

Social background of minority ethnic applicants to medicine and dentistry

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Aim To explore ethnic variations in social background of successful applicants to undergraduate United Kingdom medical and dental schools.

Method Retrospective analyses of University and College Admissions Services data on all students to commence study in pre-clinical medicine and dentistry, during the academic years 1994/5, 1995/6 and 1996/7. Analyses were undertaken for two categories of social class, namely higher (professional and intermediate) and lower (skilled non-manual, skilled manual, partly skilled, and unskilled) social class.

Results Over 15 thousand students were accepted to study medicine and dentistry during the three-year study period, of which 80% were from high social class backgrounds. More medical (80.9%) students were from high social class backgrounds than dental (73.3%) students (OR=1.54, 95% CI=1.39, 1.70). Social class differences were observed, with a greater proportion of higher social class students amongst the white students than amongst the minority ethnic students (OR=1.42, 95% CI=1.30, 1.55). This was more marked in dentistry (OR=1.48, 95% CI=1.22, 1.79) than in medicine (OR=1.35, 95% CI=1.22, 1.49). More students from higher social class backgrounds were observed in medicine than in dentistry amongst the black (OR=1.55, 95% CI=0.59, 4.00), Indian (OR=2.04, 95% CI=1.58, 2.62) and white (OR=1.44, 95% CI=1.26, 1.64) groups.

Conclusions Significant inter-ethnic differences are observed in the social background of students entering medicine and dentistry. Dentistry accepted a greater proportion of students from lower social class backgrounds and from black and minority ethnic groups.

Access to higher education for all sections of society is a central aim of the UK government's education strategy.¹ The educational debate concerning the minority ethnic community over the past three decades has focused upon issues such as, underachievement of pupils from minority ethnic backgrounds,²⁻³ exclusion of young black Caribbean males from the education system⁴ and lack of participation in higher education by minority ethnic groups.⁵

Applications to higher education have shown marked variations between minority ethnic groups and their white counterparts.⁶⁻⁷ Changes to the higher education system such as the introduction of registration fees has raised the concern that fewer students from lower social class groups may apply. However, there is evidence that

although there are a number of reasons why young people enter full time education, the most influential factor is related to their social class background.^{5,8} Therefore, as ethnic groups vary as to their social class, it may be anticipated there may be differences in entry into the higher education system by ethnic group. The desire to improve access to higher education is a laudable aim and the increasing number of minority ethnic groups in medical and dental schools may give weight to the success to such a strategy. Alternatively, the access issue in medicine and dentistry may simply reflect that social class is a more dominant variable than ethnicity per se.

Detailed socio-demographic data on successful applicants to universities and colleges of further education has only recently been collected, and ethnic monitoring was introduced to the data collected by the University and College Admissions Services (UCAS) in 1994. The aim of this study was to explore ethnic variations in social background of successful applicants to undergraduate medical and dental schools, in the UK, for the academic years 1994/5, 1995/6 and 1996/7.

Method

University and College Admissions Services (UCAS) provided data on all students to commence study in pre-clinical medicine and dentistry, during the academic years 1994/5, 1995/6 and 1996/7. Social class was classified as professional, intermediate, skilled non-manual, skilled manual, partly skilled, and unskilled. The number of students by social group is summarized in Table 1. Analyses were undertaken for two categories of social class, namely higher (professional and intermediate) and lower (skilled non-manual, skilled manual, partly skilled, and unskilled) social class. Occasionally the higher category was analyzed separately. Ethnic group followed categories of the 1991 UK census: white, black Caribbean, black African, black other, Indian, Pakistani, Bangladeshi, Chinese, Asian other and other. Due to small numbers in certain groups, the three black communities were combined, as too were Asian other and other. Ethnic group in Table 2 summarizes the number of students to commence study in medicine and dentistry.

Odds Ratios (OR) with 95% confidence intervals (CI) were evaluated and reported to illustrate differences between subgroups of students.

Results

Over fifteen thousand students were accepted to study medicine and dentistry during the three-year study period, of which 80% were from higher social class backgrounds (Table 1). More medical (80.9%) students were from higher social class backgrounds than dental (73.3%) students (OR=1.54, 95% CI=1.39, 1.70). This observation was made for each year of the study period, with only moderate variation amongst the years 1995/6 (OR=1.36, 95% CI=1.14, 1.64) and 1996/7 (OR=1.71, 95% CI=1.44, 2.03).

Over one quarter (26.7%) of all students were from black and minority ethnic groups (Table 2), a larger proportion of which were

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Table 1 Number of students commencing pre-clinical and clinical medicine and dentistry by social class background, 1994/5 to 1996/7.

Social Class ¹	Medicine		Dentistry		Total	
	Number	%	Number	%	Number	%
Professional	5,303	40.6%	822	32.6%	6,125	39.3%
Intermediate	4,961	38.0%	952	37.8%	5,913	37.9%
Skilled non-manual	997	7.6%	220	8.7%	1,217	7.8%
Skilled manual	881	6.7%	254	10.1%	1,135	7.3%
Partly skilled	467	3.6%	144	5.7%	611	3.9%
Unskilled	86	0.7%	28	1.1%	114	0.7%
Not known	374	2.9%	99	3.9%	473	3.0%
Total	13,069	100.0%	2,519	100.0%	15,588	100.0%

¹Social class categories on the University and College Admissions Services applications form.

from dentistry (36.2%) compared with medicine (24.8%) (OR=1.72, 95% CI=1.57, 1.89). Although true for each year of the study period, the higher proportion of black and minority ethnic students within dentistry increased year-on-year between 1994/5 (OR=1.67, 95% CI=1.42, 1.97) and 1996/7 (OR=1.78, 95% CI=1.52, 2.08).

The largest minority ethnic group was Indian (11.4%), the smaller groups being black-African, black-Caribbean and black-other at 0.78%, 0.23% and 0.19% respectively; although combined the number of black students (1.2%) was greater than the number of Bangladeshi students (1.0%).

Social class differences were observed (Figure 1), with a greater proportion of higher social class students amongst the white students than amongst the minority ethnic students (OR=1.42, 95% CI=1.30, 1.55). This was more marked in dentistry (OR=1.48, 95% CI=1.22, 1.79) than in medicine (OR=1.35, 95% CI=1.22, 1.49).

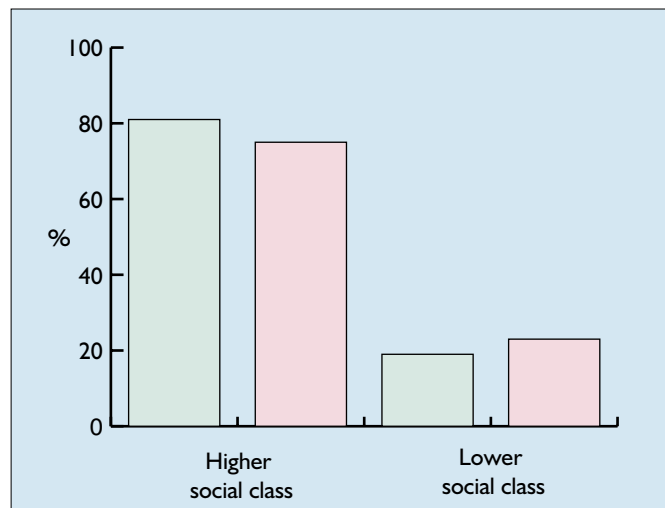


Fig. 1 Proportion of white and minority ethnic medical and dental students by social class, 1994/5 to 1996/7. Green, white; red, minority ethnic.

Examining professional and intermediate social class groups separately, there were both marked similarities and differences by ethnic group (Figure 2). Students from the black communities had a very similar social class profile to that of white students, whilst more students from professional than intermediate backgrounds were observed for the Indian (OR=1.54, 95% CI=1.32, 1.80) and Bangladeshi (OR=1.28, 95% CI=0.79, 2.10) communities than for any other ethnic group. However, those from lower social class backgrounds remained the majority amongst the Bangladeshi students. Thus black, Indian and white students were generally similar, with fewer students from lower social class backgrounds, whereas

Table 2 Number of students commencing pre-clinical medicine and dentistry by ethnic group, 1994/5 to 1996/7.

Ethnic Group	Medicine		Dentistry		Total	
	Number	%	Number	%	Number	%
Bangladeshi	142	1.1%	18	0.7%	160	1.0%
Black	153	1.2%	34	1.3%	187	1.2%
Chinese	218	1.7%	40	1.6%	258	1.7%
Indian	1,318	10.1%	459	18.2%	1,777	11.4%
Other	859	6.6%	199	7.9%	1,058	6.8%
Pakistani	506	3.9%	144	5.7%	650	4.2%
White	9,680	74.1%	1,575	62.5%	11,255	72.2%
Unknown	193	1.5%	50	2.0%	243	1.6%
Total	13,069	100.0%	2,519	100.0%	15,588	100.0%

students from lower social class backgrounds formed the majority amongst the Bangladeshi, Chinese and Pakistani.

The similarity of social class structure between black, Indian and white students differed between medicine and dentistry (Figure 3). More students from higher social class backgrounds were observed in medicine than in dentistry amongst the black (OR=1.55, 95% CI=0.59, 4.00), Indian (OR=2.04, 95% CI=1.58, 2.62) and white (OR=1.44, 95% CI=1.26, 1.64) groups. In contrast, there was less similarity of social class structure amongst Bangladeshi, Chinese and Pakistani students, and this also differed for medicine and dentistry (Figure 4). It was observed that generally more students from higher social class backgrounds studied medicine than dentistry amongst the Bangladeshi (OR=1.73, 95% CI=0.56, 5.42), Chinese (OR=1.64, 95% CI=0.76, 3.52) and Pakistani (OR=1.42, 95% CI=0.94, 2.15) groups. However, these latter differences were not formally significant, possibly due to the smaller number of students in each of these ethnic groups. This was reflected by wide confidence intervals given to the ORs.

Discussion

The results of the study show that approximately 80% of the students accepted to study medicine and dentistry during the study period were from higher social class backgrounds. Dentistry had a better record than medicine in accepting students from lower social class backgrounds and from black and minority ethnic groups. Social class differences between the ethnic groups were observed, with a greater proportion of the white group allocated to a higher

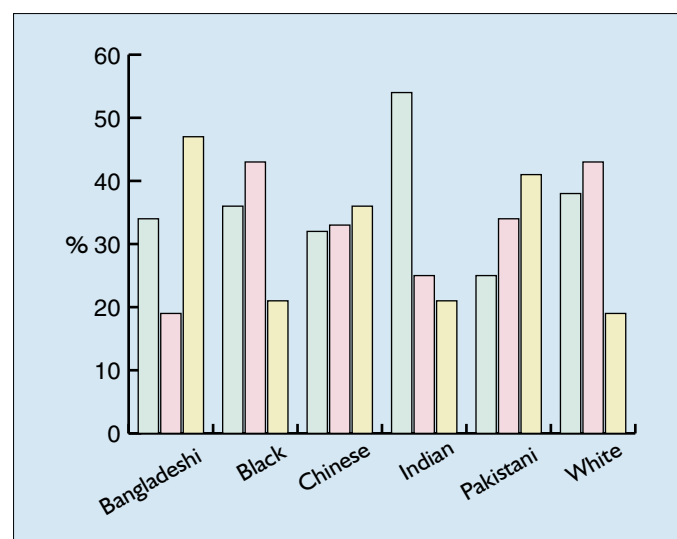


Fig. 2 Proportion of medical and dental students from professional, intermediate and lower social class backgrounds by ethnic group, 1994/5 to 1996/7. Green, professional; red, intermediate; yellow, lower.

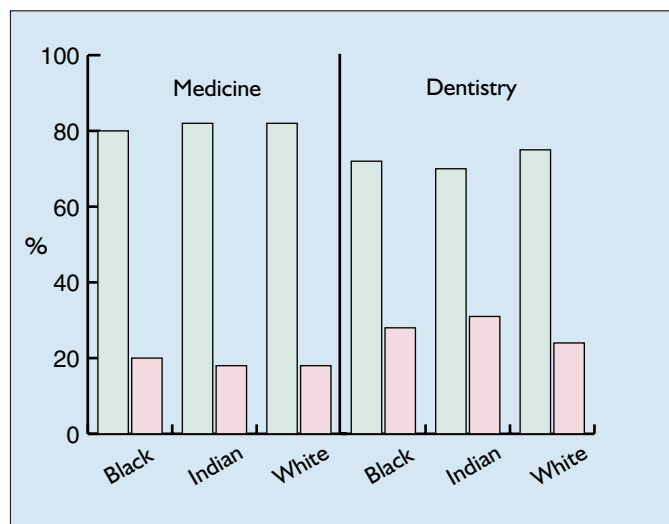


Fig. 3 Proportion of black, Indian and white students by social class backgrounds and clinical subject, 1994/5 to 1996/7. Green, higher social class; red, lower social class.

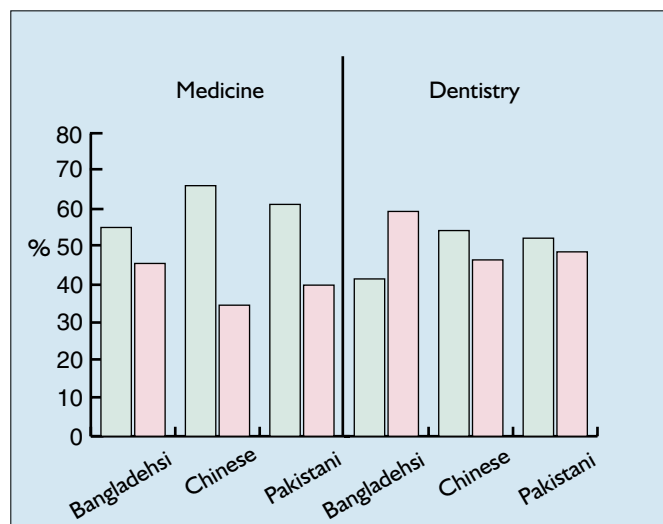


Fig. 4 Proportion of Bangladeshi, Chinese and Pakistani students by social class backgrounds and clinical subject, 1994/5 to 1996/7. Green, higher social class; red, lower social class.

social class group. Dentistry recruited more minority ethnic individuals from a lower social class group than did medicine. The Bangladeshi group was the most likely group to have students from lower social class backgrounds, with the Chinese and Pakistani students also being more likely to come from lower social class backgrounds.

The introduction of ethnic monitoring (according to the 1991 census classification) has helped in observing inter ethnic differences in those who are accepted to study medicine and dentistry. This study's findings show significant inter-ethnic differences in social background amongst black and minority ethnic groups entering medicine and dentistry. These differences could potentially mask inequalities in access and uptake of higher education where black and minority ethnic groups are considered together.

McManus (1998), in a recent investigation of bias among applicants to medical schools, showed that even when academic achievement is taken into account, minority ethnic candidates are less likely to be accepted.⁹ He also noted older applicants and those from lower socio-economic groups are also disadvantaged. These findings add to the ongoing debate on the selection process into medical and dental schools.¹⁰⁻¹² It is naturally desirable that factors such as medical parents, social class, private education, race, and gender do not become significant predictors of shortlisting, or interview success, whether unconsciously determined or otherwise.¹⁰⁻¹² However, it is clear that there is still a strong bias towards higher social class groups, although dental schools are leading on their policy of allowing greater access to groups such as minority ethnic populations and those from a lower social class groups. Despite this it is imperative that, as a profession, we ensure open access to all sections of the community and have clear guidelines for the entry into our higher education programmes.¹²

Conclusions

Significant inter-ethnic differences are observed in the social background of students entering medicine and dentistry. Students from Bangladeshi, Chinese or Pakistani communities tend to have a lower social class background. Monitoring of inequalities of access to medicine and dentistry should not consider black and minority ethnic

groups as a single entity.¹⁴ Therefore, strategies to improve access to higher education based upon minority ethnic group per se maybe inappropriate.

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