associated with BAME students, were  
465 reported as causing academic issues for one student, with the potential for this same issue to  
466 be impacting many more; however, it poses a challenge for the University:

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467 *IAcad*: One of the students has said to me “Because it’s very pressured, especially on a  
468 Friday, to get back from Friday prayer to lectures on time, can the lecture timetable be  
469 changed?”... I mean, because to change the whole timetable around one group of students’  
470 prayer needs is quite tricky...How does one respond to that? It’s very tricky. We are a  
471 secular organisation.

472 Prejudice by students towards other students was only mentioned in passing, with no specific  
473 examples given:

474 *IAdm*: Issues of faith certainly, we’ve seen an amount of bullying, harassment and bad  
475 behaviour around issues of faith, whether it’s a question of denomination, Shia and Sunni,  
476 things around that. Whether it’s about somebody’s perceived behaviour being in line with  
477 one’s faith or not; yes, we’ve seen an amount of that as well.

478 Some felt staff may just be somewhat insensitive when it comes to students from different  
479 ethnicities to their own, rather than actively prejudiced against them:

480 *IAdm*: I don’t think there’s an active prejudice at work on people’s part; I think there’s a lot  
481 of insensitivity.

482 Some potentially insensitive behaviour was reported as being from students to staff, with the  
483 perception of some students that Black male staff are ‘scary’ and not wanting to ask them  
484 questions:

485 *IAcad*: Another aspect of discrimination I’ve actually seen is from students to members of  
486 staff...there are a couple of Black lecturers and they have consistently been described as  
487 ‘scary’ to me [by White and Asian students], and this is a word that I have not heard  
488 described for any other lecturer and it’s been from multiple students who have described  
489 these people as scary. They just say their personality, their demeanour, how they present,  
490 they’re scary, and they haven’t said anything much more than that... And then I say, well, this

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3 492 *person is head of the class and they're perfectly nice, and so on and so forth, but no, no, they*  
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6 493 *don't want to talk to them, they want to talk to someone else instead.*

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8 494 Staff may also be reluctant to discuss ethnicity-related topics, with a possible reason being  
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10 495 that some are uncertain how to approach the subject, potentially leading to issues not being  
11  
12 confronted:

13 496 *IAcad: I think probably academic staff are quite fearful of this issue, that they don't know how*  
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16 497 *to talk about it, they don't know what's politically correct. They're scared of being corrected*  
17  
18 498 *about it, and so they're even uncertain about what terminology to use when talking about*  
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21 499 *Black and ethnic minority issues...I've actually had members of staff say, "I don't know what*  
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23 500 *to call them. Is it OK to call them Black?" and things like that.*

## 24 25 26 501 **Discussion**

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29 502 Multiple issues were raised by students and staff that could potentially contribute to the  
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32 503 BAME attainment gap. Both staff and students noted the importance of academic support  
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34 504 networks, and the way course information is transferred through the social networks of  
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37 505 students, which are often ethnically defined. This means those with larger social networks are  
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39 506 at an advantage when compared with social minorities. Whilst previous research has found  
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42 507 that attainment is linked to friendship groups, with ethnicity influencing the formation of  
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44 508 these [21], a novel finding of this research is how important social networks are in the  
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46 509 transfer of academic knowledge in medical school with course and exam resources  
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49 510 transferred predominantly within these networks. Research by the National Union of Students  
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51 511 (2011) found that Black students were more likely to feel like 'the odd one out' and be  
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54 512 isolated and uncomfortable in their HE environment than other students, and if this is the  
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56 513 case, then they are likely to be members of smaller social networks. This may have a  
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59 514 particularly important impact in relation to resources such as academic notes and past exam

1 515 papers. The University does not provide exam papers for all courses as the questions are often  
2 516 reused. Thus, those with fewer social links to more senior years are potentially biased-  
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4 517 against. In such scenarios, educational institutions may benefit by having a centralised or  
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7 518 regulated transfer of such academic information in order to create a more level 'playing  
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10 519 field'.

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12 520 Another potential contributor to the attainment gap is that of behavioural change by BAME  
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15 521 students, particularly those of Black ethnicity. Often, this was to counteract negative  
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17 522 stereotypes they perceive as likely to be held by students and staff. Black students mentioned  
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20 523 trying to overcompensate both academically and physically, saying that because they are  
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22 524 Black, they are likely to be seen to be less academically proficient and less well-dressed than  
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25 525 their White peers and thus they must prove this is not the case. These findings echo previous  
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27 526 research, which revealed how some Asian medical students similarly felt they were being  
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30 527 negatively stereotyped by staff, and as such were actively trying to combat this, for example  
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32 528 by working extra hard [13]. The negative impact of these types of compensatory behaviours  
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35 529 on academic performance has been explained by the theory of 'stereotype threat'. This theory  
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37 530 posits that perceived negative stereotypes reduce student confidence and result in increased  
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40 531 anxiety, especially during examinations, which in turn hampers academic performance [13].  
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42 532 Therefore, actual stereotyping does not need to occur; the student need only think they will  
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44 533 conform to a negative stereotype for it to have a detrimental effect on their performance.  
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47 534 Nevertheless, it is clear that some students and staff are negatively stereotyping BAME  
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50 535 students, by assuming certain behaviours due to their own preconceived ideas about these  
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52 536 groups.

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55 537 Some Black students felt they were being discriminated-against in examinations, particularly  
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57 538 those that involve observation by examiners such as during OSCEs. A staff member also  
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60 539 noted how some Black students sometimes modify their language in examination settings to  
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540 unnecessarily try and speak how they think a doctor ‘should’ speak, which resulted in  
541 communication issues. Whilst previous research found no evidence of explicit examiner  
542 discrimination between BAME and White students in OSCEs, male BAME students who  
543 achieved poor marks were found to have different communication styles than their White  
544 counterparts, and it is suggested the examiners’ assumptions about what makes for good  
545 communication may have disadvantaged them [19]. A member of staff highlighted that  
546 examiners may have a Eurocentric view of how empathy is expressed, biasing against certain  
547 ethnicities of students; Black students commented on how examiners assumed that because  
548 they were not obviously blushing, they didn’t care about the exam and thus were marked-  
549 down. We are not aware of previous research having found this as a potential contributor to  
550 the attainment gap.

551 Asian students mentioned family responsibilities more often than other ethnicities; indeed  
552 some commented that they felt their family responsibilities are not shared by other ethnicities  
553 and that such matters are not understood by the University, potentially leading to a feeling of  
554 being disadvantaged against other students. Staff also mentioned that BAME students appear  
555 to have increased family ties than other students, and whilst it was felt that the University  
556 could perhaps do more to cater for their increased burdens, it was considered equally  
557 important to prepare students for professional life where they have to deal with balancing  
558 work and family commitments. We are not aware of previous research into the BAME  
559 attainment gap as having revealed this potential contributor.

560 The lack of ethnic diversity in the staff population was mentioned by both students and staff,  
561 with Black staff noted as particularly uncommon, however no student raised the lack of role  
562 models at the University as an issue, whilst staff suspected it may be. It is possible that  
563 students are finding role models in the University regardless of ethnicity, or indeed that role  
564 models are unimportant. However, ethnically-similar role models have previously been found



1 565 to be crucially important in aiding the attainment of ethnic minority adult learners [9] and in  
2 566 making students feel empowered [10].  
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5 567 Other qualitative research has found that BAME students, especially those of Asian ethnicity,  
6  
7 568 are more likely to be motivated by future career and course reputation and more strongly  
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9 569 influenced by family than White students, who are more likely to be motivated by personal  
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11 570 development and actual interest in the subject [13] [20]. Some staff participants seemed to  
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13 571 think the same, believing that Asian students were more likely to have been pressured into  
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15 572 studying these courses than their non-Asian counterparts. However, the student responses did  
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17 573 not support this idea, with a wide variety of reasons given by students from all ethnicities and  
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19 574 courses, and no particular dominance of the family influence for BAME students when  
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21 575 compared with White.  
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28 576 This study has several strengths. It included both academic and administrative staff, as well  
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30 577 as male and female students from a wide range of years, ages and ethnicities, including peer-  
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32 578 led focus groups of ethnically-homogenous participants. The topic guides for the semi-  
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34 579 structured student focus groups and interviews and semi-structured staff interviews included  
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36 580 a mix of open-ended and closed questions, allowing them to bring up topics of particular  
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38 581 importance to themselves, whilst also covering core areas. . The analysis, which was  
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40 582 performed by two researchers experienced in qualitative research, allowed both inductive and  
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42 583 deductive approaches, and together, this approach increases the chances of capturing a  
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44 584 diverse range of views.  
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50 585 There were also limitations. The gender, ethnicity and age of the interviewer (HC) may have  
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52 586 impacted how both students and staff responded in the interviews, with some perhaps  
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54 587 uncomfortable discussing some topics in greater depth than others. Whilst the impact is not  
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56 588 quantifiable and no participant stated they did not wish to speak further on a subject due to  
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589 HC's characteristics, it is nevertheless a possibility. HC noted that during the course- and  
590 ethnically-homogenous student-led focus groups, the discussions were more open with more  
591 'blunt' language used when speaking directly about ethnicity when compared with the  
592 interviews, which supports similar findings by others [13] [16]. However, as there were no  
593 mixed ethnicity focus groups held, our conclusions can only be tentative. Furthermore, the  
594 more casual nature of the discourse may have also been due to the participants being familiar  
595 with the focus group leads. Equally, the presence of acquaintances may have limited some  
596 participant's willingness to discuss deeply personal or sensitive issues that otherwise may  
597 have been raised in a one-to-one interview. The lack of the remaining planned focus groups  
598 was unfortunate, but we do not think this biased the outcomes as we held multiple interviews  
599 with students from a wide range of ethnic groups studying on the courses included, and as  
600 such think it unlikely that not holding the additional focus groups had any meaningful impact  
601 on the findings.

602 The academic attainment of student participants was not taken into account when recruiting  
603 participants for the study, meaning it is possible that participants were not representative of  
604 all attainment levels. Indeed, Woolf et al. (2008) found that high achieving students were  
605 more likely to attend their study's focus group than their low achieving counterparts.

606 No noticeable differences were found between specific ethnicity subgroups, however this  
607 could be due to the sample size and less representation of some ethnic subgroups. Anecdotal  
608 evidence from staff and students suggests that Black males and those identifying as of  
609 Muslim faith face numerous issues that may be unique to them; however, there are  
610 comparatively few Black male students at the University and selecting participants on the  
611 basis of religion was beyond the scope of this study.

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612 We were unable to hold the three focus groups for Asian medical students, White biomedical  
613 sciences and medical students due to too few students being willing to participate. However,  
614 where possible those who wished to take part in the focus groups were instead offered a one-  
615 to-one interview, which may have allowed deeper exploration of individuals' experiences  
616 than otherwise would have been possible in the focus group setting.

617

## 618 **Conclusions**

619 This study contributes to the limited body of peer-reviewed, qualitative research into this  
620 important area, whilst both supporting and contrasting with previous findings. It is clear that  
621 some staff think parents of Asian students are more likely to have a negative impact on  
622 student course choice than for other ethnicities, however the student data do not support this.  
623 Evidence to support the potential for stereotype threat to be having an adverse impact on  
624 Black students was forthcoming from both students and staff, and this research provides clear  
625 examples of behavioural changes as a direct result of trying to combat stereotypes. Whilst  
626 previous studies have not found evidence of discrimination impacting upon attainment, this  
627 study has found that forms of discrimination, whether conscious or unconscious, may be  
628 negatively impacting the attainment of BAME students in examinations. The research also  
629 highlights the importance of social networks for the transfer of academic knowledge and the  
630 impact ethnicity may have on the formation of such networks, with issues around segregation  
631 and the sharing of information outside defined groups. Students with increased family  
632 responsibilities, or who commute due to living with their families, perhaps because of  
633 parental control, financial issues or childcare, may be at a disadvantage to students living  
634 locally as they are unable to attend social and academic functions. The impact commuting has  
635 on BAME students in particular is therefore worthy of research in its own right.

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636 Clearly there is a danger in referring to the BAME attainment gap as if it refers to a  
637 homogenous group – such a category is made up of multiple groups and is not a single entity  
638 with all individuals within having the same shared experiences, history and issues and the use  
639 of this term may be a limitation of all studies in this field at this time. Although, in this study  
640 we have identified some evidence of differences between specific ethnic groups here and this  
641 has to be borne in mind in any attempts to address this attainment gap. It is also difficult to  
642 know how many of the issues highlighted are specific to the University or are more widely  
643 applicable. There are implications for these findings in terms of addressing the attainment  
644 gap. For example, in terms of the content of training in cultural awareness for staff, the need  
645 for strategies to address ethnic segregation among students and unconscious bias training to  
646 address the issues identified here. Also, it may be important to make students aware of the  
647 actions that have been taken to try and counter biases in order to reduce the students’  
648 perception of stereotyping.

649 **List of abbreviations**

650 BAME = Black, Asian and Minority Ethnic

651 COREQ = Consolidated Criteria for Reporting Qualitative Research

652 HC = Hugh Claridge

653 HE = higher education

654 ISOC = Islamic Society

655 KS = Khadija Stone

656 MU = Michael Ussher

657 OSCE = Objective Structure Clinical Examinations

658 SL = Sarah Lasoye

659 UK = United Kingdom

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## 664 **Declarations**

### 665 **Ethical approval and consent to participate**

666 Ethical approval was granted by the University's Research Ethics Committee. Participants  
667 were given an Information and Consent form to read and sign if they wished to continue to  
668 participate in the study after having read the study's description.

### 669 **Consent to publish**

670 Participants were given an Information and Consent form to read and sign if they wished to  
671 continue to participate in the study, which when signed gave their permission for the research  
672 data gathered to be published provided that the participant could not be identified as a  
673 subject.

### 674 **Availability of data and materials**

675 The data generated by and analysed during the current study are available from the  
676 corresponding author on reasonable request.

### 677 **Competing interests**

678 The authors declare that they have no competing interests.

679 **Funding**

680 The study was funded by the University's Access Agreement Monitoring Group

681 **Authors' contributions**

682 HC conducted the participant interviews and was present for the focus groups. KS led one

683 focus group. HC and MU analysed and interpreted the data generated by the interviews, and

684 HC, MU and KS were the sole contributors in writing, reading and approving the manuscript.

685 **Acknowledgements**

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688 **References**

1. McManus I, Richards P, Winder B, Sproston K. Final examination performance of  
medical students from ethnic minorities. *Medical Education*. 1996; 30(1): p. 195-200.

2. Woolf K, Rich A, Viney R, Needleman S, Griffin A. Perceived causes of differential  
attainment in UK postgraduate medical training: a national qualitative study. *BMJ Open*.  
2016; 6(e013429).

3. Ansell S. Achievement Gap. *Education Week*. 2011.  
<https://www.edweek.org/ew/issues/achievement-gap/index.html> Accessed 06.06.2018

4. Stegers-Jager K, Brommet F, Themmen A. Ethnic and social disparities in different types  
of examinations in undergraduate pre-clinical training. *Advances in Health Sciences  
Education*. 2016; 21(5): p. 1023-1046.

5. Stegers-Jager K, Steyerberg E, Cohen-Schotanus J, Themmen A. Ethnic disparities in

- 1 undergraduate pre-clinical and clinical performance. *Medical Education*. 2012; 46(6): p.  
2 575-585.  
3  
4  
5  
6 6. Smith S. Exploring the Black and Minority Ethnic (BME) Student Attainment Gap: What  
7 Did It Tell Us? Actions to Address Home BME Undergraduate Students' Degree  
8 Attainment. *Journal of Perspectives in Applied Academic Practice*. 2017; 5(1): p. 48-57.  
9  
10  
11  
12  
13  
14 7. Hill N, Denholm-Price J, Atkins N, Tojal Dourado L, Nimoh O, Page N. Does group  
15 assessment impact BME attainment? *New Directions in the Teaching of Physical*  
16  
17  
18  
19  
20  
21  
22 8. Miller M. *The Ethnicity Attainment Gap: Literature Review*. Sheffield: 2016.  
23  
24  
25 [https://www.sheffield.ac.uk/polopoly\\_fs/1.661523!/file/BME\\_Attainment\\_Gap\\_Literatur](https://www.sheffield.ac.uk/polopoly_fs/1.661523!/file/BME_Attainment_Gap_Literature_Review_EXTERNAL_-_Miriam_Miller.pdf)  
26  
27  
28  
29  
30  
31  
32 9. Frumkin L, Koutsoubou M. Exploratory investigation of drivers of attainment in ethnic  
33 minority adult learners. *Journal of Further and Higher Education*. 2013; 37(2): p. 147-  
34  
35  
36  
37  
38  
39 10. National Union of Students. *Race for Equality: A report on the experiences of Black*  
40  
41  
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61  
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64  
65
13. Woolf K, Cave J, Greenhalgh T, Dacre J. Ethnic stereotypes and the underachievement of UK medical students from ethnic minorities: qualitative study. *BMJ*. 2008; 337(a1220).
  14. Woolf K, Potts H, McManus I. Ethnicity and academic performance in UK trained doctors and medical students: systematic review and meta-analysis. *BMJ*. 2011; 342(d901): p. 1-14.
  15. Vaughan S. *Medical students' experience and achievement: the effect of ethnicity and social networks*. Manchester: 2013.  
<https://www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:210942&datastreamId=FULL-TEXT.PDF> Accessed 06.06.2018
  16. Greenwood N, Ellmers T, Holley J. The influence of ethnic group composition on focus group discussions. *BMC Medical Research Methodology*. 2014; 14(107): p. 1-13.
  17. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007; 19(6).
  18. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006; 3(2): p. 77-101.
  19. Wass V, Roberts C, Hoogenboom R, Jones R, Van der Vleuten C. Effect of ethnicity on performance in a final objective structured clinical examination: qualitative and quantitative study. *BMJ*. 2003; 326(800).
  20. Cotton D, George R, Joyner M. *The Gender and Ethnicity Attainment Gap Research Project*. Plymouth: 2013.



1 [https://www.plymouth.ac.uk/uploads/production/document/path/5/5853/PedRIO\\_Paper\\_](https://www.plymouth.ac.uk/uploads/production/document/path/5/5853/PedRIO_Paper_)  
2 2.pdf Accessed 06.06.2018  
3

- 4  
5  
6 21. Woolf K, Potts H, Patel S, McManus C. The hidden medical school: A logitudinal study  
7 of how social networks form, and how they relate to academic performance. *Medical*  
8 *Teacher*. 2012 July; 34(7).  
9

10  
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13  
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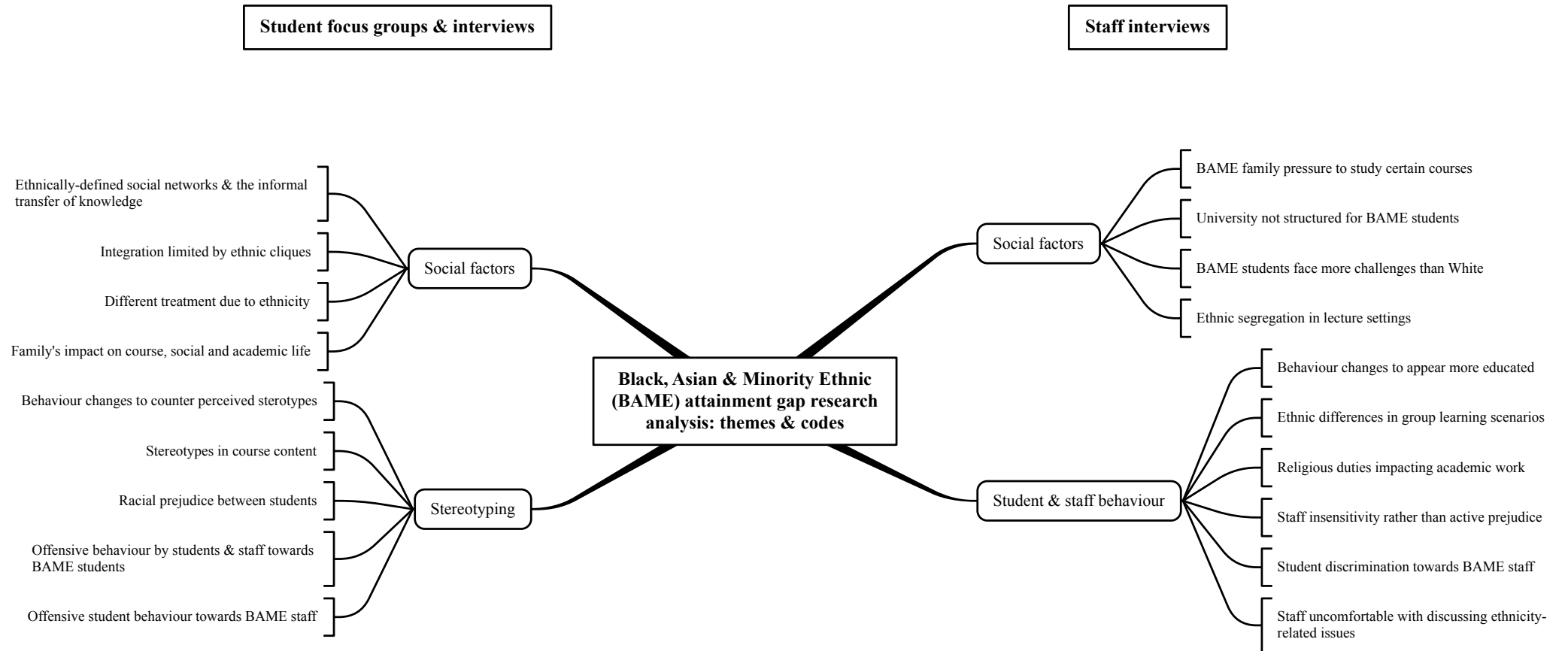
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19 **691 Figures**  
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22 692 Figure 1: Mind map of themes and codes  
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26 **693 Additional files**  
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29 694 Appendix 1: Student and Staff Interview Topic Guides  
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32 695 Appendix 2: COREQ Checklist  
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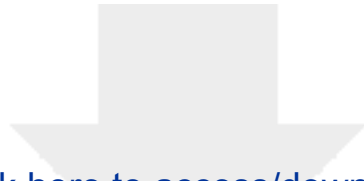




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**Supplementary Material**

Appendix 1 - Student and Staff Interview Topic  
Guides.docx



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**Supplementary Material**

Appendix 2 - COREQ Checklist v2.docx

