Research Square

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Ethnic inequalities in booking dental appointments in England

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Abstract

Objectives

Explore ethnic differences in attempting to book NHS-dental appointments within the previous six and twelve months among adults in England and reasons for not-attempting.

Methods

Secondary data analysis of GP Patient Survey. Logistic regression examined associations between ethnicity and attempted booking adjusting for age, sex, IMD and health conditions. Multinomial logistic regression examined ethnic differences in reported reasons for not attempting to book.

Results

Over 3 million respondents were included in the analysis. Overall, 38.5% and 51% attempted to book an appointment in the past six months and twelve months, respectively. After adjustment, all minority groups had lower odds of attempting to book within six months than White British. At twelve months, most groups had lower odds, while Black Caribbeans had similar odds. Reported reasons for not attempting to book also varied by ethnicity; most minority groups reported 'no need' or perceptions instead of financial constraints but not practice-related reasons to explain not attempting to book.

Conclusion

Ethnic differences were observed at the NHS dental booking stage. These findings should not be interpreted as ethnicity directly determining dental service use. Wider social and service level factors may influence whether different groups attempt to access NHS dental care.

INTRODUCTION

Ethnic inequalities in oral health and dental service use, particularly access to NHS care, remain an important public health issue in the UK (1, 2). Although the NHS is based on universal access, dental care is not used evenly (3). Use is shaped by socioeconomic position, health literacy, language, previous experiences of care, cultural expectations and NHS appointment availability, as well as individual choice (4, 5).

The organisation of NHS dentistry is central to interpreting these patterns (3). Subsidised treatment and capped patient charges reduce some financial barriers, but access still depends on appointment availability. In England, independent dental practices are contracted to deliver a fixed amount of NHS activity and may restrict appointments once this capacity is reached (3).

Evidence on ethnic differences in dental service use is conflicting. Some studies report lower routine attendance among certain minority ethnic groups (MEG), while others suggest similar or higher attendance, particularly in local studies or after socioeconomic circumstances and oral health need are considered (1, 2, 6). This variation challenges deficit-based explanations that assume minority ethnic status directly predicts lower service use (1, 2). Instead, ethnicity is likely to interact with socioeconomic position, perceived need, cultural expectations, local service provision and familiarity with the healthcare system (1, 5).

Previous studies also have important limitations (1). Broad ethnic categories can mask differences within and between groups. Other studies examine general attendance without distinguishing NHS from private care or preventive from problem-based attendance. Consequently, less is known about ethnic differences specifically in NHS dental appointment booking, where inequalities may emerge before care is received through differences in help seeking, difficulty securing an appointment, or both (1, 2). Adjustment for sociodemographic characteristics and long-standing health conditions is also inconsistent, making it difficult to determine whether ethnic differences persist after accounting for these factors (2, 7).

This study therefore examines the association between ethnicity and attempting to book an NHS dental appointment within the previous six and twelve months among adults in England, using data from the GP Patient Survey (GPPS).

METHODS

Study design and sample

This study was based on secondary analysis of the 2015 to 2020 waves of the GP Patient Survey (GPPS), which collects information on patient experience, demographic characteristics and access to health services, including NHS dental appointment booking (8). The study population comprised adults aged 18 years or older who were registered with general practices in England.

The GPPS uses stratified random sampling. Each year, questionnaires are sent to a random sample of adults registered with GP practices across England. Individuals are sampled within practices, allowing coverage across general practices and geographical areas (8). The six waves were pooled to increase the sample size and allow comparisons across ethnic groups. Response rates were 35.7% in 2015, 38.9% in 2016, 37.5% in 2017, 34.1% in 2018, 33.1% in 2019 and 31.7% in 2020 (8).

Data collection and measures

Ipsos collected the data on behalf of NHS England using a standardised questionnaire. Participants were approached by post and invited to respond by postal questionnaire or online. Reminder contacts were used to improve response (8). Data were collected once during each annual survey wave using structured self-reported questionnaire items covering NHS dental appointment booking, demographic characteristics, socioeconomic indicators and health status.

Two binary outcomes assessed whether respondents had attempted to book an NHS dental appointment within the previous six and twelve months. The six-month timeframe represents a common reference point for routine dental attendance. These reflect the GPPS dental access measure and are consistent with NICE guidance that adult recall intervals should be based on individual risk and range from three to twenty-four months (8, 9).

A secondary outcome examined reasons for not attempting to book within each timeframe. Responses were collapsed into five categories. Access or financial constraints included “NHS dental care is too expensive”, “I haven’t had time to visit a dentist” and “I’m on a waiting list for an NHS dentist”. No need included “I no longer have any natural teeth” and “I haven’t needed to visit a dentist”. Practice related reasons included “I stayed with my dentist when they changed from NHS to private” and “I prefer to go to a private dentist”. Perception or emotional reasons included “I don’t like going to the dentist” and “I didn’t think I could get an NHS dentist”. “Another reason” formed the final category. This grouping distinguished structural explanations from perceived need and other explanations.

The main exposure was self-reported ethnicity, categorised as White British, Irish, White Other, Indian, Pakistani, Bangladeshi, Asian Other, Black African, Black Caribbean, Black Other, and Mixed and Other ethnic groups (10). White British was the reference group.

Other explanatory variables were age group, sex, area level socioeconomic status measured using Index of Multiple Deprivation quintiles, and long-standing health conditions (11). Age was categorised as 18 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, 75 to 84 and 85 years or older. Sex was coded as male or female. Index of Multiple Deprivation was included in quintiles, with Q1 representing the most deprived areas and Q5 the least deprived. Long standing health conditions were coded as yes or no. These were included because demographic, socioeconomic and health related factors may influence dental service use (7).

Statistical analysis

Analyses were conducted in Stata/MP 19 using complete case analysis (12). Survey weights and design adjusted standard errors accounted for the sampling design and differential response (8, 13).

Frequencies and percentages summarised respondent characteristics according to whether an NHS dental appointment had been attempted within six and twelve months. Survey adjusted chi squared tests assessed differences across groups.

Separate logistic regression models examined associations between ethnicity and booking attempts within each timeframe. Four sequential models were fitted: unadjusted, adjusted for age and sex, further adjusted for IMD, and fully adjusted by adding long standing health conditions. Odds ratios (OR) and 95% confidence intervals were reported. The tables present the unadjusted and fully adjusted estimates.

Multinomial logistic regression examined whether reasons for not attempting to book differed by ethnicity at both timeframes, with access or financial constraints as the reference outcome. Unadjusted and fully adjusted models used the same covariates. Relative risk ratios (RRR) and 95% confidence intervals were reported.

Human Ethics and Consent to Participate declarations

Not applicable. This study used anonymised secondary GPPS data (8). The dataset contained no personally identifiable information, so additional ethical approval was not required (14).

Furthermore, every participant provided their consent prior to data collection in accordance with the Declaration of Helsinki.

RESULTS

Of the total 3,840,821 respondents for the six waves of GPPS pooled for this study, 3,395,382 were included in the analysis. The 445,439 participants excluded had missing information either on the outcome variable (n = 146,193), the main exposure (n = 34,647), or one of the covariates (n = 264,599, of which 103,481 had missing information on demographic characteristics). Overall, over a third of the participants reported attempting to book an NHS dental appointment within the previous six months, while more than half reported attempting to book within the previous twelve months. Approximately 80% of respondents were White British.

Table 1 presents the sociodemographic and health characteristics of respondents according to whether they had attempted to book an NHS dental appointment within six and twelve months. Statistically significant differences were observed across sociodemographic, health and ethnic groups during both timeframes. A higher proportion of females and respondents with long standing health conditions reported attempts to book compared with their counterparts. The proportion was also higher among those aged 45 to 74 and those in the least deprived IMD groups. White British and Black Caribbeans had the highest proportions, whereas White Others had the lowest.

Table 1
Sociodemographic and health characteristics of respondents by attempt to book an NHS dental appointment in the previous 6 and 12 months

	Tried to book an NHS Dental Appointment in the past					
	6 months (n = 1,346,066)			**12 months (n = 1,754,388)**		
	n	%	*p*-value	n	%	*p*-value
Sex			< 0.001			< 0.001
Male (n = 1,503,088)	550,499			718,171		
Female (n = 1,892,294)	795,567			1,036,217		
Age Group			< 0.001			< 0.001
18–24 (n = 57,010)	19,831	34.07		29,423	50.34	
25–34 (n = 211,828)	76,806	34.78		108,500	49.62	
35–44 (n = 354,293)	137,658	36.94		186,027	50.41	
45–54 (n = 496,467)	205,729	40.47		269,177	53.10	
55–64 (n = 633,911)	264,158	41.08		339,303	52.83	
65–74 (n = 731,904)	301,580	40.81		382,747	51.77	
75–84 (n = 612,988)	240,175	39.04		306,893	49.76	
85+ (n = 296,981)	100,129	33.13		132,318	43.80	
Long Standing Health Conditions			< 0.001			< 0.001
Yes (n = 2,105,074)	845,992	39.76		1,093,009	51.86	
No (n = 1,290,308)	500,074	37.04		661,379	50.01	
IMD Quintile			< 0.001			< 0.001
Q1 (n = 666,145)	249,222	36.68		333,925	49.82	
Q2 (n = 675,304)	261,970	37.33		346,630	50.17	
Q3 (n = 680,216)	273,951	39.09		356,885	51.75	
Q4 (n = 685,209)	281,714	40.01		362,190	52.30	
Q5 (n = 688,508)	279,209	39.53		354,758	51.08	
Ethnicity			< 0.001			< 0.001
White British (n = 2,748,517)	1,133,750	40.73		1,462,412	53.41	
Irish (n = 34,164)	12,021	35.38		15,945	46.88	
White Other (n = 170,584)	48,311	26.21		65,094	35.66	
Indian (n = 98,508)	31,331	29.21		43,999	41.25	
Pakistani (n = 56,438)	22,740	36.96		30,657	50.81	
Bangladeshi (n = 18,799)	6,741	33.65		9,374	47.30	
Asian Other (n68,786)	21.263	28.58		30,095	40.96	
Black African (n = 55,090)	16,115	27.91		23,081	40.47	
Black Caribbean (n = 32,348)	12,582	38.00		17,667	53.84	
Black Other (n = 10,330)	3,785	35.63		5,276	50.01	
Mixed - Other (n = 101,818)	37,427	35.03		50,788	48.04	
Counts are unweighted, percentages are weighted.						
p-values were calculated using survey-adjusted chi-squared tests.						
All associations were statistically significant at $p < 0.001$ for both the 6-month and 12-month outcomes.						
IMD = Index of Multiple Deprivation.						

Table 2 presents the logistic regression results. In the unadjusted models, all MEG had lower odds of attempting to book within six months than White British. At twelve months, the odds were lower for most groups. White Others, Black Africans, Asian Others and Indians had the lowest odds, while Black Caribbeans did not differ from White British. Sequential adjustment for demographic characteristics, socioeconomic indicators and long-standing health conditions did not change the direction of these findings, and ethnic differences persisted in the fully adjusted models.

Table 2
Logistic regression models examining the association between ethnicity and attempting to book an NHS dental appointment in the previous 6 and 12 months

	Tried to book NHS dental appointment in past							
	6 months				**12 months**			
Ethnicity	**Unadjusted model**		**Fully adjusted model**		**Unadjusted model**		**Fully adjusted model**	
	OR	**(95% CI)**	**OR**	**(95% CI)**	**OR**	**(95% CI)**	**OR**	**(95% CI)**
White British	1.00	(Reference)	1.00	(Reference)	1.00	(Reference)	1.00	(Reference)
Irish	0.80***	(0.77–0.82)	0.80***	(0.78–0.83)	0.77***	(0.75–0.79)	0.78***	(0.76–0.81)
White Other	0.52***	(0.51–0.52)	0.52***	(0.51–0.52)	0.48***	(0.48–0.49)	0.46***	(0.45–0.47)
Indian	0.60***	(0.59–0.61)	0.61***	(0.60–0.62)	0.61***	(0.60–0.62)	0.61***	(0.59–0.62)
Pakistani	0.85***	(0.83–0.87)	0.90***	(0.87–0.92)	0.90***	(0.88–0.92)	0.89***	(0.87–0.92)
Bangladeshi	0.74***	(0.71–0.77)	0.77***	(0.74–0.80)	0.78***	(0.75–0.81)	0.77***	(0.74–0.80)
Asian Other	0.58***	(0.57–0.60)	0.58***	(0.57–0.60)	0.61***	(0.59–0.62)	0.58***	(0.57–0.60)
Black African	0.56***	(0.55–0.58)	0.57***	(0.56–0.58)	0.59***	(0.58–0.61)	0.57***	(0.56–0.59)
Black Caribbean	0.89***	(0.86–0.92)	0.88***	(0.85–0.91)	1.02	(0.99–1.05)	0.98	(0.95–1.01)
Black Other	0.81***	(0.76–0.85)	0.80***	(0.76–0.85)	0.87***	(0.83–0.92)	0.84***	(0.79–0.88)
Mixed and Other	0.78***	(0.77–0.80)	0.80***	(0.79–0.82)	0.81***	(0.79–0.82)	0.79***	(0.77–0.80)
*$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$								
The fully adjusted model includes age, sex, Index of Multiple Deprivation quintile and long-standing health conditions.								
Analyses were survey-weighted and restricted to complete cases.								

Compared with White British, the odds of attempting to book within six months were 48% (OR0.52, 95% CI 0.51–0.52), 43% (OR 0.57, 95% CI 0.56–0.58), 42% (OR 0.58, 95% CI 0.57–0.60), 39% (OR 0.61, 95% CI 0.60–0.62) and 23% (OR 0.77, 95% CI 0.74–0.80) lower among White Others, Black Africans, Asian Others, Indian and Bangladeshis, respectively. The odds were also 20% lower among Irish (OR 0.80, 95% CI 0.78–0.83), Black Others (OR 0.80, 95% CI 0.76–0.85) and Mixed and Others (OR 0.80, 95% CI 0.79–0.82); and 12% lower among Black Caribbeans (OR 0.88, 95% CI 0.85–0.91) and 10% lower among Pakistanis (OR 0.90, 95% CI 0.87–0.92).

For the twelve-month outcome, the odds were 54% (OR 0.46, 95% CI 0.45–0.47), 43% (OR 0.57, 95% CI 0.56–0.59), 42% (OR 0.58, 95% CI 0.57–0.60), 39% (OR 0.61, 95% CI 0.59–0.62) and 23% (OR 0.77, 95% CI 0.74–0.80) lower among White Others, Black Africans, Asian Others, Indian and Bangladeshis. The odds were 22% (OR 0.78, 95% CI 0.76–0.81), 21% (OR 0.79, 95% CI 0.77–0.80), 16% (OR 0.84, 95% CI 0.79–0.88) and 11% (OR 0.89, 95% CI 0.87–0.92) lower among Irish, Mixed and Others, Black Others and Pakistanis. Black Caribbeans did not differ from White British (OR 0.98, 95% CI 0.95–1.01).

Among respondents who did not attempt to book, multinomial logistic regression examined whether reported reasons differed by ethnicity. The six- and twelve-month estimates were identical, so one set is presented in Table 3. In the fully adjusted model, most MEG were more likely than White British respondents to report no need rather than access or financial constraints. White Other respondents were less likely to report no need (RRR 0.83, 95% CI 0.81–0.85).

Table 3

Multinomial logistic regression models examining ethnic differences in reasons for not attempting to book an NHS dental appointment in the last 6 and 12 months

	Unadjusted model			Fully adjusted model		
	RRR		**(95% CI)**	**RRR**		**(95% CI)**
No Need						
White British	1.00		(Reference)	1.00		(Reference)
Irish	1.42	***	(1.33–1.51)	1.28	***	(1.19–1.36)
White Other	0.85	***	(0.82–0.87)	0.83	***	(0.81–0.85)
Indian	3.62	***	(3.50–3.77)	3.78	***	(3.62–3.95)
Pakistani	4.85	***	(4.53–5.19)	3.53	***	(3.29–3.79)
Bangladeshi	6.25	***	(5.56–7.04)	4.35	***	(3.85–4.92)
Asian Other	2.49	***	(2.36–2.61)	2.62	***	(2.49–2.77)
Black African	4.76	***	(4.49–5.04)	3.56	***	(3.35–3.78)
Black Caribbean	1.72	***	(1.57–1.88)	1.22	***	(1.12–1.34)
Black Other	2.91	***	(2.52–3.36)	2.11	***	(1.82–2.44)
Mixed and Other	2.02	***	(1.94–2.11)	1.81	***	(1.73–1.89)
Practice- related						
White British	1.00		(Reference)	1.00		(Reference)
Irish	0.55	***	(0.51–0.60)	0.54	***	(0.49–0.58)
White Other	0.14	***	(0.13–0.15)	0.19	***	(0.18–0.19)
Indian	0.36	***	(0.33–0.39)	0.46	***	(0.42–0.49)
Pakistani	0.42	***	(0.37–0.47)	0.62	***	(0.55–0.70)
Bangladeshi	0.29	***	(0.22–0.38)	0.45	***	(0.34–0.58)
Asian Other	0.26	***	(0.24–0.29)	0.33	***	(0.29–0.37)
Black African	0.25	***	(0.22–0.29)	0.34	***	(0.29–0.39)
Black Caribbean	0.52	***	(0.46–0.59)	0.59	***	(0.52–0.67)
Black Other	0.39	***	(0.31–0.50)	0.50	***	(0.39–0.63)
Mixed and Other	0.31	***	(0.29–0.33)	0.41	***	(0.38–0.44)
Perception/Emotional						
White British	1.00		(Reference)	1.00		(Reference)
Irish	1.21	***	(1.13–1.30)	1.20	***	(1.12–1.30)
White Other	0.80	***	(0.77–0.82)	0.69	***	(0.67–0.71)
Indian	1.73	***	(1.65–1.81)	1.59	***	(1.51–1.66)
Pakistani	1.85	***	(1.71–2.01)	1.38	***	(1.30–1.50)
Bangladeshi	1.99	***	(1.73–2.30)	1.42	***	(1.22–1.64)
Asian Other	1.63	***	(1.54–1.73)	1.50	***	(1.42–1.59)
Black African	2.72	***	(2.54–2.90)	1.98	***	(1.85–2.12)
Black Caribbean	1.69	***	(1.54–1.85)	1.29	***	(1.18–1.42)
Black Other	2.02	***	(1.73–2.35)	1.43	***	(1.23–1.67)
Mixed and Other	1.40	***	(1.35–1.47)	1.17	***	(1.11–1.23)

RRR = Relative Risk Ratio. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Reference ethnic group: White British. Reference outcome category: Access/financial constraints.

Fully adjusted model adjusted for age, sex, deprivation and long-standing health conditions.

	Unadjusted model			Fully adjusted model		
	RRR		(95% CI)	RRR		(95% CI)
No Need						
Other						
White British	1.00		(Reference)	1.00		(Reference)
Irish	0.95		(0.82–1.10)	0.96		(0.83–1.11)
White Other	1.08	**	(1.02–1.13)	0.79	***	(0.75–0.84)
Indian	3.68	***	(3.46–3.92)	3.07	***	(2.88–3.29)
Pakistani	5.54	***	(5.05–6.08)	3.09	***	(2.81–3.41)
Bangladeshi	7.29	***	(6.27–8.47)	3.75	***	(3.21–4.38)
Asian Other	3.41	***	(3.15–3.69)	2.75	***	(2.53–2.98)
Black African	4.33	***	(3.97–4.73)	2.48	***	(2.27–2.71)
Black Caribbean	2.39	***	(2.10–2.72)	1.50	***	(1.31–1.71)
Black Other	3.38	***	(2.68–4.26)	1.87	***	(1.48–2.36)
Mixed and Other	2.31	***	(2.16–2.48)	1.59	***	(1.48–1.71)
RRR = Relative Risk Ratio. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$						
Reference ethnic group: White British. Reference outcome category: Access/financial constraints.						
Fully adjusted model adjusted for age, sex, deprivation and long-standing health conditions.						

A similar pattern was observed for perception or emotional reasons. All MEG except White Others were more likely than White British to report these reasons rather than access or financial constraints. White Others were less likely to do so (RRR 0.69, 95% CI 0.67–0.71). Most MEG were also more likely to report other reasons. White Others were less likely (RRR 0.79, 95% CI 0.75–0.84), while Irish did not differ from White British. In contrast, all MEG were less likely than White British respondents to report practice related reasons. Overall, ethnic differences in reasons for not attempting to book varied by outcome category. Full estimates are presented in Table 3.

DISCUSSION

This study found ethnic differences in attempts to book an NHS dental appointment among adults in England. Around two fifths attempted to book within six months and around half within twelve months. Most MEG had lower odds than White British respondents, although Black Caribbean respondents had similar odds in the fully adjusted twelve-month model. Adjustment for age, sex, area level deprivation and long-standing health conditions did not substantially alter the findings. Non booking reasons also varied. Bangladeshi respondents were most likely to report no need rather than access or financial constraints, followed by Indian respondents. White Other respondents were less likely, while all other MEG were more likely, to report no need. All MEG were less likely to report practice related reasons, whereas all except White Other respondents were more likely to report perception or emotional reasons.

Previous studies report different attendance patterns by ethnic group, setting and outcome (1, 2, 6). Most examined attendance or broader access, whereas this study focused on attempted NHS booking, where barriers may arise before care is received (15, 16). Attendance measures may miss people who failed to access care or did not try because they expected difficulty.

Differences from earlier research may reflect outcome measures, ethnic grouping and context (1, 2, 6, 17). Some local studies in diverse London areas report similar or higher attendance, but service availability, ethnic density, community networks and migration histories may differ nationally. Findings may vary with geography, healthcare context and adjustment for socioeconomic and health related factors (1, 2, 7).

These results show variation not fully explained by measured covariates; they do not show that ethnicity causes lower NHS dental service use (18, 19). Ethnicity reflects social, structural, cultural, migration related and service level processes shaping whether care is seen as needed and accessible (5, 16, 17, 19). Access, utilisation and need are related but distinct, so lower booking does not necessarily indicate lower awareness or need (15, 16). Relevant factors include care experiences, migration history, cultural expectations, language, preventive beliefs, income, employment flexibility, transport, finding an NHS dentist, appointment availability and perceived or clinical need (5, 15–17, 20). Persistent differences may reflect unmeasured upstream processes rather than an independent effect of ethnicity. IMD measures area level deprivation but not individual income, wealth, education, occupation, job security or ability to take time off (11). Although NHS dentistry is subsidised, travel, childcare, unpaid time, lost income and inflexible work create practical costs, especially for groups facing socioeconomic disadvantage or limited NHS familiarity (5, 17, 19). NHS organisation also affects access. Independent practices provide a fixed amount of NHS activity and may limit appointments once capacity is reached (3, 21). Lower booking may therefore reflect restricted opportunity or difficulty obtaining care rather than preference or lower clinical need (3, 15, 16, 22).

Reporting no-need requires careful interpretation, as perceived need may differ from professionally assessed clinical need (15, 20). Preventive care occurs before pain or visible problems, so apparent lack of need may reflect previous dental systems, health literacy, costs, cultural expectations or service communication (4, 5, 22).

A great strength of this study resides in having pooled 2015 to 2020 GPPS data, which in turn created a large national sample, allowing separate examination of several ethnic groups. Furthermore, attempted NHS booking identified inequalities that may arise before treatment, while non booking reasons explored possible explanations.

There are, however, some limitations that need to be considered. First, the cross-sectional design cannot establish causality, although the study aimed to describe patterns and whether differences persisted after adjustment (23). Second, self-reported multiple-choice responses may introduce classification bias; for instance, self-reported ethnicity appropriately reflects identity and lived social experience rather than biology, but broad categories may conceal within group differences such as acculturation (17–19). Also, respondents may interpret NHS dental appointment differently where practices provide NHS and private care. Because the study measured attempts rather than successful booking, attendance, treatment or unmet clinical need, it does not measure dental care utilisation.

The findings support ethnicity specific public health approaches because booking patterns and reasons varied between groups (5, 17, 19). Interventions should address specific barriers and local context, since health promotion alone will have limited impact where appointments are unavailable, difficult to book or incompatible with work and caring responsibilities (16, 21, 22). Policy should improve appointment availability, booking flexibility, eligibility and cost information, and support in high need areas (16, 21).

Preventive advice should be culturally responsive and practical, reflecting diets, family routines, language, financial constraints and previous care experiences rather than assuming some groups value oral health less (4, 5). A Primary Health Care Approach requires accessible, acceptable, community-oriented services responsive to local need (24). Monitoring should distinguish perceived need, attempted booking, successful booking, attendance, treatment and unmet need (15, 16).

Future research should collect detailed ethnicity and migration data, including UK residence length, migration generation, main language and English proficiency, to distinguish ethnicity from migration experience, language barriers and NHS familiarity (5, 17). Studies should separate access stages, from attempted booking to treatment and needs being met (15, 16). Linking surveys to local NHS dental supply, including dentist availability, UDA delivery, acceptance of new patients, travel time and regional deprivation, could identify individual barriers and local shortages (21). Qualitative research could explore how respondents interpret no need, too expensive, waiting list or could not get an NHS dentist. Updated post 2020 research should examine whether ethnic differences have widened, narrowed or changed following substantial changes in NHS dental access since the COVID 19 pandemic (21).

CONCLUSION

This study found clear ethnic differences at the NHS dental booking stage among adults in England. Most MEG had lower odds of attempting to book than White British respondents, while Black Caribbean respondents showed similar odds after adjustment.

The findings should not be interpreted as evidence that ethnicity itself determines dental service use. Rather, ethnicity may show wider social, structural, migration-related and service-level influences on NHS dental access. Improving equity in NHS dentistry therefore requires moving beyond broad ethnic comparisons and addressing the wider barriers that shape whether different groups are able and willing to seek care.

Declarations

Competing interests

The authors declare that they have no conflict of interest.

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Author Contribution

EKDA conceived the study, developed the theoretical framework, validated data analysis and provided critical feedback for the manuscript. SG and MMR conducted the data analysis and wrote the original draft. All authors contributed to the final revision and approved the submitted version.

Data availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

AI Disclosure

The authors declare that no generative artificial intelligence (GenAI) or AI-assisted technologies were used in the writing, editing, or generation of any portion of this manuscript.

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