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Organisational perspectives on addressing differential attainment in postgraduate medical education: a qualitative study

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Abstract

Objectives

To explore how representatives from organisations with responsibility for doctors in training perceive risks to the educational progression of UK medical graduates from black and minority ethnic groups (BME UKGs), and graduates of non-UK medical schools (international medical graduates, IMGs). To identify the barriers to and facilitators of change.

Design

Qualitative semi-structured individual and group interview study.

Setting

Postgraduate medical education in the United Kingdom.

Participants

Individuals with roles in examinations and/or curriculum design from UK Medical Royal Colleges. Employees of NHS Employers.

Results

Representatives from 11 medical Royal Colleges (n=29) and NHS Employers (n=2) took part (55% medically qualified, 61% male, 71% white British/Irish, 23% Asian/Asian British, 6% missing ethnicity). Risks were perceived as significant, although more so for IMGs than BME UKGs. Participants based significance ratings on evidence obtained largely through personal experience. A lack of evidence lead to downgrading of significance. Participants were pessimistic about effecting change, two main barriers being sensitivities around race, and the isolation of interventions. Participants felt organisations should acknowledge problems, but felt concerned about being transparent without a solution; and talking about race with trainees was felt to be difficult. Participants mentioned 63 schemes aiming to address differential attainment, but these were typically local or specialty-specific, were not aimed at BME UKGs, and were largely unevaluated. Participants felt national change was needed, but only felt empowered to effect change locally or within their specialty.

Conclusions

Representatives from organisations responsible for training doctors perceived the risks faced by BME UKGs and IMGs as significant but difficult to change. Strategies to help organisations address these risks include: increased openness to discussing race (including ethnic differences in attainment among UKGs); better sharing of information and resources nationally to empower organisations to effect change locally and within specialties; and evaluation of evidence-based interventions.

Strengths and limitations of this study

- Qualitative methods afforded in-depth understanding of the problem and how it is operationalised from the perspective of key stakeholders.
- Some participants had several roles across organisations, meaning we were able to gain perspectives from representatives of other relevant organisations, such as Health Education England.
- Qualitative methods and lack of random sampling mean results are not statistically generalisable and introduces the possibility of selection bias; however, representation from across 11 UK medical Royal Colleges/Faculties/Academy of Medical Royal Colleges provided a breadth of organisational perspectives, complementing previous research with trainees and trainers.
- Low participation from the organisation *NHS Employers* meant we are not able to ascertain any differences between organisations responsible for training junior doctors and organisations responsible for employing them.

Introduction

It is well established that international medical graduates (IMGs) on average, have poorer academic and career progression compared to UK medical school graduates (UKGs), and black and minority ethnic (BME) doctors also have poorer outcomes compared to white doctors (1, 2) (see also (3) for a review). This differential attainment came into the spotlight in 2014 when, the British Association of Physicians of Indian Origin brought the Royal College of General Practitioners and the General Medical Council (GMC) to judicial review over the low pass rates of IMGs in the Membership of the Royal College of General Practitioners Examination (MRCGP) (4) following a 2013 review of the MRCGP commissioned by the GMC (5) and a subsequent article by the review authors in the British Medical Journal.(6)

The current project is part of the GMC programme to understand and reduce differential attainment in UK medicine (http://www.gmc-uk.org/education/27486.asp). A 2015 rapid review on the topic commissioned by the GMC found most research on differential attainment consisted of quantitative studies about high stakes examinations; that examinations *per se* were not generally unfair; and although research was moving towards understanding "the educational and social factors contributing to performance" (p.45), there were still too few studies to draw firm conclusions. Finally, very few evaluations of interventions to reduce differential attainment were found.(7)

Following this review, the GMC commissioned UCL's Research Department of Medical Education to undertake a qualitative study of stakeholder perceptions of the fairness of postgraduate medical training. In Part 1, we interviewed trainees and trainers across England and Wales in six specialties and Foundation training, about their perceptions of the fairness of postgraduate medical training. That work identified six risks to the progression of BME UKG and IMG trainees, and an additional six risks that only affected IMG – see Table 1.(3) In Part 2, the current study, we explore how these risks are perceived by representatives of stakeholder organisations with responsibility for training and assessing doctors undertaking specialist training (medical Royal Colleges), and for the human resources aspects of employing doctors in training in England (NHS Employers).

The aim was to gain insight into organisational factors that may act as barriers or facilitators to addressing differential attainment. This is important since organisational factors predict job performance and satisfaction in general (8), and because a supportive organisational culture has been found to be crucial in facilitating IMGs' transition into UK clinical practice.(9)

Research questions were:

1) What are stakeholders' views on the risks to BME UKG and IMG trainees' progression?
2) How significant and amenable to change did they perceive the risks to be?

We also sought to examine the facilitators and barriers to implementing change, and to identify examples of interventions or actions in place to address differential attainment.

Table 1: Risks to the progression of BME UKG and IMG trainees identified by trainees and trainers in Fair Pathways Part 1

Risks to the progression of BME UKG and IMG trainees
1. Poorer relationships with seniors and problems fitting in at work sometimes because of unconscious bias can lead to fewer learning opportunities, lower confidence, and increased chance of mental health problems.
2. Bias in recruitment, ARCPs, and at work could result in poorer outcomes
3. Anxiety about potential bias could result in poorer outcomes
4. Less autonomy in job choice resulting from poorer performance in exams and recruitment can mean increased likelihood of being separated from family and support networks, and increased chance of mental health problems.
5. Fear of being labelled as problematic can impede trainees reporting or getting help for problems, including perceived racism.
6. Potential for lack of recognition from trainers about environmental stressors, especially because within medicine there is a belief that failure results from lack of motivation or ability.
Risks to the progression of IMG trainees only
7. Inexperience with UK assessments, recruitment, UK cultural norms including communication, and NHS/work systems.
8. Cultural differences can impede relationships with colleagues and potentially patients, because of unfamiliarity with UK cultural norms, a feeling of not being understood by UKGs, and because trainers can lack confidence in IMGs' prior training.
9. Lengthy time to learn cultural norms.
10. Potential stigma of supplementary help.
11. Anxiety about increased probability of exam failure.
12. Visa difficulties and costs, and ineligibility for jobs can reduce training opportunities.

Methods

Participant sampling frame and recruitment

The sampling frame included individuals with roles in examinations and/or curriculum design from ten of the largest Royal Colleges (Psychiatrists, Surgeons, Radiologists, General Practitioners, Obstetricians and Gynaecologists, Anaesthetists, Paediatrics and Child Health, Physicians, Emergency Medicine, Pathologists) and the Academy of Medical Royal Colleges (AoMRC). It also included employees of NHS Employers with a remit around equality and diversity, education and training, and workforce management.

Participants were recruited from within this sampling frame by inviting attendees of relevant events (resulting in participants from the Royal College of Ophthalmologists and the Faculty of Intensive Care Medicine); through website searches and emails to organisations asking for relevant contact details or names, through personal contacts, and through snowball sampling (potential participants nominated colleagues to attend in their absence).

Data gathering

Participants were given an information sheet about the study, and then asked to read the Executive Summary of Part 1 of the research which included the 12 risks to trainee progression.(3) They then completed an online questionnaire, rating each risk for significance and amenability to change on a five point scale (from very significant/very difficult to change, to very insignificant/very easy to change). Ratings were used as prompts within interviews, with participants being asked to explain their ratings, and change them if they wanted. Interviews used a semi-structured schedule to ensure consistency while allowing the exploration of particular areas of interest or importance raised by participants. Interview schedules are published on the GMC website.(10) We allowed up to two hours for focus groups and an hour for interviews. When time was limited we prioritised discussing the first six risks since they related to BME UKGs and IMGs whereas the second six related only to IMGs. Only researchers and participants were present during interviews.

To facilitate participation, focus group attendance was offered in person or online using Blackboard Collaborate video conferencing software. Interviews were conducted face-to-face or by telephone. Data collection was carried out by HJ (Asian Australian female neuroscientist and medical student), AR (white British female psychologist), RV (white British female linguist), and KW (white British female psychologist and medical educationalist). All focus groups and interviews were audio-recorded and professionally transcribed. Researchers took field notes. Data were collected at the Royal College of Physicians of London, the General Medical Council offices in London, online, and over the telephone.

Analysis

Thematic analysis (11) was conducted using NVivo 11©.(12) HJ, AR, RV, and KW read all transcripts, making notes. They met to jointly produce a first draft of the coding framework, which also referred to Mountford-Zimdars et al.'s analysis of similar data from UK higher education (13) in that it categorised levels of change at the micro (individual), meso (local), and macro (national) levels. Using the draft framework, all four researchers coded one focus group transcript independently, and then met again to refine the framework. HJ, AR, RV each coded one interview transcript with the revised framework and met again; however since there were no disagreements the framework was finalised. The transcripts were divided equally between the same three researchers who coded them independently, meeting regularly to discuss any areas of uncertainty and to ensure consistency. KW wrote the first draft of the results using the coded data. All authors agreed the final version.

The questionnaire responses were designed to prompt discussion rather than to be a statistically reliable representation of participants' views, and therefore are not presented.

Ethics

Ethical approval was granted by UCL Research Ethics Committee (Ref: 0511/012). Participants gave their consent on the questionnaire and verbally at the start of the interview or focus group. Participants received a certificate of participation and those attending focus groups had refreshments.

Results

Participants

Sixty eight representatives from Royal Colleges and 56 from NHS Employers were invited; 31 participated: 29 from 11 Royal Colleges/Faculties/AoMRC, and two from NHS Employers. 17 (55%) participants were medically qualified, 19 (61%) were male, 22 (71%) were white British or white Irish, seven (23%) were Asian/British Asian, and two (6%) were missing ethnicity data. Two people declined because of conflicting commitments or lack of time. Others did not give a reason. One person who was invited agreed to take part but then later did not respond to emails arranging an interview.

Data were gathered between September and December 2016, in five focus groups (FG1 to FG5) and seven interviews (I1 to I7). FG1, FG3, FG4, FG5, and I4, I7 discussed the first six risks only. All participants rated 12 risks in the questionnaire. The mean length of the interviews was 51 minutes (range: 31 to 76 minutes), and the mean length of the focus groups was 1 hour 47 minutes (range: 97 to 133 minutes).

Quotes are allocated to participants by referring to their ethnic group, gender, whether a medical doctor or not, whether a representative of a Royal College or of NHS Employers, and focus group (FG) or interview (I) number.

Significance of risks

Participants rated all risks as significant, although risks arising from being 'different' to the majority were perceived as most significant and those relating to trainee anxiety or stigma were perceived as least significant.

> [Risk 7: *IMG inexperience with UK systems and cultural norms*] is the most significant risk I think, for people coming from different cultures. […] Medical knowledge the same but [UK assessments, recruitment, UK cultural norms including communication and NHS systems] are different. And people know English language but they don't the nuances of English language. […] It's quite a steep hill for them to climb.
>
> **Asian/British Asian male medical Royal College I2**

> [Regarding Risk 10: *Potential stigma of supplementary help*], it's difficult to see where the stigma comes from. Because it is common sense that, if you are an IMG, you are going to need a bit more help to get into it. And that should be accepted by both IMGs and their UK colleagues.
>
> **White male non-medical Royal College FG2**

All risks were felt to be more significant for IMGs than for BME UKGs with a small minority of (white male) participants questioning whether BME UKGs faced these risks:

> In my experience, from the trainees I work with, the BME trainees are very good. […] I've not seen anything specific in our hospital or in our Deanery where UK BME graduates are managed any differently […] I wouldn't say that it is different for a UK white graduate or a UK BME graduate in the [region] of Scotland.
>
> **White male medical Royal College I3**

The influence of evidence on significance ratings

When rating significance, participants drew on evidence obtained through personal experience of interacting with and observing trainees, through evidence they had access to via their role (e.g. examination scores, examinations appeals, supporting trainees 'in difficulty', or advising doctors employed in Trusts), or from equalities training they had received. Some female and Asian participants also discussed their own experience of being a member of a minoritised group.

> I was talking to a BME trainee yesterday and I said "What's your thinking... Have you ever, at any stage, felt that you've been discriminated against?" And he said to me, "When I first came over here […] I said to somebody, several people [that I] wanted to take Cardiology, and they looked at me and said 'you've got no chance'". It was as blatant as that, and the perception was "Well, if you are from Pakistan you have no chance, you won't go onto Cardiology training school". […] But what he said in the exam is, "Do you know something, we sometimes walk in and if we see a non-white examiner we will sometimes worry that they're going to be stricter". […] Purely anecdotal evidence from him.
>
> **White male medical Royal College FG5**

> I've had just so much experience with [Risk 3] with candidates, and of course I look back on my own training as a BME candidate in my time.
>
> **Asian/Asian British female Royal College FG3**

Evidence tended to be specific to the individual's specialty or local area. Some participants recognised that their personal experiences were not necessarily generalisable and that their personal involvement could affect their objectivity, but generally participants did not think critically about the representativeness or accuracy of such evidence. For example, one participant (White male medical Royal College FG4**)** took the fact that he heard complaints from trainees and none were about racism as evidence that trainees did not have a problem reporting racism if it occurred. Furthermore, in general a lack of evidence tended to lead to downgrading of significance. This was recognised by a few participants who made attempts to gather evidence to make informed decisions and persuade others to act.

Participants also referred to published research in considering the significance of risks. Research was highly valued and rarely critiqued; however much of it was about examinations rather than other aspects of teaching, learning, or assessment, meaning it was not relevant to most of the risks. Participants from Psychiatry, Medicine, and General Practice seemed to feel more under scrutiny and pressure to deal with differential attainment and were particularly likely to refer to published research about their specialty, and actions underway to address differential attainment, whereas other specialties were still collecting data.

Amenability of risks to change

Participants were generally pessimistic about the possibility of change, and this was largely because they felt that the most significant risks required change at a macro (national) level, whereas they only had power to effect change at a meso (local) or micro (individual) level, although two participants described how top-down support from national organisations such as the GMC was important but not sufficient for change.

> [Regarding Risk 12: Visa difficulties and costs, and ineligibility for jobs can reduce training opportunities] Immigration is a hot potato at the moment, since Brexit, before that. And the Government is trying to shut all doors for these people and so it's extremely, extremely difficult. It's a political football, it's difficult to change.
>
> **Asian/Asian British male medical Royal College I2**

One exception was Risk 7 (IMG inexperience with UK systems and cultural norms), which being perceived as highly significant was also rated as relatively easy to change, probably because it is well recognised at a national level and has many interventions in place to address it. It may also be because addressing it requires increasing trainees' knowledge which was felt to be easier than changing culturally-bound attitudes and behaviours, which related more to Risks 1 and 8.

Sometimes participants were pessimistic because they felt disempowered to effect change where it was needed outside their own organisation, such as this Royal College participant who felt change needed to occur within hospital Trusts, which he had no influence over:

> I've had probably about five [examples] this week and thousands in the last couple of years of trying to convince [a] Trust to do seemingly incredibly straightforward things and they refuse. […] It's "No, we will not, we have a financial bottom line we have to keep to."
>
> **White male non-medical Royal College FG3**

By contrast, a Royal College participant who also had a senior role within his Health Education England Local Education and Training Board (LETB) felt more positive about the ability of his Royal College to address Risk 6 [*Potential for lack of recognition from trainers about environmental stressors*] since his LETB was taking steps to address it:

> [Risk 6] is definitely [something that] as an organisation, [my Royal College] and the LETB, [LETB name] can very much change. And I think, I know in [my LETB] we're trying to make all the education supervisors think about the context, so it's not just about an individual in the workplace struggling with an exam or patient feedback or clinical knowledge, there's health capabilities, professionalism, the wider pressures on somebody, their cultural issues, linguistic issues, personality issues.
>
> **White male medical FG1**

Participants feeling they lacked knowledge or evidence – especially about the relative underperformance of BME UKGs - also made them less confident about effecting change.

> M1: I think [my rating of Risk 2] is a reflection of my general frustration in terms of recruitment in general. In the lack of evaluation at the end of the recruitment cycle. […] We say we had X percentage that got through a particular stage. Half of them might drop out at a particular stage and I think, generally speaking, just a lack of consistency of evaluation which tells a story. […]
>
> F1: It's difficult, isn't it, when you don't have concrete evidence of what you need to change. To respond to that.
>
> **M1: Asian/Asian British male non-medical NHS Employers FG5**
>
> **F1: White female medical Royal College FG5**

Barriers to change

We identified two additional barriers to change: sensitivities around race and the isolation of good practice. Participants recognised that concerns about appearing discriminatory in micro-level interactions with trainees could prevent trainers from helping BME and IMG trainees develop and learn effectively. At a meso level, although most participants felt that being open about differential attainment was a positive step, there was trepidation about being transparent about race-related problems, especially if those problems were not public knowledge. For example, one participant felt uncomfortable talking within the focus group about bias that had been identified in recruitment in his specialty, even though the problem had been recognised and addressed. He referred to talking about the issue within the focus group as:

> Washing our - not dirty linen, but the linen we realised wasn't quite as clean as it could have been.
>
> **M1: white male medical Royal College FG4**

Another participant in the same focus group from a different specialty later explained that his College was not investigating a potential cause of bias within their clinical examination:

> [The College didn't] know how we get around that [problem] without opening up a whole can of worms that we shouldn't be opening.
>
> **M2: white male medical Royal College FG4**

There was concern among some participants about positive action to help IMGs or BME UKGs. For example, although many participants believed Risk 4 was significant, they felt giving targeted support to BME or IMG trainees was unfair or perceived as unfair to white doctors. One female Asian participant felt actions to improve fairness, such as having diverse recruitment panels, were pointless if done in a tokenistic fashion.

M1: We accept people setting up, you know, a woman consultants group. Or a black and ethnic minority consultants group […] You know, all of that is perfectly okay. The idea that you set up a white consultants group, mind you, it might would certainly cause...[laughter] …or a male consultants group.

F2: Or a male support group.

M2: Middle-aged white men support group...[laughs]

M1: that meets at your golf club…[laughs]

F1: We've got one of those [laughs].

M1: White male medical Royal College FG2

F1: White female medical Royal College FG2

M2: White male non-medical FG2

Regarding the isolation of good practice, participants often lacked access to examples of good practice from outside their specialty, which contributed to their lack of knowledge and feelings of disempowerment to address differential attainment locally. Variability in systems by geographic region, even within the same specialty, might also be a barrier, as discussed by two participants from the same specialty:

M1: I have seen bias at recruitment, I think, where correctly, perhaps, people are putting photos up to say "if you know this person you can't assess them", but then actually people are making her laugh because they can't pronounce the name or there's some sort of comment about hairstyle or something.

F1: We don't do names. We do numbers.

M1: Well, exactly, but this is moderation, therefore selection is different across the country, as you're saying with ARCPs.

F1: So you do names in [recruitment], do you?

M1: Unless it's changed this year.

F1: No, we've had it for years. We have pictures of candidate 104.

M1: But it's still a picture, so it's comments.

F1: Still a picture, to make sure we're talking about the right person.

M1: And therefore I think that's putting bias into the assessors by even a giggle about the surname. It's unconscious. It's not intentional, but it'll have an effect.

M1: White male medical Royal College FG1

F1: White female medical Royal College FG1

Interventions or actions currently underway to address differential attainment

We recorded 63 examples of interventions or actions to address risks to the progression of BME UKGs and IMGs. We categorised them into: 1) training for trainers and examiners, 2) training and support for trainees, 3) leadership (e.g. having a senior member of a Royal College with a particular role supporting IMGs), 4) transparency around data and engagement with stakeholders, and 5) designing recruitment and assessments to minimise bias or unintended negative consequences. See Woolf et al. for examples.(10) Very few participants said interventions had been evaluated and no interventions were targeted at BME UKGs.

Discussion

Summary of findings

Representatives of medical Royal Colleges and NHS Employers recognised that BME UKGs and IMGs face significant risks to their progression in UK postgraduate training. The most significant risks were felt to be difficult to change since they required action at a macro (national) level, and participants only felt empowered to effect micro (individual) or meso (local) level change. Perceived lack of knowledge to guide change was also a barrier. One exception was Risk 7 [IMGs' inexperience with UK systems and cultural norms] which was perceived as highly significant but also relatively easy to change, perhaps because it is widely recognised as a problem at a macro level, it has a number of interventions or actions in place to address it, and because addressing it requires increasing trainees' knowledge which is believed to be easier than changing attitudes and behaviours.

Other main barriers to change were sensitivities about race and the isolation of good practice. Participants believed talking about race could impede trainee-trainer relationships and organisations were often wary of being transparent about race-related problems. Some felt positive action to address inequalities was unfair to highly performing white UK graduates. The fact that good practice, research, and data tended to be isolated within specialties and/or regions meant participants typically felt they did not have the relevant knowledge or power to act locally to effect change.

Strengths and weaknesses of the study

This is the first study to explore differential attainment among UK medical graduates from the perspective of representatives of organisations rather than individual teachers/trainers or students/trainees. The qualitative methodology provided valuable insights into the reasons why it has proved difficult to effect positive change despite differential attainment

being known about since 1995,(14) and provides insights into how to progress. Its qualitative methodology does not however provide statistically generalisable results.

The study had good representation from 10 medical Royal Colleges/Faculties plus from the AoMRC, and had a mix of people with various roles in assessment, curriculum design, and recruitment, from both clinical and non-clinical backgrounds. There was relatively good representation of Asian groups and women, although none from Black or other minority ethnic groups. There was very limited participation from NHS Employers, making it difficult to identify from the data any issues relating to the employment of trainees as distinct from their training.

Relationship to previous findings

The fact that race is a taboo is well known. White people generally fear that if they bring it up they might offend or be accused of racism, whereas BME people fear being marginalised, stigmatised, or blamed.(15, 16) For example, a BME trainee in Part 1 of the current project (3) described fearing the ramifications of even *thinking* about being the victim of racism:

> No-one likes the one who's going to kick up a fuss or start saying "Oh it's because I'm an ethnic minority this, that, and the other". No you start getting yourself into problems if you start thinking like that.
>
> **Asian Other UKG Female ST1-3 Medicine**

Sensitivities around race are a recognised barrier to addressing the differential attainment present across higher education, which is described as "a sensitive and highly politicised issue"(p.30).(17) Barriers include fear of instigating a counterproductive blame culture (blaming staff for poor teaching practices and BME students for relatively poor performance), concerns about lowering academic standards, and fear that admitting problems concerning race and racism can damage an institution's reputation. A lack of recognition of the extent and seriousness of the issues can also be a problem, for example Tolia-Kelly has written recently about how black academics complaining about the negative impact of racism at work are often dismissed as oversensitive.(18)

The isolation of good practice in addressing differential attainment reflects the specialty silos found in clinical medicine, which. As Hanauer explains, such silos can hinder understanding and prevent solutions being found: "our view from these silos of expertise often misses or even ignores clues that relate to the etiology and pathogenesis of diverse disorders"(p.1).(19) The relevance to differential attainment among UKGs is clear: despite being observed across specialties and settings, is still largely addressed within specialties.

The fact that interventions were not targeted at BME UKGs and evaluation was not mentioned reflects findings of a review of interventions to help IMGs adjust to UK clinical

practice, which found none were independently evaluated.(9) Similarly, Mountford-Zimdars et al's review of the causes of differential attainment in UK higher education found that interventions to improve the attainment of BME UK students were rarely evaluated robustly.(13)

Implications of the findings

The lack of interventions to address differential attainment in UK medical graduates probably results partly from difficulties talking about race. Differential attainment in IMGs is typically explained using a deficit model (e.g. lack of knowledge and culturally appropriate skills), whereas ethnic differences in attainment among UK graduates are more difficult to explain away without reference to racism or discrimination, since BME UKGs have presumably attained a similar level of knowledge and skills as white UKGs. Regardless of the reason for it, the lack of targeted interventions is problematic, since differential attainment in UK medical graduates has persisted over decades and is widespread. Future research and interventions should address the issues faced by UK graduates separately from the issues faced by IMGs to ensure the former receives sufficient attention. Publishing evidence from rigorous independent evaluations of interventions is also vital.

In our view, to overcome the isolation of good practice we must take a macro-level view of differential attainment. This includes exploring differential attainment in recruitment and selection, and in workplace based assessments and training environments, as well as in examinations; exploring differences and similarities between specialties and regions; and examining the continuum of medical training from application to independent practice, and from excellence awards to fitness to practice complaints. National organisations whose remit spans specialties, such as the GMC, Health Education England, the AoMRC, and Medical Schools Council can facilitate sharing of data, research and initiatives. The administrative data cohort study UK Medical Education Database (www.ukmed.ac.uk) is one example of where this is already working. In addition, medical educationalists can look to UK higher education, where the Equality Challenge Unit recently introduced the Race Equality Charter Mark for universities, and to the National Health Service, which has the Workforce Race Equality Standard. Organisations implementing change would do well to heed Sara Ahmed's finding that an organisation's need to be seen by others to be performing well in terms of diversity can be a perverse barrier to meaningful change.(20)

Conclusions

Representatives from a variety of Royal Colleges and from NHS Employers recognised that BME UKGs and IMGS can face significant risks to their progression in postgraduate medical training. To effect positive change, those responsible for medical education and training should develop and evaluate interventions to address ethnic differences in attainment among UK medical graduates; find effective ways to manage individual and organisational sensitivities around race; and coordinate and disseminate research and good practice across specialties as well as undergraduate medical education.

Competing interests

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: all authors except HJ had financial support from the General Medical Council who commissioned this research; KW receives a fee as educational consultant to the Membership of the Royal College of Physicians (UK) Examination. No authors have any other relationships or activities that could appear to have influenced the submitted work.

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Authors contributions

KW and AG designed the study with input from the General Medical Council. RV, AR, KW and HJ carried out the field work. RV, AR, HJ and KW analysed and interpreted the data with input from AG. KW drafted the manuscript and is the guarantor. All authors revised it critically for important intellectual content and approved the final version for publication. All authors agree to be accountable for all aspects of the work.

Data sharing

No additional data available.

Transparency Declaration

Katherine Woolf affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted. This research was funded by the General Medical Council, and the report on the full findings can be found here http://www.gmc-uk.org/fairtraining2 . There were no discrepancies from the study as planned.

Exclusive License

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References

1. Woolf K, Potts HWW, McManus IC. Ethnicity and academic performance in UK trained doctors and medical students: systematic review and meta-analysis. BMJ. 2011;342.
2. The State of Medical education and Practice in the UK General Medical Council; 2013.
3. Woolf K, Rich A, Viney R, Rigby M, Needleman S, Griffin A. Fair Training Pathways for All: Understanding Experiences of Progression. UCL Medical School; 2016.
4. The Queen on the Application of BAPIO Action Ltd vs Royal College of General Practitioners and The General Medical Council. 2014.
5. Esmail A, Roberts C. Independent Review of the Membership of the Royal College of General Practitioners (MRCGP) examination. University of Manchester; 2013.
6. Esmail A, Roberts C. Academic performance of ethnic minority candidates and discrimination in the MRCGP examinations between 2010 and 2012: analysis of data. BMJ : British Medical Journal. 2013;347.
7. Regan de Bere SN, S; Nasser, M. Understanding differential attainment across medical training pathways: A rapid review of the literature. Plymouth University; 2015.
8. Peter L, John C. The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. Journal of Management Development. 2004;23(4):321-38.
9. Kehoe A, McLachlan J, Metcalf J, Forrest S, Carter M, Illing J. Supporting international medical graduates' transition to their host-country: realist synthesis. Medical Education. 2016;50(10):1015-32.
10. Woolf K, Rich A, Viney R, Jayaweera H, Rigby M, Griffin A. Fair Training Pathways for All: Understanding Experiences of Progression. Part 2.: UCL Medical School; 2016.

11. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101.

12. NVivo Version 11. QSR International Pty Ltd; 2016.

13. Mountford-Zimdars A, Sabri D, Moore J, Sanders J, Jones S, Higham L. Causes of Differences in Student Outcomes,. Higher Education Funding Council for England; 2015.

14. Dillner L. Manchester tackles failure rate of Asian students. BMJ. 1995;310(6974):209.

15. Cooke L, Halford S, Leonard P. Racism in the medical profession: the experience of UK graduates. British Medical Association, Health Policy and Economic Research Unit; 2003.

16. Roberts JH, Sanders T, Wass V. Students' perceptions of race, ethnicity and culture at two UK medical schools: a qualitative study. Medical Education. 2008;42(1):45-52.

17. Berry J, Loke G. Improving the degree attainment of Black and minority ethnic students Higher Education Academy and Equality Challenge Unit; 2011.

18. Tolia-Kelly DP. A day in the life of a Geographer: 'lone'1, black, female. Area. 2017;49(3):324-8.

19. Hanauer S. A poor view from specialty silos. Nature Reviews Gastroenterology & Hepatology. 2010;7:2.

20. Ahmed S. On being included: racism and diversity in institutional life. Durham, North Carolina: Duke University Press; 2012.

Glossary

AoMRC	Academy of Medical Royal Colleges
ARCP	Annual Review of Competence and Progression
BAPIO	British Association of Physicians of Indian Origin
BME	Black and minority ethnic
CT	Core Trainee
ECU	Equality Challenge Unit
GMC	General Medical Council
IMG	International Medical Graduate (graduate from a non-UK medical school)
LETB	Local Education and Training Board
MRCP(UK)	Membership of the Royal Colleges of Physicians (United Kingdom)
MTI	Medical Training Initiative
NHS	National Health Service
RCGP	Royal College of General Practitioners
RCP	Royal College of Physicians
UK	United Kingdom
UKG	United Kingdom Graduate (graduate from a UK medical school)

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: 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. Volume 19, Number 6: pp. 349 – 357

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Organisational perspectives on addressing differential attainment in postgraduate medical education: a qualitative study in the United Kingdom

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Organisational perspectives on addressing differential attainment in postgraduate medical education: a qualitative study in the United Kingdom

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Abstract

Objectives

To explore how representatives from organisations with responsibility for doctors in training perceive risks to the educational progression of UK medical graduates from black and minority ethnic groups (BME UKGs), and graduates of non-UK medical schools (international medical graduates, IMGs). To identify the barriers to and facilitators of change.

Design

Qualitative semi-structured individual and group interview study.

Setting

Postgraduate medical education in the United Kingdom.

Participants

Individuals with roles in examinations and/or curriculum design from UK Medical Royal Colleges. Employees of NHS Employers.

Results

Representatives from 11 medical Royal Colleges (n=29) and NHS Employers (n=2) took part (55% medically qualified, 61% male, 71% white British/Irish, 23% Asian/Asian British, 6% missing ethnicity). Risks were perceived as significant, although more so for IMGs than BME UKGs. Participants based significance ratings on evidence obtained largely through personal experience. A lack of evidence led to downgrading of significance. Participants were pessimistic about effecting change, two main barriers being sensitivities around race, and the isolation of interventions. Participants felt organisations should acknowledge problems, but felt concerned about being transparent without a solution; and talking about race with trainees was felt to be difficult. Participants mentioned 63 schemes aiming to address differential attainment, but these were typically local or specialty-specific, were not aimed at BME UKGs, and were largely unevaluated. Participants felt national change was needed, but only felt empowered to effect change locally or within their specialty.

Conclusions

Representatives from organisations responsible for training doctors perceived the risks faced by BME UKGs and IMGs as significant but difficult to change. Strategies to help organisations address these risks include: increased openness to discussing race (including ethnic differences in attainment among UKGs); better sharing of information and resources nationally to empower organisations to effect change locally and within specialties; and evaluation of evidence-based interventions.

Strengths and limitations of this study

- Qualitative methods afforded in-depth understanding of the problem and how it is operationalised from the perspective of key stakeholders.
- Some participants had several roles across organisations, meaning we were able to gain perspectives from representatives of other relevant organisations, such as Health Education England.
- Qualitative methods and lack of random sampling mean results are not statistically generalisable and introduces the possibility of selection bias; however, representation from across 11 UK medical Royal Colleges/Faculties/Academy of Medical Royal Colleges provided a breadth of organisational perspectives, complementing previous research with trainees and trainers.
- Low participation from the organisation *NHS Employers* meant we are not able to ascertain any differences between organisations responsible for training junior doctors and organisations responsible for employing them.

Introduction

It is well established that international medical graduates (IMGs) on average, have poorer academic and career progression compared to UK medical school graduates (UKGs), and black and minority ethnic (BME) doctors also have poorer outcomes compared to white doctors (1, 2) (see also (3) for a review). This differential attainment came into the spotlight in 2014 when, the British Association of Physicians of Indian Origin brought the Royal College of General Practitioners and the General Medical Council (GMC) to judicial review over the low pass rates of IMGs in the Membership of the Royal College of General Practitioners Examination (MRCGP) (4) following a 2013 review of the MRCGP commissioned by the GMC (5) and a subsequent article by the review authors in the British Medical Journal.(6)

The current project is part of the GMC programme to understand and reduce differential attainment in UK medicine (http://www.gmc-uk.org/education/27486.asp). A 2015 rapid review on the topic commissioned by the GMC found most research on differential attainment consisted of quantitative studies about high stakes examinations; that examinations *per se* were not generally unfair; and although research was moving towards understanding "the educational and social factors contributing to performance" (p.45), there were still too few studies to draw firm conclusions. Finally, very few evaluations of interventions to reduce differential attainment were found.(7)

Following this review, the GMC commissioned UCL's Research Department of Medical Education to undertake a qualitative study of stakeholder perceptions of the fairness of postgraduate medical training. In Part 1, we interviewed trainees and trainers across England and Wales in six specialties and Foundation training, about their perceptions of the fairness of postgraduate medical training. That work identified six risks to the progression of BME UKG and IMG trainees, and an additional six risks that only affected IMG – see Table 1.(3) In Part 2, the current study, we explore how these risks are perceived by representatives of stakeholder organisations with responsibility for training and assessing doctors undertaking specialist training (medical Royal Colleges), and for the human resources aspects of employing doctors in training in England (NHS Employers).

The aim was to gain insight into organisational factors that may act as barriers or facilitators to addressing differential attainment. This is important since organisational factors predict job performance and satisfaction in general (8), and because a supportive organisational culture has been found to be crucial in facilitating IMGs' transition into UK clinical practice.(9)

Research questions were:

1) What are stakeholders' views on the risks to BME UKG and IMG trainees' progression?
2) How significant and amenable to change did they perceive the risks to be?

We also sought to examine the facilitators and barriers to implementing change, and to identify examples of interventions or actions in place to address differential attainment.

Table 1: Risks to the progression of BME UKG and IMG trainees identified by trainees and trainers in Fair Pathways Part 1. Reproduced from Woolf et al (3)

Risks to the progression of BME UKG and IMG trainees
1. Poorer relationships with seniors and problems fitting in at work sometimes because of unconscious bias can lead to fewer learning opportunities, lower confidence, and increased chance of mental health problems.
2. Bias in recruitment, ARCPs, and at work could result in poorer outcomes
3. Anxiety about potential bias could result in poorer outcomes
4. Less autonomy in job choice resulting from poorer performance in exams and recruitment can mean increased likelihood of being separated from family and support networks, and increased chance of mental health problems.
5. Fear of being labelled as problematic can impede trainees reporting or getting help for problems, including perceived racism.
6. Potential for lack of recognition from trainers about environmental stressors, especially because within medicine there is a belief that failure results from lack of motivation or ability.
Risks to the progression of IMG trainees only
7. Inexperience with UK assessments, recruitment, UK cultural norms including communication, and NHS/work systems.
8. Cultural differences can impede relationships with colleagues and potentially patients, because of unfamiliarity with UK cultural norms, a feeling of not being understood by UKGs, and because trainers can lack confidence in IMGs' prior training.
9. Lengthy time to learn cultural norms.
10. Potential stigma of supplementary help.
11. Anxiety about increased probability of exam failure.
12. Visa difficulties and costs, and ineligibility for jobs can reduce training opportunities.

Methods

Participant sampling frame and recruitment

The sampling frame included individuals with roles in examinations and/or curriculum design from ten of the largest Royal Colleges (Psychiatrists, Surgeons, Radiologists, General Practitioners, Obstetricians and Gynaecologists, Anaesthetists, Paediatrics and Child Health, Physicians, Emergency Medicine, Pathologists) and the Academy of Medical Royal Colleges (AoMRC). It also included employees of NHS Employers with a remit around equality and diversity, education and training, and workforce management.

Participants were recruited from within this sampling frame by inviting attendees of relevant events (resulting in participants from the Royal College of Ophthalmologists and the Faculty of Intensive Care Medicine), through website searches and emails to organisations asking for relevant contact details or names, through personal contacts, and through snowball sampling (potential participants nominated colleagues to attend in their absence).

Data gathering

Participants were given an information sheet about the study, and then asked to read the Executive Summary of Part 1 of the research which included the 12 risks to trainee progression.(3) They then completed an online questionnaire, rating each risk for significance and amenability to change on a five point scale (from very significant/very difficult to change, to very insignificant/very easy to change). Ratings were used as prompts within interviews, with participants being asked to explain their ratings, and change them if they wanted. Interviews used a semi-structured schedule to ensure consistency while allowing the exploration of particular areas of interest or importance raised by participants. Interview schedules are published on the GMC website.(10) We allowed up to two hours for focus groups and an hour for interviews. When time was limited we prioritised discussing the first six risks since they related to BME UKGs and IMGs whereas the second six related only to IMGs. Only researchers and participants were present during interviews.

To facilitate participation, focus group attendance was offered in person or online using Blackboard Collaborate video conferencing software. Interviews were conducted face-to-face or by telephone. Data collection was carried out by HJ (Asian Australian female neuroscientist and medical student), AR (white British female psychologist), RV (white British female linguist), and KW (white British female psychologist and medical educationalist). All focus groups and interviews were audio-recorded and professionally transcribed. Researchers took field notes. Data were collected at the Royal College of Physicians of London, the General Medical Council offices in London, online, and over the telephone.

Analysis

Thematic analysis (11) was conducted using NVivo 11©.(12) HJ, AR, RV, and KW read all transcripts, making notes. They met to jointly produce a first draft of the coding framework, which also referred to Mountford-Zimdars et al.'s analysis of similar data from UK higher education (13) in that it categorised levels of change at the micro (individual), meso (local), and macro (national) levels. Using the draft framework, all four researchers coded one focus group transcript independently, and then met again to refine the framework. HJ, AR, RV each coded one interview transcript with the revised framework and met again; however since there were no disagreements the framework was finalised. The transcripts were divided equally between the same three researchers who coded them independently, meeting regularly to discuss any areas of uncertainty and to ensure consistency. KW wrote the first draft of the results using the coded data. All authors agreed the final version.

The questionnaire responses were designed to prompt discussion rather than to be a statistically reliable representation of participants' views, and therefore are not presented.

Ethics

Ethical approval was granted by UCL Research Ethics Committee (Ref: 0511/012). Participants gave their consent on the questionnaire and verbally at the start of the interview or focus group. Participants received a certificate of participation and those attending focus groups had refreshments.

Results

Participants

Sixty eight representatives from Royal Colleges and 56 from NHS Employers were invited; 31 participated: 29 from 11 Royal Colleges/Faculties/AoMRC, and two from NHS Employers. 17 (55%) participants were medically qualified, 19 (61%) were male, 22 (71%) were white British or white Irish, seven (23%) were Asian/British Asian, and two (6%) were missing ethnicity data. Two people declined because of conflicting commitments or lack of time. Others did not give a reason. One person who was invited agreed to take part but then later did not respond to emails arranging an interview.

Data were gathered between September and December 2016, in five focus groups (FG1 to FG5) and seven interviews (I1 to I7). FG1, FG3, FG4, FG5, and I4, I7 discussed the first six risks only. All participants rated 12 risks in the questionnaire. The mean length of the interviews was 51 minutes (range: 31 to 76 minutes), and the mean length of the focus groups was 1 hour 47 minutes (range: 97 to 133 minutes).

Quotes are allocated to participants by referring to their participant number (P1 to P29), their ethnic group, gender, and whether a medical doctor or not. Data from representatives of NHS Employers are not included since the participation rate was so low.

Significance of risks

Participants rated all risks as significant, although risks arising from being 'different' to the majority were perceived as most significant and those relating to trainee anxiety or stigma were perceived as least significant.

> [Risk 7: *IMG inexperience with UK systems and cultural norms*] is the most significant risk I think, for people coming from different cultures. […] Medical knowledge the same but [UK assessments, recruitment, UK cultural norms including communication and NHS systems] are different. And people know English language but they don't the nuances of English language. […] It's quite a steep hill for them to climb.
>
> **P12 Asian/British Asian male medical**

> [Regarding Risk 10: *Potential stigma of supplementary help*], it's difficult to see where the stigma comes from. Because it is common sense that, if you are an IMG, you are going to need a bit more help to get into it. And that should be accepted by both IMGs and their UK colleagues.
>
> **P10 White male non-medical**

All risks were felt to be more significant for IMGs than for BME UKGs with a small minority of (white male) participants questioning whether BME UKGs faced these risks:

> In my experience, from the trainees I work with, the BME trainees are very good. […] I've not seen anything specific in our hospital or in our Deanery where UK BME graduates are managed any differently […] I wouldn't say that it is different for a UK white graduate or a UK BME graduate in the [region] of Scotland.
>
> **P13 White male medical**

The importance of personal experience to perceptions of risk significance

When rating a risk's significance, participants drew mostly on evidence obtained through personal experience of interacting with and observing trainees, through evidence they had access to via their role (e.g. examination scores, examinations appeals, supporting trainees 'in difficulty', or advising doctors employed in Trusts), or from equalities training they had received. Some female and Asian participants also discussed their own experience of being a member of a minoritised group. Evidence tended to be specific to the individual's specialty or local area.

> I was talking to a BME trainee yesterday and I said "What's your thinking... Have you ever, at any stage, felt that you've been discriminated against?" And he said to me, "When I first came over here […] I said to somebody, several people [that I] wanted to take Cardiology, and they looked at me and said 'you've got no chance'". It was as blatant as that, and the perception was "Well, if you are from Pakistan you have no chance, you won't go onto Cardiology training school". […] But what he said in the exam is, "Do you know something, we sometimes walk in and if we see a non-white examiner we will sometimes worry that they're going to be stricter". […] Purely anecdotal evidence from him.
>
> **P25 White male medical**

> I've had just so much experience with [Risk 3] with candidates, and of course I look back on my own training as a BME candidate in my time.
>
> **P23 Asian/Asian British female**

Some participants recognised that their personal experiences were not necessarily generalisable and that their personal involvement could affect their objectivity, but generally participants did not think critically about the representativeness or accuracy of such evidence. For example, one participant (P16 White male medical Royal College**)** took the fact that he heard complaints from trainees and none were about racism as evidence that trainees did not have a problem reporting racism if it occurred. Furthermore, in general a lack of evidence tended to lead to downgrading of significance. This was recognised by a few participants who made attempts to gather evidence to make informed decisions and persuade others to act.

Participants also referred to published research in considering the significance of risks. Research was highly valued and rarely critiqued; however much of it was about examinations rather than other aspects of teaching, learning, or assessment, meaning it was not relevant to most of the risks. Participants from Psychiatry, Medicine, and General Practice seemed to feel more under scrutiny and pressure to deal with differential attainment and were particularly likely to refer to published research about their specialty, and actions underway to address differential attainment, whereas other specialties were still collecting data.

Amenability of risks to change

Participants were generally pessimistic about the possibility of change, and this was largely because they felt that the most significant risks required change at a macro (national) level, whereas they only had power to effect change at a meso (local) or micro (individual) level, although two participants described how top-down support from national organisations such as the GMC was important but not sufficient for change.

> [Regarding Risk 12: Visa difficulties and costs, and ineligibility for jobs can reduce training opportunities] Immigration is a hot potato at the moment, since Brexit, before that. And the Government is trying to shut all doors for these people and so it's extremely, extremely difficult. It's a political football, it's difficult to change.
>
> **P12 Asian/Asian British male medical**

One exception was Risk 7 (IMG inexperience with UK systems and cultural norms), which being perceived as highly significant was also rated as relatively easy to change, probably because it is well recognised at a national level and has many interventions in place to address it. It may also be because addressing it requires increasing trainees' knowledge which was felt to be easier than changing culturally-bound attitudes and behaviours, which related more to Risks 1 and 8. Sometimes participants were pessimistic because they felt disempowered to effect change where it was needed outside their own organisation, such as this Royal College participant who felt change needed to occur within hospital Trusts, which he had no influence over:

> I've had probably about five [examples] this week and thousands in the last couple of years of trying to convince [a] Trust to do seemingly incredibly straightforward things and they refuse. […] It's "No, we will not, we have a financial bottom line we have to keep to."
>
> **P21 White male non-medical**

By contrast, a Royal College participant who also had a senior role within his Health Education England Local Education and Training Board (LETB) felt more positive about the ability of his Royal College to address Risk 6 [*Potential for lack of recognition from trainers about environmental stressors*] since his LETB was taking steps to address it:

> [Risk 6] is definitely [something that] as an organisation, [my Royal College] and the LETB, [LETB name] can very much change. And I think, I know in [my LETB] we're trying to make all the education supervisors think about the context, so it's not just about an individual in the workplace struggling with an exam or patient feedback or clinical knowledge, there's health capabilities, professionalism, the wider pressures on somebody, their cultural issues, linguistic issues, personality issues.
>
> **P1 White male medical**

Participants feeling they lacked knowledge or evidence – especially about the relative underperformance of BME UKGs - also made them less confident about effecting change.

> It's difficult, isn't it, when you don't have concrete evidence of what you need to change. To respond to that.
>
> **P24 White female medical**

Barriers to change

We identified two additional barriers to change: sensitivities around race and the isolation of good practice. Participants recognised that concerns about appearing discriminatory in micro-level interactions with trainees could prevent trainers from helping BME and IMG trainees develop and learn effectively. At a meso level, although most participants felt that being open about differential attainment was a positive step, there was trepidation about being transparent about race-related problems, especially if those problems were not public knowledge. For example, one participant felt uncomfortable talking within the focus group about bias that had been identified in recruitment in his specialty, even though the problem had been recognised and addressed. He referred to talking about the issue within the focus group as:

> Washing our - not dirty linen, but the linen we realised wasn't quite as clean as it could have been.
>
> **P16 White male medical**

Another participant in the same focus group from a different specialty later explained that his College was not investigating a potential cause of bias within their clinical examination:

> [The College didn't] know how we get around that [problem] without opening up a whole can of worms that we shouldn't be opening.
>
> **P15 White male medical**

There was concern among some participants about positive action to help IMGs or BME UKGs. For example, although many participants believed Risk 4 was significant, they felt giving targeted support to BME or IMG trainees was unfair or perceived as unfair to white doctors.

> P7: We accept people setting up, you know, a woman consultants group. Or a black and ethnic minority consultants group […] You know, all of that is perfectly okay. The idea that you set up a white consultants group, mind you, it might would certainly cause...[laughter] …or a male consultants group.
>
> P9: Or a male support group.
>
> P6: Middle-aged white men support group...[laughs]
>
> P7: that meets at your golf club…[laughs]
>
> P9: We've got one of those [laughs].
>
> **P7 White male medical**
>
> **P9 White female medical**
>
> **P6 White male non-medical**

Regarding the isolation of good practice, participants often lacked access to examples of good practice from outside their specialty, which contributed to their lack of knowledge and feelings of disempowerment to address differential attainment locally. Variability in systems by geographic region, even within the same specialty, might also be a barrier, as discussed by two participants from the same specialty:

P1: I have seen bias at recruitment, I think, where correctly, perhaps, people are putting photos up to say "if you know this person you can't assess them", but then actually people are making her laugh because they can't pronounce the name or there's some sort of comment about hairstyle or something.

P4: We don't do names. We do numbers.

P1:Well, exactly, but this is moderation, therefore selection is different across the country, as you're saying with ARCPs.

P4:So you do names in [recruitment], do you?

P1:Unless it's changed this year.

P4:No, we've had it for years. We have pictures of candidate 104.

P1:But it's still a picture, so it's comments.

P4:Still a picture, to make sure we're talking about the right person.

P1:And therefore I think that's putting bias into the assessors by even a giggle about the surname. It's unconscious. It's not intentional, but it'll have an effect.

P1 White male medical

P4 White female medical

Interventions or actions currently underway to address differential attainment

We recorded 63 examples of interventions or actions to address risks to the progression of BME UKGs and IMGs. We categorised them into: 1) training for trainers and examiners, 2) training and support for trainees, 3) leadership (e.g. having a senior member of a Royal College with a particular role supporting IMGs), 4) transparency around data and engagement with stakeholders, and 5) designing recruitment and assessments to minimise bias or unintended negative consequences. See Woolf et al. for examples.(10) Very few participants said interventions had been evaluated and no interventions were targeted at BME UKGs.

Discussion

Summary of findings

Representatives of medical Royal Colleges recognised that BME UKGs and IMGs face significant risks to their progression in UK postgraduate training. Participants tended to downgrade risks they had not personally observed, not always explicitly recognising that their own experiences were not necessarily generalisable and that personal involvement can affect objectivity. The most significant risks were felt to be difficult to change since they

required action at a macro (national) level, and participants only felt empowered to effect micro (individual) or meso (local) level change. Perceived lack of knowledge to guide change was also a barrier. One exception was Risk 7 [IMGs' inexperience with UK systems and cultural norms] which was perceived as highly significant but also relatively easy to change, perhaps because it is widely recognised as a problem at a macro level, it has a number of interventions or actions in place to address it, and because addressing it requires increasing trainees' knowledge which is believed to be easier than changing attitudes and behaviours.

Other main barriers to change were sensitivities about race and the isolation of good practice. Participants believed talking about race could impede trainee-trainer relationships and organisations were often wary of being transparent about race-related problems. Some felt positive action to address inequalities was unfair to highly performing white UK graduates. The fact that good practice, research, and data tended to be isolated within specialties and/or regions meant participants often based their ratings of a risk's significance on their own personal experience rather than on generalisable data. It also meant that they could feel they did not have the relevant knowledge or power to act locally to effect change.

Strengths and weaknesses of the study

This is the first study to explore differential attainment among UK medical graduates from the perspective of representatives of organisations rather than individual teachers/trainers or students/trainees. The qualitative methodology provided valuable insights into the reasons why it has proved difficult to effect positive change despite differential attainment being known about since 1995,(14) and provides insights into how to progress. Its qualitative methodology does not however provide statistically generalisable results.

The study had good representation from 10 medical Royal Colleges/Faculties plus from the AoMRC, and had a mix of people with various roles in assessment, curriculum design, and recruitment, from both clinical and non-clinical backgrounds. There was relatively good representation of Asian groups and women, although none from Black or other minority ethnic groups. There was very limited participation from NHS Employers, making it difficult to identify from the data any issues relating to the employment of trainees as distinct from their training. We are not certain why we had low participation from NHS Employers, and this may be of interest to explore in future research.

Relationship to previous findings

The fact that race is a taboo is well known. White people generally fear that if they bring it up they might offend or be accused of racism, whereas BME people fear being marginalised, stigmatised, or blamed.(15, 16) For example, a BME trainee in Part 1 of the current project (3) described fearing the ramifications of even *thinking* about being the victim of racism:

> No-one likes the one who's going to kick up a fuss or start saying "Oh it's because I'm an ethnic minority this, that, and the other". No you start getting yourself into problems if you start thinking like that.
>
> **Female, Asian Other, UK Medical Graduate, Core Medical Trainee**

Sensitivities around race are a recognised barrier to addressing the differential attainment present across higher education, which is described as "a sensitive and highly politicised issue"(p.30).(17) Barriers include fear of instigating a counterproductive blame culture (blaming staff for poor teaching practices and BME students for relatively poor performance), concerns about lowering academic standards, and fear that admitting problems concerning race and racism can damage an institution's reputation. A lack of recognition of the extent and seriousness of the issues can also be a problem, for example Tolia-Kelly has written recently about how black academics complaining about the negative impact of racism at work are often dismissed as oversensitive.(18)

The isolation of good practice in addressing differential attainment reflects the specialty silos found in clinical medicine, which. As Hanauer explains, such silos can hinder understanding and prevent solutions being found: "our view from these silos of expertise often misses or even ignores clues that relate to the etiology and pathogenesis of diverse disorders"(p.1).(19) The relevance to differential attainment among UKGs is clear: despite being observed across specialties and settings, is still largely addressed within specialties.

The fact that interventions were not targeted at BME UKGs and evaluation was not mentioned reflects findings of a review of interventions to help IMGs adjust to UK clinical practice, which found none were independently evaluated.(9) Similarly, Mountford-Zimdars et al's review of the causes of differential attainment in UK higher education found that interventions to improve the attainment of BME UK students were rarely evaluated robustly.(13)

Implications of the findings

The lack of interventions to address differential attainment in UK medical graduates probably results partly from difficulties talking about race. Differential attainment in IMGs is typically explained using a deficit model (e.g. lack of knowledge and culturally appropriate skills), whereas ethnic differences in attainment among UK graduates are more difficult to explain away without reference to racism or discrimination, since BME UKGs have presumably attained a similar level of knowledge and skills as white UKGs. Regardless of the reason for it, the lack of targeted interventions is problematic, since differential attainment in UK medical graduates has persisted over decades and is widespread. Future research and interventions should address the issues faced by UK graduates separately from the issues faced by IMGs to ensure the former receives sufficient attention. Publishing evidence from rigorous independent evaluations of interventions is also vital.

In our view, to overcome the isolation of good practice we must take a macro-level view of differential attainment. This includes exploring differential attainment in recruitment and selection, and in workplace based assessments and training environments, as well as in examinations; exploring differences and similarities between specialties and regions; and examining the continuum of medical training from application to independent practice, and from excellence awards to fitness to practice complaints. National organisations whose remit spans specialties, such as the GMC, Health Education England, the AoMRC, and Medical Schools Council can facilitate sharing of data, research and initiatives. The administrative data cohort study UK Medical Education Database (www.ukmed.ac.uk) is one example of where this is already working. In addition, medical educationalists can look to UK higher education, where the Equality Challenge Unit recently introduced the Race Equality Charter Mark for universities, and to the National Health Service, which has the Workforce Race Equality Standard. Organisations implementing change would do well to heed Sara Ahmed's finding that an organisation's need to be seen by others to be performing well in terms of diversity can be a perverse barrier to meaningful change.(20)

Conclusions

Representatives from a variety of Royal Colleges recognised that BME UKGs and IMGS can face significant risks to their progression in postgraduate medical training. To effect positive change, those responsible for medical education and training should develop and evaluate interventions to address ethnic differences in attainment among UK medical graduates; find effective ways to manage individual and organisational sensitivities around race; and coordinate and disseminate research and good practice across specialties as well as undergraduate medical education.

Competing interests

All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: all authors except HJ had financial support from the General Medical Council who commissioned this research; KW receives a fee as educational consultant to the Membership of the Royal College of Physicians (UK) Examination. No authors have any other relationships or activities that could appear to have influenced the submitted work.

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The research was funded by the General Medical Council who were involved in designing the study, were kept informed of progress with the collection, interpretation and analysis of the data, and approved this report before submission. The researchers remained independent from the funders. A version of the findings was published on the GMC website in 2016.(10)

Authors contributions

KW and AG designed the study with input from the General Medical Council. RV, AR, KW and HJ carried out the field work. RV, AR, HJ and KW analysed and interpreted the data with

input from AG. KW drafted the manuscript and is the guarantor. All authors revised it critically for important intellectual content and approved the final version for publication. All authors agree to be accountable for all aspects of the work.

Data sharing

No additional data available.

Transparency Declaration

Katherine Woolf affirms that the manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted. This research was funded by the General Medical Council, and the report on the full findings can be found here http://www.gmc-uk.org/fairtraining2 . There were no discrepancies from the study as planned.

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References

1. Woolf K, Potts HWW, McManus IC. Ethnicity and academic performance in UK trained doctors and medical students: systematic review and meta-analysis. BMJ. 2011;342.
2. The State of Medical education and Practice in the UK General Medical Council; 2013.
3. Woolf K, Rich A, Viney R, Rigby M, Needleman S, Griffin A. Fair Training Pathways for All: Understanding Experiences of Progression. UCL, Education RDfM; 2016.
4. The Queen on the Application of BAPIO Action Ltd vs Royal College of General Practitioners and The General Medical Council. 2014.
5. Esmail A, Roberts C. Independent Review of the Membership of the Royal College of General Practitioners (MRCGP) examination University of Manchester; 2013.
6. Esmail A, Roberts C. Academic performance of ethnic minority candidates and discrimination in the MRCGP examinations between 2010 and 2012: analysis of data. BMJ : British Medical Journal. 2013;347.
7. Regan de Bere SN, S; Nasser, M. Understanding differential attainment across medical training pathways: A rapid review of the literature. Plymouth University; 2015.
8. Peter L, John C. The effect of organisational culture and leadership style on job satisfaction and organisational commitment: A cross-national comparison. Journal of Management Development. 2004;23(4):321-38.
9. Kehoe A, McLachlan J, Metcalf J, Forrest S, Carter M, Illing J. Supporting international medical graduates' transition to their host-country: realist synthesis. Medical Education. 2016;50(10):1015-32.
10. Woolf K, Rich A, Viney R, Jayaweera H, Rigby M, Griffin A. Fair Training Pathways for All: Understanding Experiences of Progression. Part 2.: UCL Medical School; 2016.
11. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101.
12. NVivo Version 11. QSR International Pty Ltd; 2016.
13. Mountford-Zimdars A, Sabri D, Moore J, Sanders J, Jones S, Higham L. Causes of Differences in Student Outcomes,. Higher Education Funding Council for England; 2015.
14. Dillner L. Manchester tackles failure rate of Asian students. BMJ. 1995;310(6974):209.
15. Cooke L, Halford S, Leonard P. Racism in the medical profession: the experience of UK graduates. British Medical Association, Health Policy and Economic Research Unit; 2003.
16. Roberts JH, Sanders T, Wass V. Students' perceptions of race, ethnicity and culture at two UK medical schools: a qualitative study. Medical Education. 2008;42(1):45-52.
17. Berry J, Loke G. Improving the degree attainment of Black and minority ethnic students Higher Education Academy and Equality Challenge Unit; 2011.
18. Tolia-Kelly DP. A day in the life of a Geographer: 'lone'1, black, female. Area. 2017;49(3):324-8.
19. Hanauer S. A poor view from specialty silos. Nature Reviews Gastroenterology & Hepatology. 2010;7:2.
20. Ahmed S. On being included: racism and diversity in institutional life. Durham, North Carolina: Duke University Press; 2012.

Glossary

AoMRC	Academy of Medical Royal Colleges
ARCP	Annual Review of Competence and Progression
BAPIO	British Association of Physicians of Indian Origin
BME	Black and minority ethnic
CT	Core Trainee
ECU	Equality Challenge Unit
GMC	General Medical Council
IMG	International Medical Graduate (graduate from a non-UK medical school)
LETB	Local Education and Training Board
MRCP(UK)	Membership of the Royal Colleges of Physicians (United Kingdom)
MTI	Medical Training Initiative
NHS	National Health Service
RCGP	Royal College of General Practitioners
RCP	Royal College of Physicians
UCL	University College London
UK	United Kingdom
UKG	United Kingdom Graduate (graduate from a UK medical school)

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the inter view or focus group?	
Duration	21	What was the duration of the inter views or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: 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. Volume 19, Number 6: pp. 349 – 357

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