Ethnic differences in referral routes to youth mental health services

Facebook

Study using @CORCcentral data on over 14,500 young people finds ethnic differences in referral to mental health services, e.g. compared to White British young people, Black and mixed-race young people were more than twice as likely to be referred by social care/youth justice than primary care #mentalhealthequality <link to article placeholder>

Twitter

New study @JAACAP finds ethnic differences in referral to youth mental health services @EBPUnit @CORCcentral @pravpatalay #mentalhealthequality <link to article placeholder>

Lay Summary

Data were analysed from over 14,500 young people accessing mental health services in the United Kingdom. Young people from minority ethnic backgrounds were more likely to be referred to mental health services through routes that were less likely to involve voluntary service access. For example, compared to White British young people, Black young people and mixed-race young people were more than twice as likely to be referred through social care/youth justice than primary care. Understanding the reasons for these differences is critical for reducing inequalities and improving pathways to mental health care access in young people. Services should work with local referring organisations to ensure early identification and appropriate intervention for young people from minority ethnic backgrounds.

Clinical Guidance

- Clinicians and service providers should review ethnic differences in referral routes to their service
- More needs to be done to understand why referral and access points to services vary so greatly based on ethnicity
- Clinicians and service providers should consider the language or literacy needs of their local community and ensure their service is culturally representative of and sensitive to their local community

Abstract

Objective: To examine whether there are ethnic differences in referral route to youth mental health services. **Method:** This was an analysis of national routinely collected data from *N* = 14,588 young people (mean(SD) age = 12.28(3.75) years, 54% female; 64% White British) accessing mental health services in the United Kingdom (UK). Ethnicity was self-reported by young people and carers and referral route was recorded by services**. Results:** After accounting for service-level variation and controlling for age, gender, problem type, and contextual factors, ethnicity was significantly associated with referral route. Compared to White British young people, Black young people (OR = 2.90, 95% CI = 2.07-4.06) and mixed-race young people (OR = 2.66, 95% CI = 1.91-3.72) were more than twice as likely to be referred through social care/youth justice than primary care. Compared to White British young people, Asian young people (OR=1.85, 95% CI = 1.34-2.54) were almost twice as likely to be referred through social care/youth justice than primary care. We conducted a sensitivity analysis to examine whether ethnic differences in referral route were attenuated when also accounting for service area deprivation, and the above effects were only partially attenuated. **Conclusion:** There are ethnic differences in referral route to youth mental health services in the UK, and young people from minority ethnic backgrounds are more likely to be referred through routes that are less likely to be voluntary. Understanding the reasons for these differences is critical for reducing inequalities and improving pathways to mental health care access.

Keywords: Adolescent; Psychiatry; Referral; Ethnic Groups; Inequality

Introduction

Mental health services have a legal and professional responsibility to not discriminate against young people on the basis of their ethnicity (e.g., The United Nations Convention on the Rights of the Child 1989, Article 2). Early intervention is an important indicator of prognosis, and young people who receive treatment earlier have better outcomes than young people for whom treatment is delayed.[1,2] Only one in five young people with a diagnosable mental health problem accesses mental health services in the United Kingdom (UK)[3] and it is important to examine whether there are ethnic differences in how young people access mental health services (i.e., youth mental health referral routes).

Examining ethnic differences in youth mental health referral routes is complex given the number of service-level and individual-level factors related to mental health, help-seeking behaviour, and service provision that need to be considered.[4-6] Referral routes may differ between services and therefore, analysis needs to account for the fact that data are nested within services. Referral route may be affected by socio-economic deprivation as areas of higher deprivation may have higher levels of minority ethnic groups and more young people with mental health problems.[7-9] Referral route may be affected by a young person's age, gender, problem type, and contextual factors, which are known to covary and to be associated with different referral routes. For example, boys may be more likely than girls to be identified as requiring support for behavioral difficulties in schools.[10] To the best of our knowledge, no study has examined ethnic differences in youth mental health referral route accounting for service-level variation and controlling for relevant covariates such as gender, age, problem type, contextual factors, and deprivation.

In many international healthcare models, referral to specialist mental health services is contingent on referral from primary healthcare agencies, such as General Practitioners.[11,12] In contrast, referral from social care or youth justice services is more likely to be the result of

concerns about caregivers' ability to care for the young person or concerns about the young person's risk of harm to themselves or others.

To ensure that youth mental health services are equally accessible to young people from different ethnic backgrounds and thus to identify areas of unmet need and inform the planning of service provision, there is a need for evidence about whether there are ethnic differences in youth mental health referral routes. Previous meta-analyses (across all ages) found that Black patients were more likely to be referred to specialist mental health services through compulsory admission or through the criminal justice system than White patients.[4,13] Notwithstanding the aforementioned limitations, a number of studies suggest that young people from minority ethnic backgrounds may be less likely to be referred to youth mental health services through primary care agencies than White young people.[14-24] Moreover, it is known that minority ethnic groups experience greater socio-economic disadvantage compared to White majority groups,[25] which may result in different mental health referral routes. For example, a recent policy review of the criminal justice system in the UK found that the proportion of ethnic minority young people in custody has increased by 16% over the past decade.[26] Correspondingly, young people from minority ethnic groups may be more likely to be referred to youth mental health services from justice agencies. Therefore, it is important to examine whether ethnic differences in referral route are attenuated when also accounting for socio-economic disadvantage in addition to other covariates described above.

The aim of the present study was to examine ethnic differences in youth mental health referral route using multilevel multinomial regression analysis controlling for age, gender, problem type, and contextual factors. We also conducted a supplementary sensitivity analysis to examine whether ethnic differences in referral route were attenuated when also accounting for service area deprivation. We hypothesised that young people from minority ethnic groups would be less likely to be referred to mental health services through primary care agencies

and more likely to be referred through other agencies such as social care/ youth justice, compared to White British majority young people.

Method

Participants and procedure

The data corpus was collected from youth mental health services participating in a programme to implement evidence-based practice covering 60% of the population of young people in England.[18,27] Services included in this programme were similar to other services in England and the programme has subsequently been rolled out to all services in the country.[28] Young people aged ≤ 25 years with complete case characteristics (i.e., problem type and contextual factors) were included in the analysis if they had no missing data on key demographic characteristics (i.e., age, gender, and ethnicity; n = 772 excluded) and referral route (n = 6,138 excluded), resulting in a final dataset of N = 14,588 young people (mean (SD) age = 12.28 (3.75) years; interquartile range = 10 years, 13 years, 15 years) from 74 youth mental health services. Young people with complete data on referral route were 0.22 years younger (mean (SD) 95% CI = 12.28 (3.75) 12.22-12.34) than those without complete data on referral route (mean (SD) 95% CI = 12.50 (3.67) 12.41-12.59) but there were no differences in gender ($\chi2(1) = 2.91$, $p > .05$) or proportion of young people from minority ethnic groups ($\chi2(1) = 1.63$, $p > .05$). Detailed demographic descriptives are shown in Table 1.

[INSERT TABLE 1 HERE]

Ethical considerations

The present analysis involved secondary analysis of anonymised routinely collected data and therefore, ethical review was not required.[29]

Measures

Demographic characteristics. Age, gender, and ethnicity were recorded by services as part of routine data recording. Ethnicity was captured using the categories from the 2001 Census and was generally based on self-report by the carer or the young person. These were grouped for analysis as follows:[18] White British (as the ethnic majority group), White Other (including Irish and Other White background), mixed-race (including Mixed White and Black Caribbean, Mixed White and Black African, Mixed White and Asian, and any other mixed background), Asian (including Indian, Pakistani, Bangladeshi, and Other), Black or Black British (including Caribbean, African, and Other), other ethnic groups (including Chinese and Other), and not stated.

Problem type. Problem type was identified using an algorithm[30,31] based on 30 items of the clinician-rated Current View (CV) questionnaire.[32] The algorithm categorises young people into 17 mutually exclusive needs based groups, however to avoid including under-powered groups in the main analysis, we used seven groups and categorised those occurring with a frequency of ≤ 5% as "Other" problems (i.e., "Bipolar Disorder", "Depression", "Generalized Anxiety Problems", "Eating Disorders", "Obsessive Compulsive Disorder", "Psychosis", "Autism", "Co-occurring Behavioural and Emotional Difficulties", "Post Traumatic Stress Disorder", and "Social Anxiety Disorder").

Contextual factors. Contextual factors were identified using four items of the CV questionnaire.[32] Clinicians rated the extent to which young people were experiencing problems in four contextual areas: "Home", "School, work or training", "Community", and "Service engagement" (coded 1 for "moderate" or "severe" and 0 for "mild" or not applicable).

Referral route. Referral route was recorded by services using 33 indicators which were grouped into eight study variables for the present analysis as shown in Table 2.

[INSERT TABLE 2 HERE]

Service area deprivation. To examine whether ethnic differences in referral route were attenuated when also accounting for service area deprivation, we performed a sensitivity analysis using service area deprivation. We matched data on services to the normalised Income Deprivation Affecting Children Index (IDACI) to generate an average score based on the Lower Layer Super Output Area in each service's catchment area.[33] Scores were then transformed into bands using the following established categories:[34] < 0.2 = band 0 (least deprived), 0.2-0.249 = band 1, 0.25-0.299 = band 2, and 0.3-0.4 = band 3 (most deprived); there were no IDACI scores > 0.4.

There are two widely used approaches to assessing socio-economic disadvantage in young people in the UK: individual-level indicators, such as family income or whether the child is eligible for free school meals, which is determined by the parents' gross income and whether they receive state aid; and area-level indicators, such as the IDACI, which is a widely used measure of deprivation in policy research.[35] Evidence comparing indicators of deprivation suggest that the IDACI correctly identified 70% of young people experiencing educational disadvantage and eligibility for free school meals correctly identified 80%.[36] There were no individual-level indicators of socio-economic disadvantage (e.g., family income, free school meal eligibility) available in the data corpus. Although IDACI may be somewhat less accurate than individual-level indicators, the primary aim of the present research was to examine ethnic differences in youth mental health referral routes and thus to identify areas of unmet need and inform the planning of service provision, and the approach of matching services to area-level deprivation indicators has been used in previous studies.[37,38] Therefore, our primary analysis was to examine differences in referral route across different ethnic groups, and we then additionally conducted a sensitivity analysis to

examine the extent to which findings were attenuated when also taking into account service area deprivation.

Statistical analysis

To examine ethnic differences in youth mental health referral routes, accounting for the nesting of individuals in services and controlling for age, gender, problem type, and contextual factors, multilevel multinomial logistic regressions were conducted in STATA 14.[39] Multilevel modelling was appropriate given the clustered structure of the data, where young people were clustered within youth mental health services. The use of a multilevel modelling approach allows us to model and control for service-level variation, as young people from the same service may be more similar to each other than to young people from different services, for example because of similarities in geographic location and therapists seen.[40] Two preparatory models were estimated. In Model 0 (null model) the variance explained in referral route at the service-level was examined and no predictors were added. The intraclass correlation coefficient was 14% indicating that there was significant service-level variation in referral route and confirming that multilevel modelling was the appropriate statistical approach. In Model 1, demographic characteristics, problem type, and contextual factors were added: female; age coded 0-5 years and 6-12 years (where 13-25 years was selected as the reference category as it was the largest group); problem type using the seven problem groups (where the "Self-management advice" group, referring to young people for whom clinicians rated a maximum of 1 problem as moderate, was selected as the reference category as it was the largest group), and the four contextual problems (which were individually coded as young people's contextual factors were not mutually exclusive). The likelihood ratio test was used to compare successive models, which were significant and all variables were therefore retained in the final model. Ethnicity was added to the final model (where the White British group was selected as the reference category as it was the largest

group). A sensitivity analysis was conducted to examine whether ethnic differences in referral route were attenuated when also accounting for service area deprivation.

Results

Analyses are shown in Table 3. The likelihood ratio test was significant for the final model compared to Model 1: $\chi^2(6) = 373.91$, $p < .001$. Compared to White British young people, White non-British young people were more likely to be referred through social care/ youth justice relative to primary care. Compared to White British young people, Black young people were more likely to be referred through education, mental health services, social care/ youth justice, and other routes—and less likely to be self-referred—relative to primary care. Compared to White British young people, Asian young people were more likely to be referred through education, social care/ youth justice, and other routes—and less likely through mental health services or to be self-referred—relative to primary care. Compared to White British young people, young people with mixed-race backgrounds were more likely to be referred through education, social care/ youth justice, and other routes relative to primary care. Compared to White British young people, young people from other ethnic backgrounds were less likely to be referred through education, child health, mental health services, social care/ youth justice, and self-referral relative to primary care. Finally, compared to White British young people, young people with unstated ethnic backgrounds were less likely to be referred through child health, mental health, and other routes relative to primary care.

In the sensitivity analysis, we added service area deprivation to the supplementary model (as shown in the Supplementary material) using IDACI bands, where band 0 representing the lowest level of deprivation was selected as the reference group to facilitate interpretation. The likelihood ratio test was significant for the supplementary model compared to the final model: $\chi^2(3) = 360.81$, $p < .001$, indicating a significant improvement to the model when accounting for area-level socio-economic deprivation. Overall, there were

few differences in the pattern of findings. Regarding the effects on social care/ youth justice, the effect of White non-British was no longer significant, and the parameter estimates for the other effects of minority ethnic background and social care/ youth justice were smaller when service area deprivation was included in the model, suggesting that socio-economic disadvantage may play an important role in the relationship between ethnicity and youth mental health referral by these routes. In addition, the effects of Black and mental health and other referral routes, and unstated ethnic backgrounds and other referral routes, were no longer significant, again suggesting that ethnic differences in referral routes for these associations were accounted for by service area deprivation in these data. Finally, when controlling for service area deprivation, two additional effects were significant: compared to White British young people, Black young people were more likely to be referred through child health relative to primary care, and Asian young people were more likely to be referred through Accident & Emergency (A & E) relative to primary care. This raises the possibility that the relationship between ethnicity and youth mental health referral for these groups by child health and A & E may be important for certain levels of socio-economic disadvantage where available primary health care resources may be more limited.

[INSERT TABLE 3 HERE]

Discussion

The aim of the present study was to examine ethnic differences in youth mental health referral route using multilevel multinomial regression analysis controlling for age, gender, problem type, and contextual factors. In line with the findings of previous studies from the adult and youth mental health literature (see Introduction), we found that young people from minority ethnic backgrounds were less likely to be referred through primary care agencies than White British young people. One of the starkest patterns was for social care and youth justice routes: compared to White British young people, young people from mixed-race,

Asian, or Black backgrounds were more likely to be referred through social care and youth justice relative to primary care, and this effect was stable when additionally controlling for service area deprivation. The findings of the present study suggest that young people from minority ethnic backgrounds were less likely to be referred to mental health services through primary care agencies, and more likely to be referred through different routes such as social care/youth justice, compared to White British majority young people. When additionally controlling for service area deprivation in the sensitivity analysis, there were few differences in the pattern of findings. The parameter estimates for the effects of minority ethnic background and social care/ youth justice were smaller when service area deprivation was included in the model, suggesting that socio-economic disadvantage may play an important role in the relationship between ethnicity and youth mental health referral by these routes.

In many international healthcare models, referral to specialist mental health services from primary healthcare agencies, such as General Practitioners, may result from voluntary referral due to concerns about the young person's behavior or emotional state.[11,12] In contrast, referral from social care or youth justice services may be more likely to be compulsory, resulting from concerns about the young person's safety, risk of harm, or care. More enduring difficulties and worse outcomes may be associated with referral to mental health services through compulsory routes, which may be attributable to many broader societal and systemic forces that result in youth from different social groups coming to the attention of mental health services through different channels.[41,42]

The present study is an important contribution to the literature on ethnic differences in youth mental health referral route because we controlled for a number of factors known to be related to mental health problem type, help-seeking behaviour, and service provision:[4-6] service-level variation, age, gender, problem type, and contextual factors. We also performed a sensitivity analysis of the effect of ethnicity on referral route when also controlling for

service area deprivation. To the best of our knowledge, the present study is the first to examine ethnic differences in youth mental health referral route accounting for service-level variation using multilevel multinomial regression analysis, controlling for deprivation, age, gender, problem type, and contextual factors.

Notwithstanding, limitations should be considered when interpreting the findings of the present study. The data were routinely collected from youth mental health services and there may have been differences in how services collected and coded the data. The data corpus was collected from one country and therefore, findings may not generalize to other countries, particularly as different countries may have different referral routes. There was a wide age range in the present sample and future research should examine age differences in referral route. Information on young people's family income was not available, meaning we were not able to examine individual-level deprivation (also see Measures). A more precise measure of socio-economic status may have ameliorated some of the effects of ethnicity. Services from the most deprived areas may have been underrepresented in our dataset as there were no IDACI scores in the highest bands.

Our study cannot explain reasons for why these differences in youth mental health referral route were found. Despite the number of factors we controlled for, it may still be possible that other variables not collected in the present data corpus explain differences in ethnicity and referral route (also see the Introduction). For instance, there is some evidence for differential aetiology of psychopathology across ethnic groups, however the causes of these differences are largely unexplained and there is some evidence that some of these differences might stem from biases in diagnosing.[4-6] It is possible that there are different developmental trajectories of psychopathology in young people from different ethnic backgrounds; it is also possible that behaviours of young people experiencing mental health difficulties, from different ethnic backgrounds, are interpreted in a different way by peers,

carers, teachers, and professionals in healthcare and social care/ youth justice services. Differences in attitudes towards and knowledge about mental health difficulties and options for help-seeking across ethnic groups are also possible explanations, especially as individuals from minority ethnic groups may be disproportionally deterred from seeking help by stigma.[43] Future research would need to examine these questions to provide an empirical answer. What is clear from our results is that understanding reasons for these differences in youth mental health referral route is a question that needs systematic investigation and intervention as the results are incongruent with the aspirations of equality of care.

The findings of the present study and the extant literature suggest that young people from minority ethnic backgrounds may be more likely to access youth mental health services through different referral routes than White majority young people, such as social care/ youth justice. National and local policy and practice guidelines should prioritise engagement between youth mental health services and local referring organisations to ensure early identification and appropriate intervention for young people from minority ethnic backgrounds.

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Table 1.

Descriptive statistics of the present sample.

Variables	Frequency, % (*n*) *N* = 14,588
Demographic characteristics	
Male	46% (6,683)
Female	54% (7,905)
0-5 years	6% (853)
6-12 years	37% (5,357)
13-25 years	57% (8,378)
Problem type	
Self-management advice	33% (4,857)
Behavioral problems	5% (784)
Unclassified problems	16% (2,314)
Severe problems	9% (1,355)
Emotional problems	9% (1,290)
Self-harm	5% (735)
Other problems	22% (3,253)
Contextual factors	
Home life	33% (4,461)
School	32% (4,361)
Community	12% (1,680)
Engagement	5% (639)
Ethnicity	
White British	64% (9,304)
White Other	4% (518)
Mixed-race	4% (597)
Asian	6% (821)
Black	4% (650)
Other ethnicity	3% (399)
Not stated	16% (2,299)
Socio-economic deprivation	
IDACI band 0	32% (4,662)
IDACI band 1	35% (5,118)
IDACI band 2	11% (1,667)
IDACI band 3	22% (3,141)

Note. IDACI = Income Deprivation Affecting Children. Frequency of problem type and ethnicity do not sum to 100% due to rounding.

Table 2.

Grouping of referral route indicators into study variables.

Study variables (numbered) and indicators	Frequency, % (*n*) *N* = 14,588
1. Primary care	50% (7,272)
General Practitioner	
Health Visitor	
Other Primary Health Care	
2. Education	10% (1,387)
Education services	
3. Child health	
School Nurse	6% (944)
Hospital-based Paediatrics	
Community-based Paediatrics	
4. Accident & Emergency (A&E)	5% (730)
A&E Department	
Other secondary care specialty	
5. Mental health	9% (1,254)
Other Independent Sector Mental Health Services	
Voluntary Sector	
Temporary transfer from another Mental Health NHS Trust	
Permanent transfer from another Mental Health NHS Trust	
Community Mental Health Team (Adult Mental Health)	
Community Mental Health Team (Learning Disabilities)	
Community Mental Health Team (Child and Adolescent Mental Health)	
Inpatient Service (Adult Mental Health)	
Inpatient Service (Child and Adolescent Mental Health)	
Transfer by graduation from Child and Adolescent Mental Health Services to Adult Mental Health Services	
Transfer by graduation from Adult Mental Health Services to Older Peoples Mental Health Services	
6. Social care/ youth justice	5% (747)
Social Services	
Police	
Courts	
Probation Service	
Prison	
Court Liaison and Diversion Service	
7. Self-referral	5% (744)
Self	
Carer	
NHS Direct	
8. Other referral pathway	10% (1,510)
Employer	
Out of Area Agency	
Drug Action Team/Drug Misuse Agency	
Other service or agency	

Table 3.

Multilevel multinomial regression analysis with age, gender, problem type, contextual factors, and ethnicity predicting referral route.

	Education vs. primary care			Child health vs. primary care			A&E vs. primary care			Mental health vs. primary care			Social care/ youth justice vs. primary care			Other vs. primary care			Self-referral vs. primary care		
	OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI		OR	95% CI	
Demographics																					
Female vs. male	**0.73**	0.64	0.84	**0.84**	0.71	0.99	**1.23**	1.02	1.49	0.93	0.81	1.08	**0.79**	0.66	0.94	0.96	0.85	1.10	0.94	0.79	1.12
6-12 vs. 13-25 years	**2.02**	1.75	2.34	**2.19**	1.84	2.62	**0.52**	0.42	0.65	1.00	0.86	1.17	**1.31**	1.08	1.58	**1.33**	1.15	1.52	**0.77**	0.64	0.93
0-5 vs. 13-25 years	**1.45**	1.07	1.96	**2.75**	2.02	3.73	0.64	0.40	1.01	1.25	0.91	1.72	**1.71**	1.22	2.39	**2.48**	1.96	3.15	1.05	0.71	1.54
Problem type																					
Behavioral vs. SM	1.18	0.90	1.54	**1.60**	1.17	2.18	1.07	0.67	1.71	1.37	1.00	1.87	0.83	0.54	1.29	0.88	0.65	1.18	1.00	0.64	1.54
Unclassified vs. SM	1.02	0.84	1.25	**1.40**	1.11	1.78	1.28	0.98	1.67	**1.27**	1.02	1.59	**1.57**	1.22	2.03	1.08	0.89	1.30	**1.46**	1.13	1.89
Severe vs. SM	0.90	0.70	1.17	**1.41**	1.05	1.89	1.19	0.86	1.65	**1.43**	1.11	1.85	1.28	0.93	1.76	1.01	0.80	1.28	0.99	0.70	1.40
Emotional vs. SM	**0.43**	0.32	0.57	**0.62**	0.44	0.87	**0.32**	0.21	0.49	**0.75**	0.57	0.98	**0.28**	0.17	0.46	**0.35**	0.26	0.47	1.19	0.89	1.57
Self-harm vs. SM	0.81	0.56	1.17	0.84	0.52	1.35	**2.71**	2.04	3.61	**1.67**	1.24	2.24	0.68	0.40	1.16	0.78	0.56	1.09	0.66	0.41	1.07
Other vs. SM	**0.76**	0.63	0.92	0.85	0.67	1.08	**0.68**	0.53	0.88	0.96	0.79	1.18	1.09	0.85	1.39	**0.82**	0.68	0.97	1.21	0.96	1.52
Contextual factors																					
Home life	1.02	0.87	1.19	1.09	0.90	1.31	0.88	0.71	1.08	**1.18**	1.01	1.39	**1.70**	1.40	2.08	1.15	0.99	1.34	1.06	0.87	1.28
School	**1.79**	1.53	2.09	1.06	0.87	1.28	0.86	0.69	1.08	**1.34**	1.14	1.58	0.85	0.68	1.05	0.98	0.84	1.15	1.17	0.96	1.43
Community	0.85	0.68	1.07	1.23	0.94	1.59	1.29	0.95	1.73	**1.31**	1.06	1.61	1.27	0.97	1.67	**1.31**	1.06	1.61	0.91	0.68	1.20
Engagement	1.01	0.73	1.39	0.74	0.48	1.15	1.36	0.92	2.01	1.29	0.97	1.73	**1.98**	1.44	2.72	**1.57**	1.20	2.05	0.83	0.53	1.30
Ethnicity																					
White other vs. WB	1.19	0.83	1.70	1.34	0.92	1.95	0.82	0.49	1.37	0.66	0.43	1.00	**1.61**	1.06	2.46	1.02	0.71	1.45	0.82	0.52	1.32
Mixed vs. WB	**1.62**	1.19	2.21	0.96	0.64	1.45	0.93	0.59	1.49	0.82	0.56	1.18	**2.66**	1.91	3.72	**1.76**	1.32	2.34	1.07	0.71	1.61
Asian vs. WB	**1.38**	1.04	1.82	0.85	0.59	1.21	0.93	0.64	1.37	**0.39**	0.26	0.58	**1.85**	1.34	2.54	**2.66**	2.10	3.36	**0.34**	0.20	0.58
Black vs. WB	**2.17**	1.63	2.90	1.30	0.90	1.88	0.86	0.52	1.41	**0.52**	0.33	0.82	**2.90**	2.07	4.06	**1.52**	1.12	2.06	**0.39**	0.21	0.76
Other vs. WB	**0.45**	0.28	0.72	**0.32**	0.18	0.58	0.86	0.53	1.38	**0.26**	0.15	0.45	**0.50**	0.27	0.90	1.32	0.96	1.79	**0.24**	0.12	0.51
Not stated vs. WB	0.96	0.79	1.17	**0.60**	0.47	0.78	0.93	0.73	1.19	**0.66**	0.53	0.81	0.85	0.65	1.12	**0.80**	0.66	0.98	0.80	0.64	1.02

Note. N = 14,588. OR = Odds Ratio. CI = Confidence Interval. SM = Self-management advice. WB = White British. A&E = Accident & Emergency. Effects in bold are significant at least at the $p < .05$ level.