Diversity and Career Progression in Dental School Staff in the UK and Ireland

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In Brief

Diversity of staff in dental schools is low and varies in line with diversity in the local population.

There is a high degree of variability of career trajectories in dental schools with females and racialised minorities less well represented than White males at the highest grade.

Qualitative data are needed to contextualise and explain how inequality is experienced and perceived by staff.

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Abstract

Introduction

Diversity is known to be important but diversity of staff working in dental schools in the UK and Ireland is low in comparison with the dental profession and the overall population.

Aims

To provide a detailed snapshot of the diversity of dental academic staff in 2021 including staff working in academic and clinical roles.

Methods

An online survey was circulated to dental schools by Dental Schools Council. Questions included dates of graduation and key career milestones, demographics and indicators of esteem. Free text questions were also included.

Results

There was a high degree of variability in dental academic careers which made direct comparisons difficult. Neither gender nor race appeared to be associated with a faster career progression. Females and those of racialised minority were less represented at the most senior grades. For those who had completed specialty training, racialised minority staff were far less likely to be working at consultant grade than their White equivalents.

Conclusion

There are differences in career progression between staff in dental schools. The high amount of individual variability makes these difficult to quantify except at the most senior positions. Qualitative information is needed to contextualise the results and provide additional information.

Introduction

The concept of inequality and injustice within the workforce is deep-rooted in British society.[1] Discrimination has long been identified as a factor for injustice, proven by the early equality laws such as the Sex Discrimination Act 1975[2] and the Race Relations Act 1976.[3] A remit of protected characteristics was incorporated into the Equality act 2010.[4] Despite such countermeasures, workplace culture and systemic racism still contribute to a lack of diversity within dental academia.[5]

Identifying what constitutes diversity sets a narrative of what is required from institutions. The Office of National Statistics (ONS) states ethnic diversity refers to the population which is not white.[6] However, the terminologies used to refer to this group have been controversial. Terms such as BAME and BME were constructed by institutions of power to group backgrounds outside that of white. Such “othering” has still isolated vast groups of culture, resulting in many members classed as BAME rejecting the term. The term “racialised minority” recognises the social construct and application of race to people of colour, and the grouping of similar perceived traits.[7] Therefore, we will avoid the term BAME and instead take ownership of the above term.

Campaigns such as *Black Lives Matter* have shone a light on the lived experiences of staff and students alike. Such awareness is useful and is a catalyst for challenging our assumptions and looking to available data for evidence of equity or otherwise within our professions. Evidence from a range of disciplines suggests that systemic inequity and racial bias have contributed to a lack of diversity, resulting in academia being dominated by white staff. For example, the Commission on Race and Ethnic Disparities[7] identified discrepancies in median earnings between White (£31,000) and Black (£28,233) graduates ten years after achieving a first degree. The same report highlighted differences in medical careers with the highest proportion of Consultant and the lowest proportion of Specialty Doctor positions filled by White people. This is also consistent with the Surash-Pearce report[8] which found that there was a 1.53 chance of a White applicant being shortlisted and appointed to a Consultant job compared to applicants of other ethnicities.

Further evidence for a lack of diversity within dental careers is described in a recent report.[9] A loss of diversity was identified at each key transitional stage from secondary school to specialist positions. Additionally, some forms of inequity can be hidden. Even among the earliest career stages in the dental workforce, entry to dental school and completion of dental education, although numbers appear to be inclusive of diversity, some minority groups including Black people and people who experience intersectional discrimination based on gender, race and class remain underrepresented.[9] With increasing seniority reduced diversity is evident[10] with 100% of UK dental deans reported as being White and 73% White Male. Similarly, a report of the dental academic workforce[5] has identified that 78% of professors are male and 91% White.

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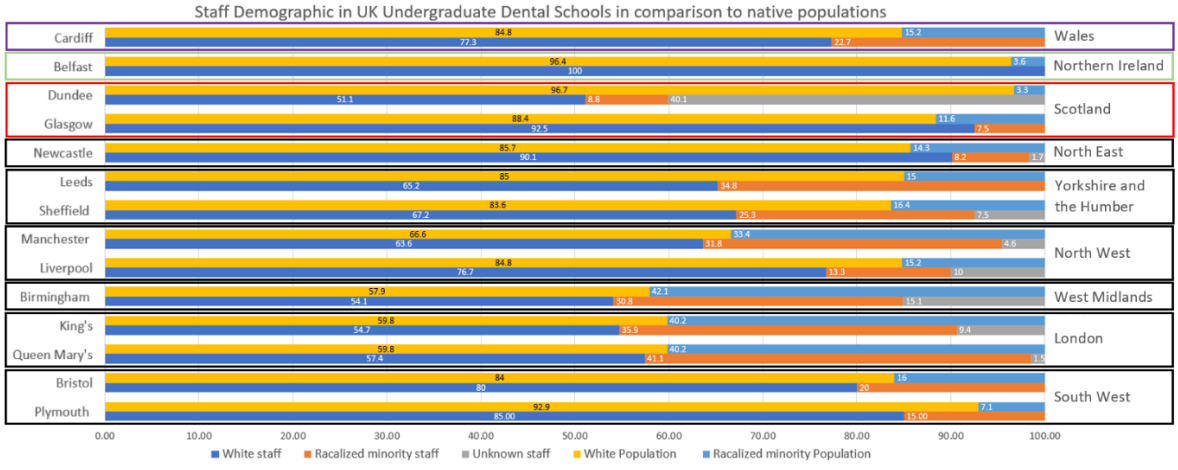
Inequalities according to gender have been documented both in dental careers[5,11] and across academic settings[12–14] with females consistently less well represented in higher grades and more prestigious positions and reporting discrimination on a variety of counts.[13,15] Race and gender are two of many social identities likely to intersect at the level of individual experience to create additional challenges[16] that may not be currently recognised within dental academia.

In order to obtain a snapshot of current diversity within dental academia in the UK we used Freedom of Information requests to ask UK dental schools to disclose the diversity of their clinical and academic staff. Figure 1 illustrates the results and varying degrees of diversity across the country. Universities located in the capital display the highest diversity with roughly just over 50% of staff being White, which is to be expected with London's native diversity. In general, when English universities are compared, diversity of dental academics increase as the city size increases and as universities become more northern; key exceptions to this include Liverpool and Newcastle. Liverpool Dental School, although in a larger city than Leeds, has 76.6% White dental academics compared to 65.2% respectively. According to 2011 Census data[17], Liverpool has particularly low ethnic diversity of only 11.1% analogously categorised as racialised minorities. Similar trends are seen in Newcastle, where 2011 Census data reveal only 14.4% analogously racialised minorities and the highest percentage of White residents (93.6%). In contrast, Birmingham, which is north of the South-West universities, has similar diversity to London. Scottish and Irish dental schools also have low diversity of staff and the local population. Belfast showed the lowest diversity of all the undergraduate dental schools with 0% racialised minority staff; this diversity is mirrored by the high White population of 96%.

Figure *1*: Diversity of clinical+ clinical academic staff in UK undergraduate dental schools, organised from most southernly English school upward, as percentages. Where asked, data were restricted to staff holding full time contracts.



As shown, there were differences across institutions in how many staff withheld information about ethnicity. It is not clear whether this may be due to different

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recording procedures or whether in some institutions staff may feel less comfortable to disclose their ethnic status.

One of the conclusions of the Equality Diversity and Inclusion in Dentistry[9] report is that it is important to create diverse, inclusive, and representative educational environments. The purpose of the present study is to describe current clinical and academic staffing within UK dental schools in terms of diversity and potential differences in career progression between staff primarily of different ethnic backgrounds and genders. The intention is to repeat a similar survey after five years in order to describe changes that may occur during that time.

Methods

Ethical approval for the project was given by Newcastle University ethics committee (5023/2020). An anonymous online survey was targeted to staff working in academic or clinical academic posts either full or part-time at dental schools in the UK and Ireland. The survey was constructed by a study team, who represented a diversity of gender, ethnicity and seniority, in collaboration with Dental Schools Council. Respondents were asked the year in which they achieved an undergraduate degree, postgraduate degree and key career milestones. They were also asked for demographic information, time outside academia and information about academic indicators of esteem. Clinical dental staff were asked to indicate whether they had applied for, started, or completed specialty training and whether they had achieved a Consultant position. Open questions about whether staff had experienced inequality or perceived that it was an issue in their institution were also included and are reported separately.[18] Survey questions are available as supplementary materials.

The survey was distributed by Dental Schools Council to Heads of Dental Schools and Education leads in England and Ireland who were asked to circulate to all staff. All Dental School Heads who attended a meeting at Dental Schools Council in December 2020 agreed to support the survey. The survey was first distributed in January 2021 and reminders sent in February and April 2021.

Data were analysed using Stata version 16 (StataCorp; Texas; USA). Year of first degree graduation was subtracted from year of graduating PhD, securing first academic post, first permanent post, lecturer, senior lecturer and professor or equivalent grades to give number of years to advance to these grades. Tables were compiled of career milestones and length of time to achieve them according to race and gender. Chi Squared and multiple regression analyses were used to test for statistically significant differences in academic position achieved and time taken to achieve career milestones.

Results

A total of 192 responses were received from 20 dental schools in the UK and Ireland. Number of responses per school ranged from 36 (Newcastle University) to 1 (University of Central Lancashire). Sixty-three were qualified to GDP level, 23 specialist and 59 to consultant level. Thirty-nine respondents were not dentally qualified and 8 were qualified as a dental therapist or hygienist. A range of ages were represented and 106 respondents were female, 84 male and 2 preferred not to

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say. In terms of race, 163 respondents were classed as White, 13 Asian, 6 Black and 10 Other. Demographics are summarised in Table 1.

Table 1: Demographics of Survey Respondents

	n	%
Race		
Asian	13	6.8
Black	6	3.1
Other	10	5.3
White	163	84.9
Gender		
Female	106	55.2
Male	84	43.8
Prefer not to say	2	1
Age		
25 – 34	28	14.6
35 – 44	69	35.9
45 – 54	55	28.6
55 – 64	34	17.8
over 64	6	3.1
Seniority		
Clinical Fellow / Research Associate level	17	8.9
Clinical Teacher	19	9.9
Lecturer	49	25.5
Senior Lecturer	52	27.1
Reader	7	3.6
Professor	31	16.1
Other	17	8.8
Career Progression	**Range**	**mean**
years from UG to PG degree	-8 - 27	9.03
years from UG degree to first university position	-11 – 38	8.73
years from UG degree to position at lecturer or equivalent	0 – 37	9.67
years from UG degree to position at senior lecturer or equivalent	6 – 30	16.47
years from UG degree to position at professor or equivalent	14 - 35	27.79

Due to the small numbers of respondents who were not White, race was dichotomised for some questions according to whether respondents were White or from a racialised minority background. Respondents represented a range of different stages on the career ladder. Table 2 shows the percentage of respondents who had achieved each of a series of career milestones, grouped by dichotomised race category and gender.

Table 2: Numbers and percentages of respondents reaching career milestones.

	Uni employ	Permanent	Lecturer	Senior Lecturer	Professor
Male White					
%	65 91.6	57 80.3	58 81.7	38 53.5	21 29.6
Male RM					

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n **%**	12 92.3	11 84.6	11 84.6	7 53.8	0 -
Female White **n** **%**	82 91.1	67 74.4	61 67.7	36 40	10 11.1
Female RM **n** **%**	14 87.5	13 81.3	12 75	9 56.2	1 6.25

*percentages are of each Gender / Race category. RM: racially minoritised

As shown, for this sample there was little difference between males of all racial identities in terms of percentages up to Senior Lecturer grade. However, no racialised minority males were in professorial positions. Females were less likely than males to have permanent positions and were less represented than males in senior positions. Only one person from a minority background in this sample had achieved an appointment to Professor, meaning that overall, of 31 Professors, 21 were White males, 10 White females and only one (female) Professor responded who was not White. Chi squared analyses showed that differences were not statistically significant at Lecturer ($X^2 = 1.109$, $p = 0.775$) or Senior Lecturer ($X^2 = 2.35$, $p = 0.503$) and that they did reach significance at Professor grade ($X^2 = 11.75$, $p = 0.008$).

Table 3 shows average number of years taken from achieving UG degree to securing university employment, lecturer or equivalent grade, senior lecturer or equivalent grade and professor grade. There was a high amount of variation in times to reach key positions, with respondents reporting, for example, starting their first lecturer position between 1 and 37 years after graduation. Time out of dental academia did not differ significantly between different gender and racial groups (data not shown). A series of multiple regression analyses were carried out to check for significant differences between groups. No statistically significant differences were found between any of the racial categories in terms of time taken to reach each milestone (university employment.

Table 3: Average number of years from completion of UG degree to reach career milestones

	Uni Employ--ment		**Lecturer**		**Senior Lecturer**		**Professor**	
	mean years (range)	**n**	**mean years (range)**	**n**	**mean years (range)**	**n**	**mean years (range)**	**n**
Male White	8.98 (-4 – 31)	65	10.8 (1 – 31)	58	18.2 (9 – 28)	26	26 (15 – 35)	21
Male RM	4.75 (-4 – 11)	12	5.45 (0 – 9)	11	15.7 (12 – 22)	7	n/a	n/a
Female White	8.81 (-11 – 38)	82	10.52 (1 – 37)	61	14.6 (6 – 30)	36	23.6 (17 – 29)	10
Female RM	11.42 (2 – 21)	14	13 (5 – 24)	12	17.9 (10 – 23)	9	**	<5

RM: racially minoritised. **redacted due to potentially identifiable information.

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In terms of Specialty Training, 89 people had made at least one application. Of these, 72 were either currently in training or had completed training and 17 were not. Table 4 shows the progression from application to Specialty Training to appointment as a Consultant by race and gender categories. White males were not more likely to have applied for Specialty Training but were the most likely to have been successful at their first attempt (89.3%) and to have achieved Consultant grade (82%). In contrast, racialised minority males had a lower rate of success (42%) and rate of progression to Consultant grade (28.6%). White females had a good success rate in applying for Specialty Training and were most likely to have been accepted on their first attempt (82.4%) but had a lower likelihood than their male counterparts of achieving Consultant grade (45.4%). All of the racialised minority females who had applied for Specialty Training had been accepted, yet they were the least likely to have achieved Consultant grade (22.2%).

Table 4: Specialty Training by Race and Gender

	Male White	Male RM	Female White	Female RM
Applied for Specialty Training	28	7	44	9
Was Accepted for Specialty Training	25 (89.3%)	3 (42%)	34 (77.3%)	9 (100%)
Was Accepted on First Application	20 (80%)	1 (33%)	28 (82.35%)	7 (77.78%)
Qualified to Specialist Level	6	3	12	2
Qualified to Consultant Level	24	4	22	8
Consultant Grade	23 (96%)	2 (50%)	20 (91%)	2 (25%)

*Results of 88 out of the 89 people who had applied for specialist training. One person did not specify their gender and is not included in these figures. RM: racially minoritized

Discussion

The aim of this survey was to outline a ‘starting point’ in terms of diversity and inclusion within dental academia including all academic staff working within dental schools regardless of professional background. This adds to previously available research[5] which has considered data only from dentists in academic settings. It also adds granularity to previously available data by collecting more detailed information about the career journey to date of dental school staff.

In comparison with the GDC register[19] respondents represented considerably less diversity than would be expected. For example, 52% of dentists registered with the GDC are White, compared to 84.9% of respondents to this survey[19]. According to the most recently available report on dental academia, 72% of dental academics were

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White, 25% from Black, Asian or minority backgrounds and 3.9% not recorded.[5] The diversity in our sample fell below these numbers which may have limited our ability to discern differences between groups. The low numbers also made it necessary to dichotomise groups into White and racialised minority categories and we recognise that a disadvantage of this approach is that variations that exist within these broad categories are not accounted for in the data.

The low diversity of the sample may have been influenced by unequal uptake of the survey with proportionally more responses from universities in northern England and particularly Newcastle, where the diversity of the local population is very low. It is however consistent with documentation of a general lack of diversity within the teaching sector. For example, the Educational Institute for Scotland[20] identified low levels of diversity and reported that 43% of racially minoritised teachers feel overlooked for promotion.

The data collated from freedom of information requests and this survey provide essential talking points in relation to career progression. In areas of stronger diversity amongst the dental school workforce it raises the question of how this has been achieved and whether lessons can be learned.

When preparing the survey we expected that staff from racialised minority backgrounds would take longer to reach key career milestones and reach fewer career milestones than their White equivalents. At professorial grade this was starkly the case, with only one of 32 professorships held by somebody from a minority background. This represents 3.8% of people from a racialised minority background who completed the survey, compared to 29.6% of White males and 11.1% of White females. At other grades however, although more White males achieved each career milestone in higher numbers than any other group, differences were less marked and did not reach statistical significance. This appears to be consistent with other published research[7,10,12] which documents differences that appear small overall and may be hidden by considering each protected characteristic individually or combining individuals into overarching groups for analysis. It is notable that females from a racialised minority background were less likely than any other group to achieve each successive career milestone and that only one person from a racialised minority had reached the grade of Professor.

There was high variability between individuals in their career path which made direct comparison difficult. Entry into a dental academic career differed according to first degree achieved and difference in timings of PhD study between those with BDS or other graduate qualifications – some respondents who were qualified as dental technicians or dental therapist or hygienists did not have a first degree. Our questions and analyses did not identify any clear difference in career progression between those with a BDS or other first degree. Time out of academia was also reported for varying lengths of time and differing reasons. Undoubtedly the extent of variation in career pathways made it difficult to pick out specific factors that led to more of an advantage or disadvantage in an academic career. The qualitative arm of this study[18] collected information about the personal experience and perceptions of dental school staff which indicated that many believed that there were significant

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differences in opportunity because of intersectionality, depending not only on gender and race but a host of other characteristics that in some individuals led to marked disadvantage in comparison to their colleagues.

For dentists who applied for Specialty Training there were no clear differences based on race or gender in success rates. There did, however, appear to be a clear difference for those who had completed Specialty Training and were eligible for Consultant grade. Of these staff, 96% of White males and 91% of White females were working as Consultants, compared to 50% of racialised minority males and 25% of racialised minority females. This is consistent with findings within medicine that suggest that White applicants to Consultant posts have a higher chance of success[8] and that a higher proportion of White doctors progress to Consultant grade.[7] The discrepancies in this survey are based on a sample of only 4 male and 8 female ethnic minority dentists qualified to Consultant level and should be explored further on a larger scale.

The results of this survey were limited by a low response rate and low numbers of respondents from minority ethnic background. In terms of race, 163 respondents were classed as White, 13 Asian, 6 Black and 10 Other. The low response rate achieved, despite the support of Dental Schools Council in distributing and promoting the survey to Dental Schools was disappointing. It may indicate that the topic of the survey was not a priority for many staff working at Dental Schools in the UK, or that the survey was not uniformly sent through senior staff to every eligible member of staff. However, this is in keeping with response rates to surveys of dental professionals in the UK[21]. The launch of the survey coincided with an exceptionally demanding time as educational activities were needing to be adjusted in the light of a second national lockdown and it may be that for some, the overwhelming nature of their work at that time was a barrier to completing the survey.

Conclusion

This cross-sectional survey presents a snapshot of ethnic and gender diversity within UK Dental Schools in 2021. In keeping with other research[5,9,10] ethnic diversity within these settings is considerably less than in the dental profession in general to the extent that students of racialised minority backgrounds have only a small chance of seeing themselves represented within dental school faculty.

For those from diverse backgrounds who are in post we found no evidence of slower career progression but a reduced representation at the highest academic and clinical grades. For females of any background, we found higher representation at junior grades but lower at the most senior academic grades. A follow-up survey planned for 2026 will add further evidence about whether this represents an improving picture with current junior staff experiencing equal opportunities who will move into senior positions in a representative and equitable manner. Alternatively, it might represent systemic factors that continue to present barriers to career progression based on characteristics including gender and race and there might be no change in representation at the most senior grades.

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Qualitative information is needed to contextualise the results and provide a more in-depth perspective.

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