

The challenges of understanding differential attainment in postgraduate medical education

THE EXTENT OF DIFFERENTIAL ATTAINMENT IN MEDICINE

The gap in achievement between different demographic groups undertaking the same assessment is known as differential attainment. Differential attainment exists within and outside medicine and across undergraduate and postgraduate studies.¹

Black and Minority Ethnic (BME) doctors perform less well than their white peers in undergraduate and postgraduate assessments. The statistics apply across all medical specialties and to all non-white ethnic groups, with the odds of failure of BME medics being up to 2.5 times higher than that of white medics.² The General Medical Council³ has found that once in general practice and other specialty training, UK-qualified white candidates have an average 75% pass rate in postgraduate exams compared with 62.7% for UK-qualified BME candidates and 42.7% for non-European international medical graduates. Of UK medical graduates, 72% of BME Foundation doctors applying for a specialty training programme are successful on their first attempt, compared to 81% of white doctors.³

We propose that performance in undergraduate and postgraduate settings should be seen as a continuum. There is benefit in having longitudinal data to promote our understanding of differential attainment.

CAUSES FOR DIFFERENTIAL ATTAINMENT

It is often assumed that differences in performance might relate to language, prior academic performance, socioeconomic status, or examiner bias. Therefore, it is surprising that there is no proof that any of these factors can explain the differences seen in undergraduate medical studies.⁴ Similarly, there is little empiric evidence that can explain the variance seen in postgraduate exam results between UK-qualified BME and white doctors.

Why is it that we are still struggling to understand the causes of differential attainment in general practice between UK-qualified BME and white doctors? Regan de Bere *et al*⁵ suggest that BME is itself a problematic term, covering a wide range of individuals from differing ethnic and cultural backgrounds. They also suggest a lack of consensus among professional bodies about the definitions of

“... the odds of failure of BME medics being up to 2.5 times higher than that of white medics.”

ethnicity. A further assumption has been that differential attainment in medical examinations is related to a deficit in BME doctors, which needs to be identified and fixed; again empiric evidence is lacking to explain such a deficit or indeed its very existence. Mountford-Zimdars *et al*'s 2015 review¹ of differential attainment in undergraduate studies across the UK identified four broad areas with explanatory potential. These comprised:

- students' experience of the curriculum in its broadest sense, including teaching and assessment practices;
- social and cultural capital;
- relationships between staff and students and among students, particularly a sense of belonging and support; and
- psychosocial and identity factors, such as the expectations that academic staff have of students and that students have of themselves.

WHERE TO FROM HERE?

Given the paucity of empiric evidence to explain the differences in attainment seen in postgraduate training and extrapolating the findings of Mountford-Zimdars *et al*,¹ we think there are several areas where focused work may yield significant benefits.

Unconscious bias

Ng *et al*⁶ suggest that the most important determinants of career success are hard work and sponsorship by senior colleagues. Sponsorship results in access to resources being made available to achieve such success, including, for example, careers advice or additional teaching. Even knowing you are held in high regard by a senior member of the team is likely to have a positive effect on self-perception. Unconscious bias influences which groups receive this type of career-changing attention; that is, who we, as senior clinicians, choose to sponsor. Our preconceptions and stereotypes inform our biases and actions towards groups of individuals.

Our understanding of unconscious bias and its role in differential attainment is limited, partly because there is a reluctance to talk about racial bias among medics. However, as Woolf points out,⁷ differences in attainment between UK-trained white and BME medics are difficult to explain without considering the impact of racism or discrimination.

Teaching programmes that promote self-awareness about bias and power imbalances with colleagues and patients offer the potential to tackle differential attainment,⁸ although further research is needed to decide which educational interventions have the greatest impact.

Social interaction

A systematic review found that the ability of teachers to encourage questions and discussions among students is the most important intervention determining academic success in higher education.⁹ High achieving students build on teacher-student interactions by working with their peers, for example in study groups. The evidence strongly suggests that being able to interact with teachers and peers has a significant impact on a student's educational trajectory.^{1,9}

There is research carried out in non-medical higher education institutions which suggests differences in patterns of social interaction between white and BME students. One study¹⁰ found that BME students were less likely than white students to seek help from or to work collaboratively with their peers. Another study¹¹ concluded that white students were more likely to spend time discussing their work with their lecturers and to feel able to ask for help from them. This was in contrast with BME students, who tended to find ways to get by without asking for assistance.

In a similar vein, the ability of students to form connections with senior colleagues and with peers from outside their own social group has been shown to be important in terms of academic outcomes.¹² Vaughan's work with undergraduate medical students

“... if someone expects to fail, it is likely that they will fail; or perhaps they will set themselves lower goals than they should.”

demonstrated that high-achieving students were more likely to have at least one tutor or clinician in their social network, whereas BME and Muslim students, as well as lower achieving students, were least likely to.¹²

Inclusion and self-efficacy

In the NHS, we are very used to gender and racial diversity in our patients and the workforce. However, there is little focus on inclusion; that is, valuing and capitalising on different approaches rather than simply accepting that they exist. Inclusion has positive effects on social interaction and thus on belonging. It is likely to result in improved self-efficacy; the perception people have of their own ability. Self-efficacy affects not only behaviour, but also the aspirations people have for themselves.¹³ This is clearly significant, in the sense that if someone expects to fail, it is likely that they will fail; or perhaps they will set themselves lower goals than they should.

Standard setting

A key challenge in high-stakes postgraduate exams is to demonstrate fitness to practise, while still actively scrutinising the validity of the implicit sociocultural assumptions and expectations underpinning such assessments. There is a debate about what we should tolerate in terms of ‘communicative flexibility’, given our increasingly diverse society. This is likely to be particularly relevant for exams rooted in a particular cultural paradigm.

In education, what we measure and how we measure it is determined by what we value; and is ultimately responsible for the ‘trainee deficit’, making success elusive for some. Such a process, while essential for assuring minimal safe standards, discounts different ways of practising which are shaped by particular cultural influences.

A shift towards valuing broad capabilities captures strengths as well as defining areas for future development.

CONCLUSION

Differential attainment between white and BME medics still exists in 2019. The causes are not clear but are almost certainly multifactorial and complex. Further research is needed, looking at outcomes using more subtle distinctions than broad racial classifications. Factors highlighted in this article are fertile ground for such research.

How we deal with the challenge of differential attainment is just as important. Using pragmatic strategies to identify and then offer targeted help to trainees considered to be at risk of failing may yield benefit for a proportion of individuals affected by differential attainment. However, these interventions do not influence the more systemic causes that need further research, innovation, and evaluation. A focus on the trainee deficit paradigm has the potential to detract from the much-needed debate about the causes of and solutions for differential attainment.

Rupal Shah,

GP Partner, Bridge Lane Group Practice, Battersea, London.

Sanjiv Ahluwalia,

GP, Wentworth Medical Practice, Finchley, London.

Provenance

Commissioned; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

DOI: <https://doi.org/10.3399/bjgp19X705161>

ADDRESS FOR CORRESPONDENCE

Rupal Shah

Bridge Lane Group Practice, 20 Bridge Lane, Battersea, London SW11 3AD, UK.

Email: rupal.shah7@nhs.net

REFERENCES

1. Mountford-Zimdars A, Sabri D, Moore J, *et al*. *Causes of differences in student outcomes*. Swindon: Higher Education Funding Council for England, 2015.
2. 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**: d901.
3. General Medical Council. *Interactive reports to investigate factors that affect progression of doctors in training*. 2015. https://www.gmc-uk.org/-/media/documents/briefing-note---exams-and-recruitment-outcome-reports_pdf-60060997_pdf-60086828_pdf-62012305.pdf (accessed 2 Aug 2019).
4. Woolf K, McManus IC, Potts HWW, Dacre J. The mediators of minority ethnic underperformance in final medical school examinations. *Br J Educ Psychol* 2013; **83**(1): 135–159.
5. Regan de Bere S, Nunn S, Nasser M. *Understanding differential attainment across medical training pathways: a rapid review of the literature*. Final report prepared for The General Medical Council. 2015. https://www.gmc-uk.org/-/media/documents/gmc-understanding-differential-attainment_pdf-63533431.pdf (accessed 2 Aug 2019).
6. Ng TWH, Eby LT, Sorensen KL, Feldman DC. Predictors of objective and subjective career success: a meta-analysis. *Personnel Psychology* 2005; **58**: 367–408.
7. Woolf K, Viney R, Rich A, *et al*. Organisational perspectives on addressing differential attainment in postgraduate medical education: a qualitative study in the UK. *BMJ Open* 2018; **8**(3): e021314.
8. White AA 3rd, Logghe HJ, Goodenough DA, *et al*. Self-Awareness and cultural identity as an effort to reduce bias in medicine. *J Racial Ethn Health Disparities* 2018; **5**(1): 34–49.
9. Schneider M, Preckel, F. Variables associated with achievement in higher education: a systematic review of meta-analyses. *Psychol Bull* 2017; **143**(6): 565–600.
10. Stuart, M, Lido C, Morgan, J. Personal stories: how students’ social and cultural life histories interact with the field of higher education. *International Journal of Lifelong Education* 2011; **30**(4): 489–508.
11. Stevenson J. An exploration of the link between minority ethnic and white students’ degree attainment and views of their future ‘possible selves’. *Higher Education Studies* 2012; **2**(4): 103–113.
12. Vaughan S, Sanders T, Crossley N, *et al*. Bridging the gap: the roles of social capital and ethnicity in medical student achievement. *Med Educ* 2015; **49**(1): 114–123.
13. Bandura A. Guide for constructing self efficacy scales. In: Urdan T, Pajares F, eds. *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing, 2006: 307–337.