Barriers affecting BAME students' access and attainment in veterinary higher education

Part 2 – The barriers and solutions

Ciar Pembroke, RVN https://orcid.org/0000-0002-3082-6562
Davies Veterinary Specialists, Higham Gobion, Hitchin

ABSTRACT This paper aims to identify the barriers affecting black, Asian and minority ethnic (BAME) students' access to, and attainment in, veterinary higher education in the UK. This will help acknowledge and understand why the veterinary sector is the least diverse profession in the UK (Gyles, 2018), with veterinary nursing being worse than veterinary medicine. In Part 2, the barriers identified from a literature review of eight studies will be discussed with potential solutions. The main themes will be exposure, pathways, isolation/marginalisation, the learning environment and teaching styles.

Keywords BAME, veterinary education, diversity, attainment, anti-racism, Black Lives Matter

Introduction

In the previous article, the background and contextual information introduced the reader to the racial issues that can affect BAME students' access and attainment in veterinary higher education. The following factors were elucidated from a systematic literature review (see Supplementary material): exposure, pathways, isolation/marginalisation, the learning environment, and teaching styles. In Part 2, these barriers will be discussed with possible solutions and limitations.

Exposure

Royal et al. (2015) measured the second most influential factor to pursuing a veterinary career as being exposure to an animal or pet. Similarly, Tomlin et al. (2010) found that 40% of surveyed students were influenced by watching a veterinary surgeon (VS) at work, for example, when visiting with a sick animal. This type of exposure applies predominantly to white children and adolescents, as they are more likely to own pets compared to non-white children and adolescents (Marsa-Sambola et al., 2016), giving increased exposure to veterinary careers. BAME youths who are exposed may not aspire to veterinary careers due to the small likelihood that the practitioner will resemble their complexion, culture or religion. Animal experience and pet ownership are, as a result, unreliable sources of exposure to veterinary careers for BAME children and adolescents, and other strategies should be trialled. For example, Miguel et al. (2013) highlight how depictions of veterinary careers can be easily changed for 10–12-year-olds when information is delivered effectively within teacher-led discussions and lesson plans. This exposure should combat the white veterinary professional stereotype and reinforce that the veterinary sector is a welcoming profession with a wide breadth of career options.

A limitation to this strategy is its reliance on the content being presented persuasively by school staff who may not have previously conveyed information about pursuing veterinary education accurately (Andrews, 2009). Careers advisors were cited as being the biggest negative influence on pursuing veterinary education by 31.1% of students (Tomlin et al., 2010). To combat misinformation, it would be beneficial for veterinary professionals to lead talks and activities in schools (Vet Futures, 2015), providing accurate information from their first-hand experiences. It has been statistically shown that parents, especially mothers (Strayhorn, 2009), influence their children's career aspirations so, during early education, parents should also be made aware of what a veterinary career involves and its potential for being a rewarding and reputable profession for their child (Tomlin et al., 2010).

Pathways

Engagement in veterinary careers needs to be maintained through clear educational pathways that will lead to a university place with minimal obstacles (Strayhorn, 2009). Lack of opportunities can mean that the usual pathways for pursuing veterinary higher education will not be possible, such as being able to gain sufficient hours of work experience to meet application requirements or meeting grade boundaries. Admission processes for universities can also be ambiguous and confusing, as some accept Business and Technology Education Council (BTEC) qualifications while others do not (Hudson et al., 2009). Some also use contextual factors to varying degrees without disclosing how they are utilised, while some do not use contextual factors at all (Boliver et al., 2017). This ambiguity can be discouraging to students who are not certain about gaining a place and therefore see it as a wasted application, despite being capable (Wyness, 2017).

Students should be informed about what qualification is needed and which grades are acceptable, based on known contextual factors. Support and guidance should be available throughout the educational pipeline, from primary to secondary school, providing information on preferred subjects, tutoring, workshops, and programmes run during school holidays to give students opportunities to gain experience (Strayhorn, 2009). Universities should take responsibility for making their veterinary courses more accessible by having no requirement for practical work experience, accepting both BTEC and A-level qualifications, and lowering grade boundaries where appropriate, using contextual factors to create a more level playing field (Andrews, 2012). Some admissions teams may argue that contextual factors should be avoided as their use sets low-attaining students up for failure, but there is no evidence of this (Boliver et al., 2017). Analysis has shown that due to lack of guidance, information and advice, disadvantaged students are less prepared for university, while also having lower predicted grades when applying (Wyness, 2017), which decreases the likelihood of acceptance. Universities need to act if widened participation is to be achieved.

Isolation and marginalisation

Once at university, BAME students face isolation and marginalisation from microaggressions, casual racism and stereotypes from their peers and university staff (Claridge et al., 2018; Dortch and Patel, 2017; Morrison et al., 2019). Even though an anti-discrimination policy will be in place (Equality Act, 2010), race discrimination is not always quantifiable and can intersect and find expression in multiple areas (Gillborn et al., 2017). The different forms of racism are not widely known, so when an incident does occur, it may not be reported and may also go unnoticed by others. Once this cycle is allowed to continue, it becomes an accepted culture for both the victims of racism and the perpetrators. This is most easily explained through the oppression model **(Figure 1)**. This can lead to isolation and exclusion from social circles. In the Claridge et al. (2018) study, isolation had detrimental effects on academic performance due to students missing out on resources and information distributed in different ethnically homogenous social circles. Students who are vulnerable to academic hardship due to these factors require early intervention in learning and development opportunities (Vet Futures, 2015).

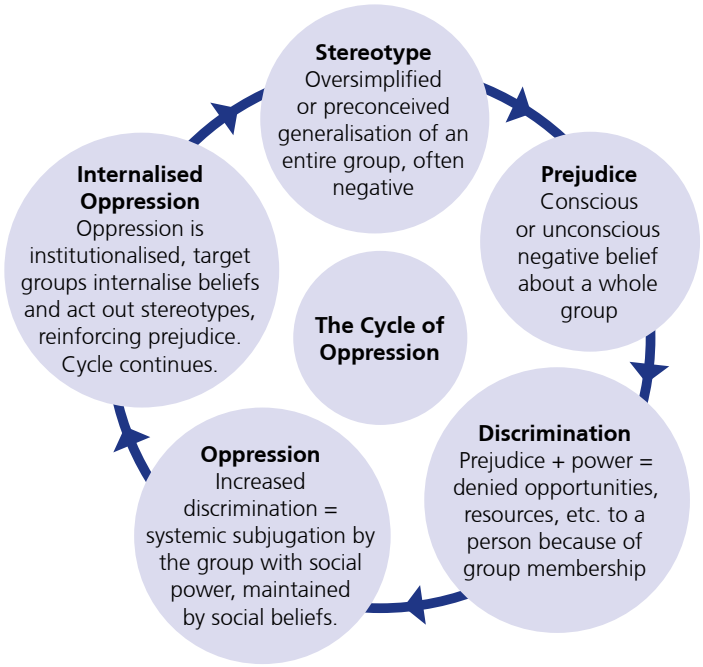


Figure 1. The Cycle of Oppression. Information from Muhlenberg College Counselling Services.

To identify where change is needed, a safe dialogue needs to be opened, through which minority students and staff can feel comfortable sharing their experiences with people who have engaged with the dialogue and have the power to make changes (Alexander et al., 2015).

The burden of finding solutions should not fall on the victims of racism; the responsibility should always lie with universities to identify where extra support and resources are needed. Resources may include unconscious bias testing and subsequent continued professional development (BVA, 2019), while support may entail universities having a strong public stance on racism, so students can be reassured that any concerns will be acted upon. A temperature check of student attitudes on campus is a useful starting point for universities when measuring the impact racism currently has on BAME veterinary students (Davis, 2013), such as the college climate survey undertaken in all veterinary colleges in the United States (Greenhill and Carmichael, 2014). Small incentives and scheduling lesson time for survey completion could encourage participation.

The learning environment and teaching styles

Within universities, both the building and staff composition can impact a student's sense of belonging (Sanders & Rose-Adams, 2014). BAME staff at universities, especially on veterinary courses, are hugely disproportionate to white staff, particularly in decision-making roles (Advance HE, 2018). Not only does this starve BAME veterinary students of role models that resemble themselves, but it also gives the impression that their issues will not be heard, related to, or acted upon. Price (2010) used a linear probability model to show that having one black lecturer could increase black student persistence by 8.1%, closing the university persistence gap between white and black students. Diversity within the staff is not shown to have any detrimental effects on white students and, instead, has positive effects for both minorities and majorities (Price, 2010).

Universities should design recruitment strategies to target BAME veterinary professionals (Alworth et al., 2010). As this is a lengthy process, universities could instead make an effort to invite BAME practitioners to lead talks and workshops. This would be beneficial in encouraging BAME students to persist while also normalising successful BAME professionals for white students. In the age of social media influencers, there is easy access to inspirational professionals, and research into historical veterinary figures such as Dr Jotello Festiri Soga **(Figure 2)**.

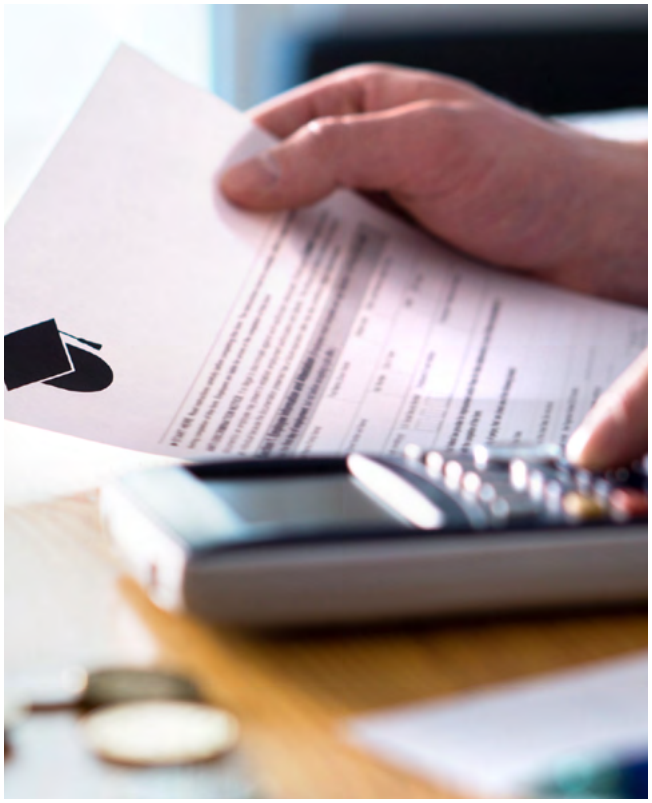
University buildings can also make BAME students feel unwelcome. Universities need to reflect on how the campus environment and traditions may be perceived by BAME students (Alexander et al., 2015) and what could be considered offensive or intimidating, such as solely celebrating white idols or glorifying historical figures known for their participation in slavery and colonisation. These aspects of the university need to be re-evaluated and updated so they are more appropriate, encouraging and welcoming to students through cultural humility (Alvarez et al., 2019).

Dr Jotello Festiri Soga, 1865–1906, was the first black member of the RCVS register. He returned to his birth country of South Africa and played a key role in the cure of rinderpest (cattle plague) through his animal health research and his ability to speak Xhosa to local farmers. He had a major role in his government-formed team of veterinarians. However, as a black veterinarian, he was denied a permanent position and his research was deliberately hidden.

Information based on World Veterinary Association (2011) Media Releases.

Figure 2. Dr Jotello Festiri Soga

Veterinary teaching styles are not designed for diverse groups of students. For example, mental health, financial and educational support are all lacking. Claridge et al. (2018) identified that students felt they had to speak a certain way in exams to combat stereotypes, which led to mistakes. Additionally, examiners were cited as being less able to recognise student anxiety through flushed cheeks than on white students' complexions. These factors are especially important in veterinary nursing (VN) education, where qualification relies on practical assessments.



There is also evidence that veterinary students are not made aware of the financial help they are entitled to, which would help cover course expenses (AVS & BVA, 2020). Financial difficulties can be a major contributing factor to a decline in mental health, but the stigma around mental health and differences in how students present their emotions can mean signs of deterioration may be missed or ignored, especially in BAME students. When all these factors are at play, they can present a major barrier to attaining a veterinary qualification.

Students having to sacrifice university education due to financial difficulties is not acceptable, and it should be in the resources of universities to provide full information about the financial aid available to each student (Boliver et al., 2017). This could support the 50% of veterinary students currently needing to do a part-time job while studying, in order to contribute to course expenses (AVS & BVA, 2020).

Students and staff need to be aware of and trained in cultural humility and unconscious bias (Mills et al., 2011). This is both to help with client interactions in professional life and also to combat stereotyping and bias related to the perception of the struggles and academic achievements of individual students. Although there is a known academic gap, this should not mean staff should be content with or expect BAME students to achieve lower grades. Alexander et al. (2015) use the example of a science teacher openly declaring in a survey that the genes affecting skin colour also affect IQ, so black boys are not suited to academic work. These shockingly false attitudes could easily be rectified with the correct education where multiculturalism is not a taboo subject. Having an inclusive, multicultural pedagogy can create a space where staff better understand students' stresses, making them more approachable if students need to raise concerns about academic work or mental health, and making it easier for staff to recognise signs of struggle in BAME students.

Conclusion

In conclusion, the findings of the literature review identified exposure, pathways, isolation and marginalisation, learning environment and teaching styles as barriers to access and attainment in veterinary education for BAME students. Lifting these barriers relies heavily on universities, veterinary professionals and the RCVS to recognise and acknowledge problems so actions can be taken. This requires changes in staff recruitment and training, teaching styles, university admission processes, early outreach to students and parents, as well as improving support networks. The limitations on implementing these strategies include, primarily, the lack of basic research specific to racial issues within VN and veterinary medicine. Other difficulties include obtaining long-term funding and resources, delivering information effectively, developing trust and a sense of belonging for BAME students, and maintaining staffing levels.

The veterinary sector, especially VN, is currently failing to recruit and provide a diverse workforce, meaning it cannot fulfil the needs of the role. This gap in diversity needs rectifying to reduce the high levels of racism currently present in the sector. Doing so would also improve practice and university experiences more generally, by driving innovation, encouraging a range of perspectives, and enhancing skills such as problem-solving, active thinking and motivation.

It is important to tackle racial discrimination and address the complexities around finding effective solutions on an ongoing basis, as circumstances evolve. This continuous evolution is an essential part of reflective practice and of a truly inclusive industry.

REFERENCES

Advance HE (2018) Equality and Higher Education: Staff Statistical Report 2018. London, Advance HE.

Alexander, C., Arday, J., Ahmed, S., et al. (2015) Aiming Higher: Race, Inequality and Diversity in the Academy. London, Runnymede, pp. 7–44.

Alvarez, E.E., Gilles, W.K., Lygo-Baker, S. & Chun, R. (2019) Teaching cultural humility and implicit bias to veterinary medical students: a review and recommendation for best practice. Journal of Veterinary Medical Education. 47 (1), 2–7.

Alworth, L., Ardayfio, K.L., Blickman, A., et al. (2010) Diversity in laboratory animal science: issues and initiatives. Journal of the American Association for Laboratory Animal Science. 49(2), 138–146.

Andrews, F. (2012) Widening access to the profession. Veterinary Record. 170 (1), 9–12.

Andrews, F.M. (2009) Veterinary school admissions in the United Kingdom: attracting students to veterinary careers to meet the expanding needs of the profession and of global society. Revue Scientifique et Technique – Office International des Epizooties. 28 (2), 699–707.

AVS & BVA (2020) AVS/BVA Student Market Research Results 2020. Available from: https://www.bva.co.uk/media/3359/avsbva-research.pdf [Accessed 11 December 2020], pp. 5–27.

Boliver, V., Crawford, C., Powell, M. & Craige, W. (2017) Admissions in Context: The use of Contextual Information by Leading Universities. London, The Sutton Trust, pp. 3–36.

BVA (2019) BVA Report on Discrimination in the Veterinary Profession. Available from: https://www.bva.co.uk/media/2991/bva-report-on-discrimination-in-the-veterinary-profession.pdf [Accessed 10 December 2020], pp. 2–10.

Claridge, H., Stone, K. & Ussher, M. (2018) The ethnicity attainment gap among medical and biomedical science students: a qualitative study. BMC Medical Education. 18, 325.

Davis, K. (2013) Orientation: looking at strategies utilized by other health professions for increasing diversity. In: Greenhill, L., Davis, K., Lowrie, P. & Amass, S. (eds.) Navigating Diversity and Inclusion in Veterinary Medicine. West Lafayette: Purdue University, pp. 31–38.

Dortch, D. & Patel, C. (2017) Black undergraduate women and their sense of belonging in STEM at predominantly white institutions. NASPA Journal About Women in Higher Education. 10 (2), 202–215.

Equality Act (2010) Available from: https://www.legislation.gov.uk/ukpga/2010/15/contents [Accessed 14 April 2021].

Gillborn, D., Demack, S., Rollock, N. & Warmington, P. (2017) Moving the goalposts: education policy and 25 years of the Black/White achievement gap. British Educational Research Journal. 43 (5), 845–874.

Greenhill, L.M. & Carmichael, K.P. (2014) Survey of college climate at all 28 US colleges and schools of veterinary medicine: preliminary findings. Journal of Veterinary Medical Education. 41 (2), 111–121.

Gyles, C. (2018) Challenges for the veterinary profession. Canadian Veterinary Journal. 59 (4), 339–342.

Hudson, N., Rhind, S., Moore, L. et al. (2009) Admissions processes at the seven United Kingdom veterinary schools: a review. Veterinary Record. 164 (9), 583–587.

Marsa-Sambola, F. Williams, J., Muldoon, J. et al. (2016) Sociodemographics of pet ownership among adolescents in Great Britain: findings from the HBSC study in England, Scotland, and Wales. Anthrozoös. 29 (4), 559–580.

Miguel, S.F., Burgess, W., Davis, K.S., Reed, D. & Adedokun, O. (2013) The impact of using a veterinary medicine activity book in the classroom on fifth- and sixth-grade students' depictions of veterinarians. Journal of Veterinary Medical Education. 40 (4), 426–430.

Mills, J., Volet, S. & Fozdar, F. (2011) Cultural awareness in veterinary practice: student perceptions. Journal of Veterinary Medical Education. 38 (3), 288–297.

Morrison, N., Machado, M. & Blackburn, C. (2019) Student perspectives on barriers to performance for black and minority ethnic graduate-entry medical students: a qualitative study in a West Midlands medical school. BMJ Open. 9 (11), e03249.

Muhlenberg College Counselling Services. (No date) Cycle of Oppression. Available from: https://www.muhlenberg.edu/media/contentassets/pdf/campuslife/multicultural/lgbt/scan004.pdf [Accessed 21 May 2021].

Price, J. (2010) The effect of instructor race and gender on student persistence in STEM fields. Economics of Education Review. 29 (6), 901–910.

Royal, K., Schoenfeld-Techer, R., Kedrowicz, A., Hardie, E. & Flammer, K. (2015) Measuring factors that influence decisions to become a veterinarian. Research and Development in Medical Education. 4 (1), 23–29.

Sanders, J. & Rose-Adams, J. (2014) Black and minority ethnic student attainment: a survey of research and exploration of the importance of teacher and student expectations. Widening Participation and Lifelong Learning. 16 (2), 5–27.

Strayhorn, T.L. (2009) The absence of African-American men in higher education and veterinary medicine. Journal of Veterinary Medical Education. 36 (4), 351–358.

Tomlin, J., Brodbelt, D. & May, S. (2010) Influences on the decision to study veterinary medicine: variation with sex and background. Veterinary Record. 166 (24), 744–748.

Vet Futures (2015) Taking Charge of our Future: A Vision for the Veterinary Profession for 2030. Available from: https://www.vetfutures.org.uk/resource/vet-futures-report/ [Accessed 27 March 2021].

World Veterinary Association (2011) Media Releases. Available from: https://www.worldvet.org/library.php?item=134&cat=3&view=item [Accessed: 24 May 2021].

Wyness, G. (2017) Rules of the Game: Disadvantaged Students and the University Admissions Process. London, The Sutton Trust, pp. 3–30.

Supplementary material – studies used for original literature review

Claridge, H., Stone, K. & Ussher, M. (2018) The ethnicity attainment gap among medical and biomedical science students: a qualitative study. BMC Medical Education. 18, 325.

Dortch, D. & Patel, C. (2017) Black undergraduate women and their sense of belonging in STEM at predominantly white institutions. NASPA Journal About Women in Higher Education. 10 (2), 202–215.

Greenhill, L.M. & Carmichael, K.P. (2014) Survey of college climate at all 28 US colleges and schools of veterinary medicine: preliminary findings. Journal of Veterinary Medical Education. 41 (2), 111–121.

Miguel, S.F., Burgess, W., Davis, K.S., Reed, D. & Adedokun, O. (2013) The impact of using a veterinary medicine activity book in the classroom on fifth- and sixth-grade students' depictions of veterinarians. Journal of Veterinary Medical Education. 40 (4), 426–430.

Mills, J., Volet, S. & Fozdar, F. (2011) Cultural awareness in veterinary practice: student perceptions. Journal of Veterinary Medical Education. 38 (3), 288–297.

Morrison, N., Machado, M. & Blackburn, C. (2019) Student perspectives on barriers to performance for black and minority ethnic graduate-entry medical students: a qualitative study in a West Midlands medical school. BMJ Open. 9 (11), e03249.

Price, J. (2010) The effect of instructor race and gender on student persistence in STEM fields. Economics of Education Review. 29 (6), 901–910.

Strayhorn, T.L. (2009) The absence of African-American men in higher education and veterinary medicine. Journal of Veterinary Medical Education. 36 (4), 351–358.

Reflective professional development notes. To access hyperlinks to the references, scan the QR code on page 3.