Addressing differential attainment by ethnicity in UK medical students and graduates

Dr Katherine Woolf
Associate Professor in Medical Education
NIHR Career Development Fellow
k.woolf@ucl.ac.uk
This evening’s talk

• Overview of the evidence relating to differential attainment by ethnicity among UK medical graduates:
  – Focus on postgraduate, supplemented with evidence from undergraduate

• Some evidence-based suggestions for tackling differential attainment.
Differential attainment by ethnicity (a.k.a. the ethnic attainment gap, the BME attainment gap)

Difference between the average attainment of white medics and the average attainment of black and minority ethnic (BME) medics.

Medics = UK medical graduates (people who graduated from a UK medical school) and UK medical students.
‘Black and Minority Ethnic’

‘Black and Minority Ethnic’: group of people not in the white majority.

2011 UK census categories included in BME group:

- Mixed/Multiple Ethnic Groups
- Asian/Asian British
- Black/African/Caribbean/Black British
- Other Ethnic Group (Arab, Other)

Not included:

- White (British, Irish, Gypsy or Irish Traveller, Other White)
Percentage of Black and Minority Ethnic medics in education and training in the UK

- 36% of UK medical students (n~11,000).
- 28% of UK medical graduates who aren’t consultants or GPs (n~15,000).
‘Attainment’

- Scores/pass rates in undergraduate exams;
- Scores/pass rates in postgraduate exams;
- Postgraduate progression outcomes (ARCPs);
- Postgraduate recruitment outcomes.
“The time at which [the RCGP] should act upon the information which it has gathered and analysed has either arrived or will do very soon. If it does not act and its failure to act is the subject of a further challenge, it may be held to be in breach of its duty.”
Understanding your data

You should review, interpret and analyse data by protected characteristic wherever it is reasonable and proportionate to do so. This will help you to understand if, for example, certain groups of doctors in training who share protected characteristics may be affected by your work.

- should take steps to identify any barriers for the progression of learners, and develop plans to address these
Impact on patients

NHS Staff Survey acute Trusts
NHS acute inpatient survey

Links between NHS staff experience and patient satisfaction: Analysis of surveys from 2014 and 2015

Dawson (2018) NHS England
The percentage of staff believing the Trust provides equal opportunities for career progression or promotion “was a very important predictor of patient satisfaction.”
BME NHS staff experiences of equality: impact on patient satisfaction

“When a higher proportion of BME staff experienced discrimination, patient satisfaction was lower. […] This was the case for discrimination from both colleagues and patients/the public, and unsurprisingly was predominantly due to discrimination on the basis of ethnic background.”

Dawson (2018) NHS England
Differential attainment by ethnicity

- Magnitude and prevalence.
- Causes (& some myth busting).
Meta-analysis: n=23 742 UK medical students and graduates (n=10 549 postgraduates)

The negative effect of non-white ethnicity on performance was significant (P<0.001) and of medium magnitude (d=-0.42, 95%CI -0.49 to -0.34) … making the odds of failure in non-white candidates 2.5 times higher than for white candidates”. 

Woolf et al, BMJ, 2011
Meta-analysis: n=23,742 UK medical students and graduates (n=10,549 postgraduates)

“Ethnic differences in attainment seem to be a consistent feature of medical education in the UK, being present across medical schools, exam types, and undergraduate and postgraduate assessments, and have persisted for at least the past three decades.”

Woolf et al, BMJ, 2011
Differential attainment by ethnicity in UK medical students and graduates is present:

- In written and clinical examinations.
- In undergraduate and postgraduate examinations.
- Across specialties.
- In Annual Review of Competence Progression (ARCPs) outcomes.
- In recruitment outcomes.

Woolf *et al.* (2011) BMJ GMC national data
Which ethnic groups?

All BME groups including Asians, tend to underperform compared to white groups.

Small numbers in some ethnic groups can make statistical comparisons between BME groups difficult e.g. Smith & Tiffin (2018): of n=14131 F2s, only 370 were from Black ethnic groups.

Dewhurst et al. (2007) *BMC Med*  
Smith & Tiffin (2018) *BMJ Open*  
Woolf et al. (2011) *BMJ*
Differential attainment:
GROUP DIFFERENCES ON AVERAGE

• Plenty of highly performing BME medics.
• Plenty of poorly performing white medics.

→ CANNOT make assumptions about individuals.

Anish Bhuva, 2009 Gold Medal Winner
Commonly-mentioned potential causes of differential attainment by ethnicity among UK medical graduates/students

- Poorer prior academic attainment.
- Socio-economic factors.
- English language proficiency.
- Study habits.
- Cultural/family expectations/requirements.
- Unfair bias in examinations.
Prior attainment?

- Ethnic differences in medical school finals remained after controlling for pre-medical school attainment.
- Some evidence that poorer postgraduate exam performance is partly due to poorer undergraduate performance.

Woolf K, McManus IC et al. (2013) BJEP
McManus IC, Woolf K et al (2013) BMC Medicine
Language proficiency?

- Not the main cause - ethnic differences in medical school finals remained after controlling for own first language and parents’ first language.

Woolf K, McManus IC et al. (2013) BJEP
Socioeconomic status?

- Not the main cause - ethnic differences in undergraduate and postgraduate medicine remained after controlling for SES.

Woolf K, McManus IC et al. (2013) *BJEP* GMC research (2016)
Other student/trainee characteristics?

- Type of school
- Personality
- Motivation
- Study habits
- Mental health

Woolf K, McManus IC et al. (2013) BJEP
Other student/trainee characteristics?

• Type of school
• Personality
• Motivation
• Study habits
• Mental health

→ Not the main causes - ethnic difference in medical school finals remained after controlling for these.

Woolf K, McManus IC et al. (2013) BJEP
Exam bias? Unlikely to be the main cause

- DA in machine-marked multiple choice exams.
- No evidence particular MCQ items responsible.
- No evidence examiners discriminate or favour ‘their own’ in clinical MRCP(UK) and MRCGP exams.
- Single-blind RCT: OSCE scoring not influenced by student ethnicity.

Bias in workplace-based assessments and/or recruitment? Uncertain

“[ARCPs] cannot be considered free from cultural influences and opportunities for assessor bias, which would seem to be a priority area for future research.” (Tiffin et al., 2014)
Surveys of trainee experience

- BME trainees: generally poorer experiences and lower satisfaction.

- BME UKG FY1s less likely to agree that:
  “The NHS is a good equal opportunities employer for doctors from ethnic minorities”

Gill, D (2016) JRSM
Lambert T, Surman G & Goldacre M (2014) JRSM
Relationships are crucial to learning

‘The results highlight the close relation between social interaction in courses and achievement’
I had a six month experience with a boss where...whatever I could do beforehand was questioned. ...
After that [I] spent about a year basically getting my confidence back.

Asian Other UK graduate, male, Surgery ST4+

BME trainees talked more about problematic relationships with seniors

Woolf et al. (2016) *BMJ Open*
Woolf et al. (2016) *GMC website*
Ethnic differences and stereotyping can hinder good educational relationships

Some of these sweet little Asian girlies are very hard to get through to. I’m quite a physically biggish sort of chap, maybe that’s another factor. I’m older, obviously that’s a factor. I’m male. I’m … they don’t communicate terribly well.

White male clinical teacher UCL
Ethnic differences and stereotyping can hinder good educational relationships

Some [Asian] students, I wonder if they want to do medicine at all, or if they’re just pressured into it. **White female clinical teacher UCL**

People often think [Asian students] are going into medicine for the wrong reasons and sometimes make it tougher for them to prove themselves. **Asian female student UCL**

Woolf et al. (2008) *BMJ*
‘Name up to ten people important for your academic success’

Number of teachers named

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The old days where if you wore the right rugby tie and then you passed - that's obviously unacceptable. But [...] all my [Case Based Discussions], everything has been from registrars who have generally said “Yeah, I'll just do one for you”.

It's not been a formalised thing. It's basically been the same as the rugby tie, but rather than wearing a tie, I've just known them and get on with them, and then they'll do the thing for me.

White British UKG Male ST1-3 GP

Woolf et al. (2016) BMJ Open
I was with a GP a couple of weeks ago having a coffee with him. He's like, “Oh, yeah, normally when we recruit people we look at whether they're going to mingle with us, they're going to gel with the kind of background we are, whether they can come to barbecues with my family”. 

Asian Pakistani UK graduate Female ST1-3 GP

Woolf et al. (2016) BMJ Open
Woolf et al. (2016) GMC website
Perceived bias: recruitment

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.

White male representative of Medical Royal College

Woolf et al. (2018) *BMJ Open*
Woolf et al. (2018) *GMC website*
I'm expecting to get a lower mark because I'm- I know it's a stupid way of thinking but actually it got to the point where I was thinking “What is it? Am I...?” I wasn't sure if it was my knowledge anymore, I wasn't sure if it was my confidence, I wasn't sure if it was my skin colour.

So you start- I think it creates almost like a nasty way of thinking and how you perceive yourself to be.

And if that someone's expectation of you is low subconsciously, your performance will be low.

Black UKG Female ST4+ Psychiatry

Woolf et al. (2016) BMJ Open
Woolf et al. (2016) GMC website
Lack of support in and outside work

- BME UKGs less likely to get first choice of job, so more likely to be separated from support outside work.
- Difficulties accessing support in work.
- Poor mental health can impede learning.

Woolf et al. (2016) *BMJ Open*
Woolf et al. (2016) *GMC website*
The most difficult thing was] the year apart. [...] My wife and kids couldn't move up. We spent a year commuting from Sheffield to Bristol.

Arab UKG Male ST4+ Surgery
Lack of support in work for poor mental health

I was so stressed I was getting panic attacks and things like that, and my trainer wasn’t recognising what was going on.

Mixed UKG Male ST1-3 Psychiatry (formerly GP)

Woolf et al. (2016) *BMJ Open*
Woolf et al. (2016) *GMC website*
Poor mental health impeding learning

I1: I feel, like, on constant level of burnout [...] 
I2: [...] I was at the point, like everyone is when they’re working, where just an entire 3 months of just not sleeping at night because you’re just so worried about the next day and how you’re going to manage.

I1: Asian Indian UKG Female ST1-3 Psychiatry
I2: Asian Indian UKG Female ST1-3 Medicine

Woolf et al. (2016) *BMJ Open*
Woolf et al. (2016) *GMC website*
Addressing risks

1. Problematic relationships with seniors (lack of trust and support).
2. Perceived bias in recruitment & workplace based assessments.
3. Lack of support in and outside work.
Getting to know trainees and giving them supported responsibility builds confidence

At the beginning of my GP placement, my trainers took quite a lot of time out to give me time to sit and just observe them in clinic first, and discuss different cases, and observe me consulting patients.

And now I see patients independently but then always discuss the case with them afterwards [...] They've gone above and beyond supporting me in that environment and for such a short space of time I feel a lot more able now [...] a lot more confident.

Arab UKG, Female, Foundation
Getting to know trainees and positive feedback builds confidence

I've had one trainee who I did feel lacked confidence when he first came to work with us on the Short Stay Unit. ... He was with us for a year... I was his supervisor, we had the continuity and he had a lot of positive feedback which built his confidence up.

And then he passed his exams, and then he became a registrar and has gone into the speciality that he wanted to do.

[That experience] made me a bit more aware of how important my role is.

Trainer White UKG Female Medicine

Woolf et al. (2016) BMJ Open
Woolf et al. (2016) GMC website
Supported responsibility builds trainee confidence and resilience

- Providing practical opportunities to be stretched in a supported way builds resilience via ‘steeling effects’.
- ‘Steeling’ increases:
  - self-efficacy, knowledge and skills;
  - self-esteem via positive feedback.

Woolf et al. (2016) *BMJ Open*
Rutter (2012) *Dev Psychopathol*
I’ve been fortunate enough as a third year medical student, my third consultant now whom I knew then 11 years ago told me “if you want to do Surgery you have to start publishing now”, which I did then. And he’s pretty much supported me throughout the last 10 years and given me pointers in what to do.

Asian Chinese UKG Male ST4+ Surgery

Woolf et al. (2016) BMJ Open
Woolf et al. (2016) GMC website
“Established elites pay special attention to those members who are deemed to have high potential and then provide sponsoring activities to them to help them win the competition. Once identified as potential elites, the chosen individuals are given favorable treatment to make them even better and differentiate them even further from the non-elite group. […] They] are allowed to start the race earlier, gain momentum more quickly, and are more likely to be declared as winners.” Ng et al (2005)
Impact of sponsorship on career success

“Career success is largely a function of two important career experiences: working hard and receiving sponsorship”.

Ng et al (2005) Pers Psych
Building positive trainee-trainer relationships

• Time and support for trainers to get to know trainees:
  – Builds trust, understanding, and belonging for trainees.
  – Enables trainers to assess learning needs and provide supported opportunities for taking responsibility.

• Remind trainers how important they are.

• Consider ways to ensure BME trainees receive sponsorship (e.g. inclusive advocacy scheme).

Woolf et al. (2016) BMJ Open
Woolf et al. (2016) GMC website
Addressing risks

1. Problematic relationships with seniors (lack of trust and support).
2. Perceived bias in recruitment & workplace based assessments.
3. Lack of support in and outside work.
Addressing potential bias in recruitment: training and data collection

We know that bias in recruitment can be an issue [...]. And so, in our College, as we have national recruitment, we have training on avoiding bias beforehand.

We are now collating data on the background of our applicants so that we will have some understanding of it to see what difference we can make.

Royal College of Ophthalmologists

Woolf et al. (2018) BMJ Open
Woolf et al. (2018) GMC website
Addressing potential bias in recruitment: standardisation and transparency

At recruitment in Psychiatry we not only have a standard script but it’s published in advance. And initially interviewer’s instinct about that was ‘this is crazy’, you know, and yet I’ve become persuaded that it makes sense.

Royal College of Psychiatrists

Woolf et al. (2018) BMJ Open
Woolf et al. (2018) GMC website
Addressing risks

1. Problematic relationships with seniors (lack of trust and support).
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Arranging work so trainees can have a life outside work

Having non-medic friends who show you that life isn't all about your job. When you're in this weird, weird microcosm that is medicine, it's so difficult to step away.

Asian Pakistani UKG, Male, ST1-3 GP

Providing senior support in work

I have a good support from the Deanery who gave me the clinical academic post. I feel an immense sense of responsibility towards that to deliver.

I had support from my TPD, two of them in particular for my personal issues [...].

So yes I've had an immense amount of support for which I'm extremely grateful. I hope they would likewise consider that their investment is worth it.

Asian UKG Female ST4+ Surgery
Facilitating peer support in work

Other GP trainees. [...] We're all in the same situation. Often someone has gone through something that you're going to go through, and they will be able to support you or know someone who will be able to help you out.

Asian Indian UKG, Male, ST1-3 GP

Woolf et al. (2016) *BMJ Open*
Woolf et al. (2016) *GMC website*
Medical friendships strongly influenced by ethnicity

Facilitating mixed peer support

• Random allocation to activities (to teaching groups; to pair/group work within teaching groups).
• “Getting to know you” activities in formal setting.
• Facilitating inclusive extra-curricular social activities (not just going to the pub).
• Emphasise shared identities (e.g. specialty or practice identity)

Ashford & Mael (1989) *Acad Man Rev*
Contact between majority and minority group members reduces prejudice

Intergroup contact typically reduces intergroup prejudice

A Meta-Analytic Test of Intergroup Contact Theory

Thomas F. Pettigrew
University of California, Santa Cruz

Linda R. Tropp
Boston College

The present article presents a meta-analytic test of intergroup contact theory. With 713 independent samples from 515 studies, the meta-analysis finds that intergroup contact typically reduces intergroup prejudice.

Meta-analytic findings indicate that these conditions are not essential for prejudice reduction. Hence, future work should focus on negative factors that prevent intergroup contact from diminishing prejudice as well as the development of a more comprehensive theory of intergroup contact.

Keywords: intergroup prejudice, intergroup contact, meta-analysis

Breaking stereotypes and building positive learning relationships

Before [the patient entered] we [had] a brief chat about ‘who you are, where you come from, where you’re up to, what are your interests’[....]

Suddenly [...] my perception of her changed.

I didn’t just see a student, another student, another Indian student [...] I actually saw this person.

When patients came in it was just easy to engage her.

White female clinical teacher
Supporting trainees experiencing racism from patients or colleagues

“Some of the abuse comes from patients, but some also comes from colleagues, including those in senior positions”
Supporting trainees experiencing racism from patients or colleagues

“I felt let down that the senior doctor didn’t address it. I expected him to have acknowledged it as an inappropriate comment, but nothing was said to me or the patient, which makes it look like these types of comments are okay”

Although some BME students report becoming reluctantly “acclimatised to” or excusing these interactions, medical diversity experts say that these incidents need to be better handled to create a culture of zero tolerance within the workplace. A third (34%) of UK medical students (13 563 individuals) are BME, according to the General Medical Council. [1]
Speaking up about racism is *really* hard

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

Discrimination is everyone’s problem

- Active bystander or ally training (e.g. Coker et al., 2011) for trainees:
  - Facilitates trainees standing up for one another.
  - Means the burden of dealing with discrimination doesn’t just fall on victims.

- Training for seniors in dealing with incidents of discrimination.

- Build better systems to enable discrimination to be reported and dealt with. Coker et al (2011) Violence Against Women
Reframing race and diversity

Race and differential attainment are taboo subjects in undergraduate and postgraduate medical education.

“Students tended to perceive diversity as something that creates problems for healthcare professionals” (Nazar et al., 2015).

Lack of BME representation in teaching.

Teaching that encourages talking about race and recognises diversity as a beneficial part of the profession


Rigorous evaluation of actions needed

- Actions to address differential attainment rarely evaluated.
- Publication of evaluations is key to learn from best practice and avoid repeating mistakes.

Woolf et al. (2018) *BMJ Open*
Don’t need to go it alone!

• General Medical Council research and resources

• BMA information and resources

• WRES resources
  https://www.england.nhs.uk/about/equality/equality-hub/equality-standard/resources/
Resources from higher education

• UUK & NUS project led by Baroness Amos

• National Union of Students resources
  https://www.nusconnect.org.uk/campaigns/liberatemydegree/black-attainment-gap-resources

• UCL BME attainment project with Kingston
  https://www.ucl.ac.uk/teaching-learning/education-strategy/bme-attainment-project-supporting-student-success
Advancing Race Equality Toolkit

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https://www.ucl.ac.uk/human-resources/sites/human-resources/files/toolkit.pdf
Differential attainment is a serious and pervasive problem that must be addressed

- Time and training for seniors to provide supported responsibility for BME trainees; opportunities for mixed peer support; and opportunities for support outside work.
- Demonstrate how concerns about bias in assessments and recruitment are addressed.
- Support conversations about race, including for trainees speaking out and training for dealing with discrimination.
- Seek advice from other organisations.
- Evaluate!
Thank you

k.woolf@ucl.ac.uk
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