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The Black diaspora and health inequalities in the US and England: does where you go and how you get there make a difference?

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Abstract The relatively poor health of Black American people in the US and Black Caribbean people in England is a consistent finding in the health inequalities literature. Indeed, there are many similarities between the health, social, economic and demographic profiles of these two groups. However, there is evidence that Caribbean people in the US are faring considerably better. This paper explores differences in the social and economic position of Black American, Black Caribbean and white people in the US and Black Caribbean and white people in England, how these relate to ethnic inequalities in health, and may be underpinned by differences in patterns and contexts of migration. We use similar surveys from the US and England to explore these questions. The US data were drawn from the National Survey of American Life and the English data were drawn from the Health Survey for England and a follow up study. Findings show the advantaged health position of Caribbean American people in comparison with both Caribbean people in England and Black American people. Multivariate analyses indicate that these differences, and the differences in health between Black and white people in the two countries, are a consequence of social and economic inequalities.

Keywords: ethnicity, race, Caribbean, Black, inequalities in health, international comparison

Introduction

Differences in health across ethnic groups, in terms of both morbidity and mortality, are a dominant feature of developed countries and of great significance to population health. They have been repeatedly documented in England (Marmot *et al.* 1984, Harding and Maxwell 1997, Nazroo 2001, Bhopal *et al.* 1999, Erens *et al.* 2001), the US (Department of Health and Human Services 1985, Rogers 1992, Davey Smith *et al.* 1998, Pamuk *et al.* 1998, Williams 2001), Canada (Sheth *et al.* 1999, Wu *et al.* 2003, Wu and Schimmele 2005), Latin America (Pan American Health Organization 2001), South Africa (Sidiropoulos *et al.* 1997), Australia (McLennan and Madden 1999) and elsewhere (Polednak 1989).

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The patterning of these inequalities is complex; nevertheless a consistent finding is the poorer health profile of Black Americans in the US and Black Caribbean people in England across a range of outcomes, most notably hypertension, diabetes and mental illness, as well as broad measures of general health.[1] Given these inequalities, much research activity has focused on a comparison of Black and white populations within these two locations, with the aim of understanding the factors that underlie the greater risk of disease and poor health among Black populations. Here the findings are contested, with some emphasising the genetic underpinning of such inequalities (Wild and McKeigue 1997) and others arguing that ethnic inequalities in health are predominantly determined by social and economic inequalities (Nazroo 1998, 2003). Regardless of the contribution of genetic factors, it is clear that there is a socioeconomic patterning of the health of Black populations, with higher rates of disease and poorer health related to both poorer economic positions and exposure to racial harassment and discrimination (Krieger *et al.* 1993, Williams *et al.* 1994, Davey Smith *et al.* 1998, Williams 1999, Nazroo 1998, Krieger 2000, Nazroo 2001, Karlsen and Nazroo 2002, Harris *et al.* 2006a and 2006b). And once such factors are adjusted for in statistical models, differences in health between Black and white populations diminish (Davey Smith *et al.* 1998, Nazroo 1998 and 2003, Harris *et al.* 2006a). The implication is that socioeconomic factors at least interact (in both a causal and statistical sense) with genetic (and other) influences and, therefore, a greater understanding of socioeconomic inequalities and their origins will both increase our understanding of causal processes and point to opportunities for the development of public-health policy.

Nevertheless, the majority of existing research has, not surprisingly, focused on proximal influences and pathways, including a mix of social, psychological, biological and genetic factors – such as current socioeconomic position, experiences of racism and discrimination, social networks, insulin resistance and metabolic syndrome. Less attention has been paid to the more distal processes that have led to the contemporary social and economic location of ethnic minority groups and the related ethnic patterning of health outcomes. There is no certainty that the disadvantages of ethnic groups are fixed across countries, generations, or across different 'Black identities' (Agyemang *et al.* 2005). Indeed, while there are many similarities between the health, social, economic and demographic profiles of Black Americans in the US and Caribbean people in England, there are also marked differences in the history of these groups. While Black Americans have been resident in the US since they arrived as slaves, Caribbean people arrived in England after World War II as labour migrants. This migration happened in the face of considerable hostility from some of the English population, but at a time when the civil rights movement was emerging in the US, with a consequent opening up of opportunities for Black Americans. There is, however, evidence to suggest that the civil rights movement most affected those who subsequently migrated into the US, rather than those who were already there (Butcher 1994, Model 1995). Indeed, the socioeconomic profile of Caribbean people who migrated to the US appears better than that of Black Americans (Foner 2005, Jackson and Antonucci 2006). And a series of US studies that have explored race inequalities in birth outcomes by country of birth have generally found that Black women born overseas have more favourable outcomes than those born in the US (Cabral *et al.* 1990, Pallotto *et al.* 2000, Acevado-Garcia *et al.* 2005, Howard *et al.* 2006, but see Fuentes-Afflick *et al.* 1998 for an exception to this).

This points to the need to move beyond the treatment of ethnicity as an unproblematic variable in health analysis, where 'Caribbean', or even 'Black', labels are seen as representing global uniform categories whose meaning can be assumed and for whom findings can be generalised from one context or group to another (Cabral *et al.* 1990, Bhopal 2004,

Howard *et al.* 2006). Central to an understanding of socioeconomic inequalities and how they relate to the ethnic patterning of health is approaching ethnicity as a social identity, recognising the variable nature of such identities across contexts and generations, and the factors that underpin such variability (Hall 1992). To what extent does being 'Black' have different meanings in different locations, for different Black groups, and for different generations? How does this configure social (ethnic/race) relations? And what implications does this have for health inequalities? One way forward is to consider how the pattern and context of migration has influenced the social and economic circumstances of populations post-migration and, consequently, health inequalities.

Investigating these issues in one country context – which has typically been the case, especially with large population-based surveys – limits variability across social, economic and historical contexts, making it difficult to identify the factors that lead to positive and negative outcomes for migrants. For example, the migration from the Caribbean to England happened in a circumscribed period and was driven by particular economic and political factors, leaving little variation in the characteristics of the migration population, the circumstances into which they migrated, and their post-migration experiences. Data on similar populations who have migrated in, and to, very different circumstances provide the opportunity to conduct the kinds of comparative analyses that will facilitate greater understanding of how the variable patterns and contexts of migration drive ethnic inequalities in health. Although distal in the causal pathway, these factors remain relevant to contemporary migrant and post-migration populations.

We aim to advance this agenda by examining the patterning of ethnic inequalities in health between five ethnic groups in the US and England – Black American, Caribbean American, white American, Caribbean English and white English – and the social and economic factors that might underlie any differences in health that are observed. We hypothesise that differences between the three Black groups in their migration histories and consequent social and economic positions will lead to differences in the health inequalities they experience.

Methods

Survey design

The analysis uses survey data from three sources, each with a probability sample design. US data are from the National Survey of American Life (NSAL), which was conducted in 2001–3. Full details of the study have been reported elsewhere (Jackson *et al.* 2004, Jackson and Antonucci 2006, Heeringa *et al.* 2006). In brief, it is based upon an integrated national household probability sample of 3,570 Black American adults and 810 co-resident adolescents (aged 13–17) (response rate 71%), 1,621 Caribbean adults and 360 co-resident adolescents (response rate 78%) and 891 non-Hispanic white adults (response rate 70%). Respondents were allocated into the Black American and Caribbean American categories if they self-identified as 'Black', with the Caribbean category further defined using questions on country of ancestry. Migrants identifying as Black but not from the Caribbean were excluded from the sample for this analysis (most of these were born in Africa). The Black American and white samples were selected from geographical segments in proportion to the Black American population distribution; the Caribbean sample was selected from the Black American segments and from additional metropolitan segments with more than 10 per cent Caribbean people. This makes NSAL the first national sample of people of different race and ethnic groups who live in the same contexts and geographical areas as

Black Americans. This does however mean that the white sample is representative only of white people who live in areas where the density of the black population is 10 per cent or greater. Interviews were conducted by ethnically matched interviewers using a standardised face-to-face computerised interview.

English data were drawn from the Health Survey for England (HSE) 1998 and 1999, and a follow-up study on mental illness (EMPIRIC – Ethnic Minority Psychiatric Illness Rates in the Community). These studies are described in detail elsewhere (Erens and Primatesta 1999, Erens *et al.* 2001, Sproston and Nazroo 2002). In brief, the HSE is a series of surveys about the health of people in England that has been conducted annually since 1991. The HSE sampling procedures are similar to those for NSAL and are designed to select probability samples of both individuals and households, with respondents recruited from a sample of addresses selected from within a stratified sample of postcode sectors using the Postcode Address File. Black Caribbean respondents were drawn from the 1999 HSE (Erens *et al.* 2001), which was boosted to contain greater proportions of people from ethnic minority groups. The white English group was drawn from the 1998 HSE (Erens and Primatesta 1999), because a full interview was not administered to white informants at the 1999 HSE. For the 1999 HSE, sampling points were identified using information from the 1991 Census, which allowed postcode sectors to be stratified and selected on the basis of their ethnic composition. Areas with low concentrations of ethnic minority people were also identified and included. Screening for non-white ethnic minority respondents in areas with few ethnic minority residents was carried out using the validated focused enumeration technique (Smith and Prior 1997, Brown and Richie, 1981). Respondents were identified as suitable for inclusion and allocated to an ethnic group on the basis of their responses to a question on their ethnic family origins, a categorisation that correlates highly with self-identified ethnicity (Nazroo 2001), with those identifying Caribbean origins included in the analyses presented here. Overall, the 1998 and 1999 HSEs yielded a sample of 14,538 white English respondents (response rate 70%) and 1,217 Caribbean respondents (response rate estimated at 55%).

EMPIRIC (Sproston and Nazroo 2002) was a follow-up survey of those aged 16 to 74 in the 1998 (a subsample only) and 1999 HSE samples, collecting additional information on mental health, ethnic identity and experiences and perceptions of racism and discrimination. This resulted in a sample of 753 white English respondents (response rate 71%) and 647 Caribbean respondents (response rate 68%) for analyses involving racism variables.

For this paper we have altered the labelling of ethnic groups from those used in the original surveys, to clearly distinguish national origin. The labels we use are: Black American, Caribbean American, white American, white English, Caribbean English. In addition, because of differences in the ages covered in the different surveys, only those aged 18 to 74 are included in the analyses we present.

Measures and equivalence of data items

Although the US and English data collections were designed independently, similar topics were covered in their questionnaires, giving the potential for a joint analysis of their data. The following describes the measures that were used in the analyses presented in this paper, after which we discuss issues relating to the non-equivalence of data items in the surveys.

General (self-assessed) health was established using different measures in the different surveys. In NSAL, respondents were asked: 'How would you rate your overall physical health at the present time? Would you say it is excellent, very good, good, fair or poor?'. In the HSE respondents were asked 'How is your health in general? Would you say it was very good, good, fair, bad or very bad?' And the HSE respondents included in EMPIRIC

were asked: 'In general, would you say your health is excellent, very good, good, fair or poor?' For this analysis, NSAL respondents are coded according to whether they had responded 'excellent', 'very good' or 'good', as opposed to those responding 'fair' or 'poor'. Respondents to the HSE were grouped according to whether they had responded 'excellent' or 'good', as opposed to those responding 'fair', 'bad' or 'very bad'. The comparability of these questions is explored at the end of this section of the paper.

Both NSAL and the HSE included questions on diagnosed conditions and, in their list of conditions, both included: heart disease, hypertension, diabetes and stroke. For all but heart disease the questions were almost identical. For heart disease, NSAL asked one question asking about 'heart trouble', while the HSE had several questions covering: angina, heart attack, heart murmur, irregular heart rhythm and other heart trouble.

Household income was collected in categories using a showcard on both sites. It was equivalised using the McClements scoring system, which takes account of the number of people in the household (McClements 1977). A score was allocated to each household member, and these were added together to produce an overall McClements score. The head (or first adult) of the household was given a score of 0.61, the spouse/partner of the head was given a score of 0.39. Other second adults were given a score of 0.46, third adults, 0.42 and subsequent adults, 0.36. Dependent children aged below two were given a score of 0.09, those aged between two and four, 0.18, those between five and seven, 0.21, those between eight and ten, 0.23, those between 11 and 12, 0.25, those between 13 and 15, 0.27 and those aged 16 or over were given a score of 0.36. For these analyses it was assumed that the respondent was the head of household and that adulthood begins at 18 years. Equivalised income was derived as the annual household income divided by the McClements score, which was then attributed to all members of the household. Rather than attempting directly to equate US and English incomes, the equivalised income was categorised into US and English population specific quintiles. About 13 per cent of respondents did not report their income (ranging from 8.6 per cent in the white American group to 15.5 per cent in the Black American group), so these respondents have been included as an additional category for the income variable.

Employment status was coded 'employed or in fulltime education', 'unemployed', 'unemployed due to long term sickness', 'looking after the home' and 'retired'.

Differences in education systems between England and the US made it necessary to remove some of the detail contained in the country-specific education measures to create comparable scales. NSAL respondents were asked how many years of education they had completed and were then asked if they had obtained a high school graduation certificate, a college degree or certificate and if they had had any other form of schooling. HSE respondents were simply asked about any qualifications gained. For these analyses, educational level was categorised according to the highest qualification gained: those with less than a high-school certificate or A-level; those with A-levels or an American high-school graduation certificate; those with higher educational qualifications, such as college or university degrees; and those with other types of qualifications.

Experience of racist victimisation covered three dimensions in both sites: being verbally insulted, threatened or harassed; being treated unfairly at work; or being refused employment. In NSAL, the questions explored whether the respondent experienced verbal insults or name calling and/or was threatened or harassed 'in your day-to-day life almost everyday, at least once a week, a few times a month, a few times a year or less than once a year?'. These variables were combined into one measure of whether the respondent had experienced either form of insult more frequently than 'less than once a year' and with the respondent attributing this to his/her ancestry, race or skin colour in response to a

follow-up question. This coding was to allow comparability with the British data, which asked respondents 'In the last twelve months, has anyone insulted you for reasons to do with your ethnicity? By insulted I mean verbally abused, threatened or been a nuisance to you.'.

To determine experience of discrimination in employment, respondents to NSAL were told: 'In the following questions we are interested in the way other people have treated you or your beliefs about how other people have treated you. Can you tell me if any of the following have ever happened to you? Have you ever been unfairly denied a promotion?'. And: 'For unfair reasons, have you ever not been hired for a job?'. Again only those cases where the respondent attributed the behaviour to his/her ancestry, race or skin colour were included. In EMPIRIC, respondents were asked: 'Have you yourself ever been treated unfairly at work with regard to promotion or a move to a better position for reasons which you think were to do with race, colour or your religious or ethnic background? (I don't mean when applying for a new job.)'. And: 'Have you ever been refused a job for reasons which you think were to do with your race, colour or your religious or ethnic background?'.

As this description of the questions used shows, there were some differences between the NSAL and HSE surveys in the approach to measurement and in the wording of particular items, even if there was equivalence between data items at a conceptual level. This is particularly striking for our main outcome measure, general health, where the wording of the question and the outcome categories differs. Fortunately, the EMPIRIC survey included a version of the general health question that was very close to the NSAL version, allowing a direct comparison between the different versions of the questions. Analysis of data from the HSE/EMPIRIC respondents who were asked both versions of the question showed that in response to the HSE question 23 per cent of the white English and 32 per cent of the Caribbean English samples described their health as fair, bad or very bad (rather than very good or good), compared with 21 per cent and 31 per cent respectively describing their health as fair or poor (rather than excellent, very good or good) in response to the EMPIRIC question. This suggests that the problems with differences in wording for this item did not greatly affect the findings.

Other issues relating to the equivalence of data items that are worth highlighting at this point include: heart disease being covered by several specific questions in the HSE, and one broad question in NSAL, which is likely to lead to the inclusion of more cases in the HSE data; the use of country specific quintiles for household income; the merging of quite different classifications for education level, reflecting differences in the education systems; and the collection of similar categories of exposure to racism and discrimination, but using quite different questioning techniques.

Finally, the subjective nature of the general health measure might mean that it does not map onto similar health constructs in the differing national and cultural contexts in which we use it, either at the level of underlying health concept or in terms of thresholds behind response options (so the threshold between, for example, 'fair' and 'good' might vary); and that the self-reports of diagnosed disease might vary across nations, because of institutional variations in opportunities for diagnosis. In both cases, the implication would be that we cannot use these measures to draw comparisons across the countries and groups (including within countries) that we study. We return to these important issues when we consider possible limitations in the discussion section of the paper.

Statistical methods

Analyses of the data involve both crosstabulations and multivariate analyses using logistic regression. For crosstabulations we compute means (for age) and distributions. For the multivariate analyses we build stepwise logistic regression models to examine the contribution

of explanatory factors to ethnic differences in our dichotomised general health outcome. First, models are adjusted for age and gender, then explanatory variables are included in a series of steps, so that their impact on the odds ratios associated with ethnicity can be shown. Respondents who are missing on variables included in one or more steps in the model are excluded from the whole model, with the exception of those missing only on the income variable (who, as we describe above, have been included as an additional category).

The complex survey designs for NSAL, HSE and EMPIRIC meant that the samples had to be weighted to correct for the unequal probabilities of selection for different classes of respondents. In addition, weights were applied to adjust for the non-response to the NSAL and EMPIRIC surveys. For EMPIRIC, these non-response weights were obtained using regression modelling based on HSE data (available for both respondents and non-respondents to the follow-up) (Sproston and Nazroo 2002). For NSAL, post-stratification weights were applied, adjusting the weighted distribution of the sample to conform to the known distribution of the population for age, region, and gender within each ethnic group (Heeringa *et al.* 2004 and 2006). In addition all standard errors and confidence intervals were corrected for auto-correlation within the stratified and clustered sample design. These analyses were conducted using the survey commands within Stata.

Results

Table 1 shows the characteristics of the sample stratified by ethnicity. The English ethnic groups are on average older than their US counterparts. On the whole, respondents, particularly in the Caribbean English group, are more likely to be female, although this is not the case for the Caribbean American group. The income distributions show marked ethnic differences, with the white groups better off than others in both the US and England (though the advantage is greater in the US with 27 per cent in the top income quintile compared with 23 per cent of white English respondents). The Caribbean American group has an income profile that is very similar to that of the white English group and that is markedly better than that of the Caribbean English and Black American groups. These groups have only 17 per cent and 13 per cent in the top income quintile respectively, in comparison with 22 per cent for the Caribbean American group. Not surprisingly, the employment measure shows a similar ethnic pattern to the income measure, with the Caribbean English and Black American groups disadvantaged compared with their white counterparts. But the Caribbean American group have a higher proportion in the employment/student category than white Americans, and a higher proportion in the unemployed category, both, perhaps, because of the smaller proportion in the retired category. The measure of education level shows fewer ethnic differences, with the two Caribbean groups having a similar profile to their white counterparts. The Black American group, however, has a poorer profile than the other two US ethnic groups, with only 21 per cent in the post-high school qualifications group compared with 30 per cent of Caribbean Americans and 36 per cent of white Americans. Interestingly, the differences between the US and English groups are also large.

All three measures of racism and discrimination show, not surprisingly, low levels for the two white groups. For the measure of racial insult, rates are very similar across the three Black groups, with around 15 per cent of respondents reporting such an experience within the last year. Being refused a job is experienced at a similar level by the Black American (15%) and Caribbean American (18%) groups, but by around 30 per cent of the Caribbean English group. Likewise, being treated unfairly at work or denied promotion is reported at

Table 1 *Social and economic factors by ethnicity*

	Per cents (except for age)				
	Black American	*Caribbean American*	*White American*	*White English*	*Caribbean English*
Mean age (years)	41.0	39.0	42.7	44.8	42.6
Gender					
Male	44	51	47	46	41
Female	56	49	53	54	59
Equivalised income					
Bottom quintile	27	20	13	15	31
Second quintile	23	19	17	18	21
Middle quintile	20	22	20	21	15
Fourth quintile	17	17	24	23	16
Highest quintile	13	22	27	23	17
Employment status					
Employed or student	66	76	72	66	61
Unemployed	15	13	8	3	6
Long-term sick	8	4	4	5	6
Looking after the home	3	2	7	11	14
Retired	9	5	10	15	14
Education level					
Below A-level/high school	16	13	8	29	28
A-level/high school	58	52	53	42	41
Post degree/high school	21	30	36	25	27
Other	4	6	2	4	4
Experiences of racism/discrimination					
Insulted in last 12 months	16	15	2	5	14
Refused a job	15	18	3	2	30
Treated unfairly at work or denied promotion	13	10	2	2	24
Unweighted base for main analyses	*3,354*	*1,568*	*826*	*13,089*	*1,175*
Unweighted base for racism analyses	*3,316*	*1,553*	*822*	*751*	*646*

a higher rate by the Caribbean English group than the Caribbean American and Black American groups.

Table 2 shows differences in reported fair or bad/poor health and reports of diagnosis of a range of cardiovascular diseases by ethnic group. As well as showing the prevalence of these conditions (in percentages), the table also shows age and gender adjusted odds ratios (with 95% confidence intervals), to address differences in age profiles across the various groups. For these analyses the white American group is used as the reference category. For reported fair or bad/poor health differences are large, both between the US and English groups and when comparing ethnic groups within countries. Notably, the difference between the white and Caribbean English groups is much larger than that between the white and Caribbean American groups, and the Black American group seems to have

Table 2 *Health outcomes by ethnicity*

	Black American	*Caribbean American*	*White American*	*White English*	*Caribbean English*
Fair or bad/poor health					
Per cent	20	17	17	24	33
Age/gender standardised	1.28	1.07	1	1.40	2.43
odds ratio (95% C.I)*	(0.97–1.68)	(0.74–1.55)		(1.08–1.81)	(1.82–3.26)
Any cardiovascular disease or diabetes					
Per cent	37	31	31	26	38
Age/gender standardised	1.46	1.24	1	0.96	1.37
odds ratio (95% C.I)*	(1.18–1.80)	(0.95–1.63)		(0.80–1.16)	(1.10–1.71)
Diagnosed diabetes					
Per cent	11	8	7	3	9
Age/gender standardised	1.80	1.37	1	0.30	1.17
odds ratio (95% C.I)*	(1.40–2.31)	(0.89–2.11)		(0.24–0.38)	(0.85–1.62)
Diagnosed heart disease					
Per cent	7	8	9	14	10
Age/gender standardised	0.86	0.95	1	1.45	1.14
odds ratio (95% C.I)*	(0.48–1.53)	(0.39–2.34)		(0.83–2.54)	(0.62–2.10)
Diagnosed hypertension					
Per cent	33	27	24	23	30
Age/gender standardised	1.77	1.48	1	0.86	1.37
odds ratio (95% C.I)*	(1.39–2.27)	(1.10–1.99)		(0.68–1.08)	(1.06–1.78)
Diagnosed stroke					
Per cent	2.8	2.5	2.7	1.6	1.5
Age/gender standardised	1.25	1.19	1	0.51	0.52
odds ratio (95% C.I)*	(0.72–2.17)	(0.43–3.35)		(0.32–0.84)	(0.27–1.05)
Unweighted base	*3418*	*1568*	*826*	*13089*	*1175*

*White American is the reference category

poorer health than the Caribbean (and white) American group. The pattern of findings is similar for any diagnosed condition, although the English groups do not always have higher rates than their US counterparts. Indeed for all of the diagnosed conditions, differences between the US and English groups are smaller (hypertension and any diagnosed condition), or reversed (diabetes and stroke). Diagnosed diabetes shows a similar pattern to that seen for any diagnosed condition and, apart from the US-England difference, reported fair or bad/poor health. Differences between groups within a country are small for heart disease. All three Black groups have higher rates of hypertension than the white groups, with the Black American group having particularly high rates. And for all groups differences are small for stroke.

Figure 1 shows the prevalence of reporting fair or bad/poor health by ethnicity and age. There are relatively small differences until age 35. From that age onwards the Caribbean English group has an increasingly greater prevalence than the other groups, with the white English and Black American groups also showing higher rates than the white American

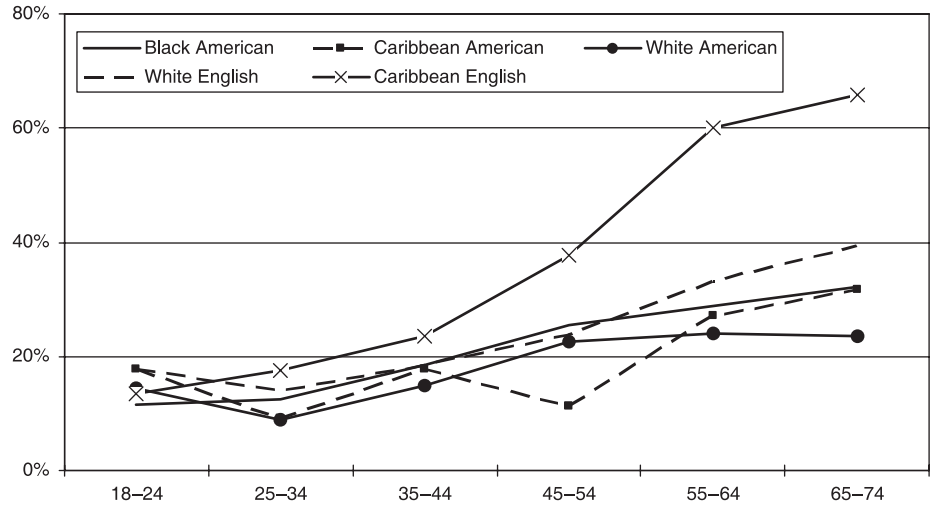

Figure 1 *Self-reported fair or bad/poor health by ethnicity and age*

group from the age of 55 onwards. The Caribbean American group appear to have the lowest rates at ages 45–54, but then their rates rise to a similar level to other groups.

One possible explanation for the apparent differences between the Caribbean American and Caribbean English groups, shown in Tables 1 and 2 and Figure 1, is that they are a consequence of differences in patterns of migration from the Caribbean to these two locations. Differences in the timing of migration are explored in Table 3, which shows that the Caribbean American group were more likely than the Caribbean English group to be aged 12 or older when they migrated and less likely to be born in their country of residence.[2] It also shows that of those who migrated, around 80 per cent of the English Caribbean group had migrated before the 1970s, while over 80 per cent of the American Caribbean group migrated from the 1970s onwards.

Table 4 explores differences in the profiles of 'migrant' and 'second-generation' Caribbean people in the two locations. (The second generation is defined as either those who were born in the US or England, or who migrated before the age of 12. The latter group were included because their numbers were too small to analyse separately (see Table 3) and, as most of their education had occurred in the host country, conceptually they fitted better in this group. Including them in the first generation group made little difference to the findings.) It shows that in both locations the second generation are better off in terms of income and education, although for employment the second generation are disadvantaged in the US and advantaged in England. Indeed, the second generation compare quite favourably to the figures shown for their white counterparts in Table 1, with, for example, a similar proportion in the top income quintile. It also shows that the second generation are more likely to report experiences of racism and discrimination in all but one case (unfair treatment at work for Caribbean English people).

Beyond migration, the main factors considered here that may explain ethnic differences in health are those relating to economic and social inequalities, including experiences of racism and discrimination. Table 5 shows the relationship between general health and income and experiencing verbal abuse. It shows that for each of the ethnic groups there is a strong relationship with income, with the prevalence of self-reported fair or bad/poor health decreasing steadily with increasing income, and with those not reporting their

Table 3 *Age of and year of migration for Caribbean respondents*

	Column per cents	
	Caribbean American	*Caribbean English*
Age on migration		
Born in the US/England	41	50
Aged 11 or younger	11	9
Aged 12 or older	48	40
Year of migration (migrants only)		
Before 1960	3	27
1960s	12	51
1970s	21	11
1980s	33	4
1990s onwards	31	8

Table 4 *Social and economic factors by age on migration for Caribbean respondents*

	Cell per cents (except for age)			
	Caribbean American		*Caribbean English*	
	Born in US or migrated <12	*Migrated aged 12 or older*	*Born in England or migrated <12*	*Migrated aged 12 or older*
Mean age (years)	34.7	43.7	33.1	56.7
Highest quintile of income	28	15	22	9
Not employed or student (excluding retired)	23	16	25	39
Educated post degree/high school	33	27	33	16
Experiences of racism/discrimination				
Insulted in last 12 months	19	11	16	11
Refused a job	22	14	33	24
Treated unfairly at work or denied promotion	12	9	22	28

level of income generally having a high prevalence of fair or bad/poor health (the white American group being the exception to this). Similarly, those who reported experiencing racist verbal abuse in the last 12 months had higher rates of fair or bad/poor health, with the exception of the white groups (who had a low prevalence of exposure; so estimates are either based on small numbers – for the white English group – or cannot be calculated – for the white American group).

Table 6 reports the multivariate (logistic regression) modelling of the relationship between general health and ethnicity, showing the odds of the various ethnic groups compared with the white American group to report their health as fair or bad/poor; it also shows how these odds change as additional explanatory factors are entered into the model.

Table 5 *Self-reported fair or bad/poor health by income, racist verbal abuse in the last 12 months and ethnicity*

	Cell per cents				
	Black American	*Caribbean American*	*White American*	*White English*	*Caribbean English*
Equivalised income					
Bottom quintile	32	19	35	39	40
Second quintile	23	25	27	35	47
Middle quintile	11	16	13	23	31
Fourth quintile	11	13	14	16	20
Highest quintile	9	5	11	13	13
Income not reported	24	22	9	25	38
Verbally abused					
Yes	26	32	n/a	[23] [1]	39
No	19	14	17	22	31

[1]Base is only 35 respondents experiencing racist verbal abuse.

Table 6 *Ethnic differences in self-reported fair or bad/poor health: effect of economic factors and migration*

	Odds ratios with 95 confidence intervals				
	Black American	*Caribbean American*	*White American*	*White English*	*Caribbean English*
Model adjusted for					
Age and gender	1.28 (0.97–1.68)	1.07 (0.74–1.55)	1	1.40 (1.09–1.81)	2.43 (1.82–3.26)
+ Income quintile, education level	0.95 (0.75–1.20)	0.90 (0.64–1.27)	1	1.14 (0.92–1.41)	1.75 (1.34–2.28)
+ Migrant and year of migration	0.95 (0.75–1.20)	0.91 (0.59–1.42)	1	1.14 (0.92–1.41)	1.33 (0.97–1.82)

At the first step, with only age and gender included in the model, the Caribbean American group has an odds ratio of close to 1 for fair or bad/poor health, the odds for the Black American group are higher (though note that the confidence intervals cross 1), the white English group has a significantly higher odds of 1.4, and the odds for the Caribbean English group are close to 2.5. The second step of the model includes measures of income and education level and, after this adjustment, only the Caribbean English group have odds of fair or bad/poor health that are significantly different from those of the white American group (at 1.75); the odds for the white English and Black American groups drop to close to 1. The final step includes migrant status and year of migration in the model, resulting in an additional reduction in the odds for the Caribbean English group, bringing them down to a non-significant level (at 1.33).

Table 7 *Ethnic differences in self-reported fair or bad/poor health: effect of racism*

	Odds ratios with 95 confidence intervals				
	Black American	*Caribbean American*	*White American*	*White English*	*Caribbean English*
Model adjusted for					
Age and gender	1.27 (0.96–1.67)	1.08 (0.73–1.58)	1	1.36 (0.99–1.85)	2.43 (1.76–3.36)
+ Racial verbal abuse only	1.16 (0.88–1.54)	0.99 (0.68–1.45)	1	1.33 (0.97–1.82)	2.25 (1.62–3.11)
+ Income quintile, education level, migrant and year of migration only	0.90 (0.69–1.18)	0.97 (0.58–1.62)	1	1.11 (0.82–1.51)	1.36 (0.88–2.11)
All of the above	0.84 (0.64–1.09)	0.86 (0.52–1.42)	1	1.10 (0.81–1.49)	1.27 (0.83–1.96)

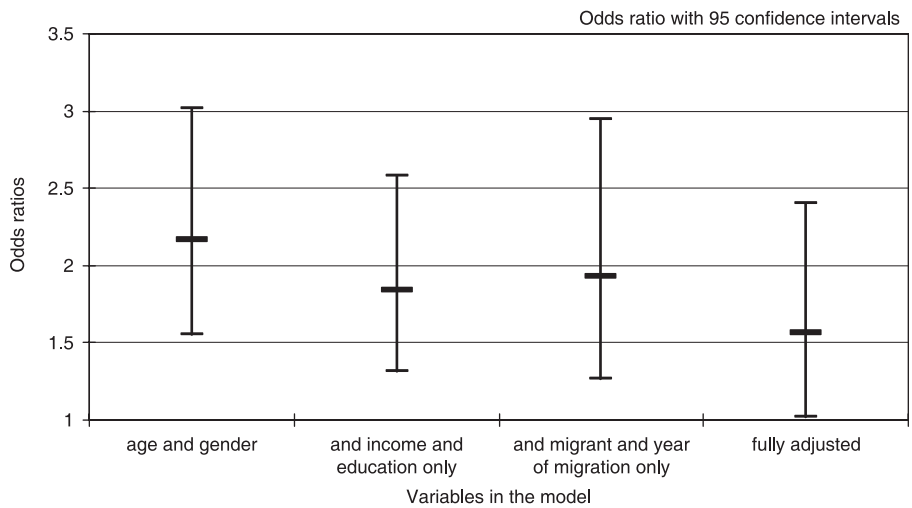

Figure 2 *Fair bad/poor health, Caribbean English compared with American Caribbean*

We also included the measure of experiencing racist verbal abuse in a model using the NSAL and EMPIRIC samples, which is reported in Table 7. Although racial verbal abuse was strongly related to risk of reporting fair or bad/poor health (with statistically significant odds of 1.87 in a gender- and age-adjusted model and 1.74 in a model including all other explanatory variables – data not shown in the table) including this measure in the model made only a small difference to the ethnic differences in risk of fair or bad/poor health. So the odds for all three of the Black groups dropped when this variable was included in the model, but for the Black American and Caribbean English groups they dropped to a much greater extent when the economic measures and the measure of migration status and period of migration were included in the model.

Our final model compares the two Caribbean groups directly and is reported in Figure 2. The first bar shows the age- and gender-adjusted odds and 95 per cent confidence intervals

for the Caribbean English compared with the Caribbean American group to report fair or poor/bad health. As expected from Table 6, the odds are significantly different (at 2.17). Adjustment for income and education reduces the odds somewhat (to 1.84), while adjustment for migrant status and year of migration (without adjustment for income and education), leads to a slight reduction in odds (1.93). Finally, adjustment for all of income, education, migrant status and year of migration brings the odds down to 1.57, although this is still statistically significant (95% confidence intervals 1.02–2.40).

Discussion

This paper has used independent, but similarly designed, surveys in England and the US to compare the health of five ethnic groups – Black American; Caribbean American; white American; white English; and Caribbean English – with the intention of exploring how the context of migration and post-migration circumstances might influence health inequalities between Black and white groups. Our main health measure, self-assessed general health, revealed a stark contrast between the situations in England and the US. The Caribbean English group have worse health than the white English group, while in the US the Caribbean American group has a very similar health profile to the white American group. In addition, there were marked differences in health between the groups in the US compared with those in England, with those in the US having better health than their English equivalents. Finally, the Black American group had worse health than the white American group, although this difference was not statistically significant. Although there were differences for the reports of diagnosed conditions, as would be expected for specific diseases and different healthcare systems, findings for these were broadly the same as for self-assessed general health.

This pattern of findings for health was also found for markers of economic inequality, including income, employment and education. On the whole, the white groups were better off than the Black groups in both countries, but while the Caribbean English profile matched that of the Black American profile (with the exception of level of education), the Caribbean American group was better off than their Black American and Caribbean English counterparts (with a profile close to that of the white American group). An exploration of migration effects revealed that the Caribbean American group were more likely than the Caribbean English group to be first generation, and to have migrated more recently. Generation was shown to be strongly related to social and economic inequalities, with the 'second' generation in both countries on the whole better off for economic markers, but more likely to report exposure to racism and discrimination.

Not surprisingly, markers of economic and social inequality – income and exposure to racial verbal abuse in the last 12 months – were strongly correlated with health for each ethnic group. And multivariate analyses showed that differences in self-reported health between the white American and the other ethnic groups diminished greatly and became non-significant when adjustments were made for economic inequalities and period of migration/generation effects. Although exposure to racial verbal abuse was strongly and negatively related to health, it did not make a large contribution to the observed ethnic inequalities in health, perhaps because of its relatively low prevalence (14–16% across the three Black groups). Finally, in multivariate analysis comparing the two Caribbean groups, the English disadvantage reduced from an odds ratio for fair/bad or poor health of 2.18 to (a still significant) 1.57 on adjustment for socioeconomic and migration effects.

The most striking finding – the differences in health between the two Caribbean groups and how this appears to be driven by economic and migration factors – indicates once

again the need to take social context seriously when considering ethnic inequalities in health. When placed alongside the differences between the Caribbean American and Black American groups, we are encouraged to place our understanding of social context within a historical frame of reference. Not only should we avoid essentialising ethnic differences in health in terms of 'innate' characteristics, we must also avoid an essentialist approach to ethnic inequalities in economic and social position. Ethnic inequalities should not be considered as somehow a product of processes internal to ethnic minority groups, but as generated by wider social (ethnic) relations that have developed differently in different (historical) contexts, which will change over time. So, rather than focusing on the psychological and biological mechanisms that link a pre-existing social inequality to health inequalities, we suggest a focus on the social and economic mechanisms that produce ethnic inequalities and how these, and their outcomes, have varied. In the context of this paper, we can ask how social and economic forces have led to the relative advantage of one Black group (Caribbean American) in comparison with one in the same location (Black American), and one that migrated from the same geographical region to a different location (Caribbean English).

In answering such questions, comparative studies of migrant and post-migrant populations can provide important evidence. Although migration issues have long been identified in work on ethnic inequalities in health, the focus has very much remained on issues of health selection (the possibility that individuals are selected into a migrant group on the basis of health, or factors that relate to health, such as education) and the stresses and strains that surround the migration process (Marmot *et al.* 1984). We would propose that when considering ethnic inequalities in health, migration needs to be considered in more fundamental ways, such as:

- the social and economic forces that drive migration;
- selection of the population into migrant and non-migrant groups;
- the social and economic contexts into which migrants arrive;
- how these contexts develop over time and across generations, in part as a consequence of the actions of migrant populations.

It is easy to observe how these are different for the three Black groups studied here. Oliver and Shapiro (1995) demonstrate how the social and economic disadvantage of Black American people is the outcome of a long history of institutional racism and discrimination that has its roots in slavery and has produced the levels of disadvantage that are currently observed. Similarly, while the post-war migration of Caribbean people into Britain was driven by a shortage of labour, this process and the socioeconomic disadvantage faced by ethnic minority migrants in England was, and continues to be, structured by racism that has its roots in colonial history (Gilroy 1987, Miles 1982). The migration from the Caribbean to the US happened later than that to England, into a different race relations context, and at a time when, perhaps, migrants were able to take advantage of the civil rights movement in a way that the pre-existing Black population (and the population in England) was not (Butcher 1994, Model 1995, Jackson and Antonucci 2006).

Such observations show that social and economic circumstances will vary, in quite specific ways, across these three groups and across time, and allow us to develop hypotheses on how this may have led to the relative advantage of the Caribbean American group. Additional data would be required to test likely hypotheses, but central to this must be an exploration of how the significance, or meaning, of a 'Black' social identity has varied across groups and over time and place. And it might well vary from first to second and

third generations. For example, the contemporary social and economic experiences of a migrant and non-migrant generation might be quite different, with the non-migrant generation more likely to do well economically (Nazroo 2004, Platt 2005) – perhaps as a consequence of different childhood experiences and consequent trajectories (Jackson and Antonucci 2006) – and to have less traditional ethnic identities (Nazroo and Karlsen 2003). In addition, the arrival of a new migrant group into an existing race relations context may well lead to a shift in the nature of that context.

Given the exploratory and opportunistic nature of the analysis conducted here – using two data sets that were not designed to be combined – there are inevitably some important limitations with the analysis we have presented, but also some strengths. The most important limitations concern issues of measurement and the equivalence of data items in the US and English surveys. Although there was remarkable equivalence in terms of the coverage of concepts and at the level of particular data items, there was limited semantic equivalence. As shown in the methods section of the paper, many of the questions had different wording in the US and English studies. We were able to explore this in relation to the measure of health that was used, and this exploration indicated that semantic non-equivalence did not produce a serious threat to the validity of our analysis. But we were unable to do this for the other measures used.

Equally important is the possibility that the different cultural frames of England and the US influence responses to questions, such that apparently similar, or indeed identical, questions may not have had identical meanings to respondents in the two locations. While this is relevant to all our measures, most significant, as we pointed out in the measures section of the paper, is the possibility that our health measures do not map onto similar constructs in the US and England. An examination of differences between the US and English findings shown in Table 2 lends support to this possibility, as do the findings of Banks and colleagues (2006a, 2006b), who show that the US population has better health than the UK when assessed using a general health measure, but worse health for a range of cardiovascular diseases and biomarkers.[3] For this paper, two points are worth making. First, in terms of relative comparisons of the situation *within* countries we show important differences between the three Black groups we study. The position of Caribbean people compared with white people in the US (where they report similar levels of health) is remarkably different from that in England (where Caribbean people report worse health than their white counterparts). The crucial issue here is not the absolute differences between countries, but the difference in the relative position of the two Caribbean groups within their countries, which, by definition, will not be influenced by differences in context between nations. Second, if the issue is one of differences in reporting thresholds between white and Caribbean people in the two countries, our analysis allows for a direct comparison between Caribbean groups that also shows better health for Caribbean people in the US compared with those in the UK. In addition, Caribbean people in the US are not only better off in terms of this self-report of health, they are also better off in terms of more objective markers of socioeconomic position (such as income), lending support to the conclusions drawn in relation to health. And the health differences we show are largely explained by our models, something we would not expect if the differences were simply a consequence of reporting bias.

Another important limitation is that the white American group was only representative of those who live in areas where the density of the Black population is greater than 10 per cent. How this influences the findings reported here is not certain, but comparisons with other data sources suggest that the profile of the white American group in NSAL matches that of white Americans generally. A final limitation is that our range of explanatory

variables did not include all that might help us understand differences in the US-English context, such as neighbourhood effects, and differences in migration effects, such as early life exposures. Despite these limitations, however, we have been able to use surveys with probability samples, very similar conceptual orientations, and with similar coverage, to carry out a novel comparison.

Conclusions

This paper illustrates marked differences between three Black populations in two locations (Caribbean English, Caribbean American and Black American), both in comparison with each other and with their white counterparts. The differences between these groups illustrate the significance of social and historical context when considering not only health inequalities, but also social and economic inequalities. The multivariate analyses reveal the overriding significance of economic effects for the ethnic inequalities in health that we observe. With these data we cannot identify how far the economic differences between the two Caribbean populations are driven by differential selection into migrant groups, perhaps on the basis of human capital, or by differences in available opportunities in the destination countries, or by a specific period effect, such as the opportunity provided by the civil rights movement in the US. This is an important area on which to focus future inquiry, if we are concerned with the distal origins of ethnic inequalities in health and the development of upstream policies to address them.

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Notes

1 In England there are two important exceptions to this. The first is low rates of detected coronary heart disease among Caribbean people. The second is the lower all-cause mortality rates for those born in the Caribbean, as estimated using death certificate data. It is worth noting that English death certificate data do have some limitations, most notably, because country of birth rather than ethnicity is collected on death certificates, they only cover those born in the Caribbean, and they do not cover the non-trivial number who return to the Caribbean (Office for National Statistics 2006), who remain in the denominator, but not in the numerator.

2 Of those Caribbean Americans classified as born in the US, eight were born in Puerto Rico, five in the Virgin Islands, two in St Thomas and one in St. Croix. We keep them in the 'Born in US' group, because for our later analyses we do not know when they actually migrated into 'mainland' US. Eight of the 16 report that they grew up in the US.

3 It is, of course, worth noting that health is a broader concept than cardiovascular disease, or, indeed, mortality. The broader domain of health and wellbeing, captured in part by a measure of general health, is relevant to an investigation such as this, concerned as it is with inequalities, rather than the aetiology of specific diseases.

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