



Recent data for majority and racial minority differences in intelligence of 5 year olds in the United Kingdom



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ABSTRACT

Data are presented from the UK Millennium Cohort Study for a sample of 14,860 5 year old British children giving the IQs of whites and racial minorities. Africans, Indians, Pakistanis and Bangladeshis obtained lower IQs than whites, while the IQ of the Chinese was higher. These group differences in IQ were consistent with the differences in educational attainments and earnings.

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1. Introduction

In the first half of the twentieth century the numbers of racial minorities in Britain were very few. The only significant black communities were in the ports of Liverpool and Cardiff. In the second half of the twentieth century the numbers of racial minorities increased as a result of the British Nationality Act of 1948. This act conferred British citizenship on the people of the British Commonwealth and the colonies and gave them the right to enter, settle, and work in Britain. At that time the British Commonwealth consisted of Canada, Australia, Ireland, New Zealand and South Africa, and the British colonies consisted of India, Pakistan and Bangladesh, much of Africa, most of the Caribbean, Hong Kong, Malaysia, and a number of other smaller territories. In May, 1948, within a few weeks of the act becoming law, the first ship carrying blacks from Jamaica arrived in Britain. In the 1950s quite large numbers of blacks and Indians were entering and settling in Britain. From the 1960s up to the present the numbers of racial minorities increased as a result of immigration and above replacement fertility. The 2001 census

recorded 1.1 million blacks, 1.1 million Indians, 1.0 million Pakistanis and Bangladeshis, and 209,000 Chinese. In the 2011 census these numbers had increased to 1.85 million blacks, 1.4 million Indians, 1.6 million Pakistanis and Bangladeshis, and 392,700 Chinese.

In the 1960s studies on the IQs of these immigrants began to be published. In an early study, the Inner London Education Authority ([Inner London Education Authority \(ILEA\), 1967](#)) published IQs of 82 for blacks and 87 for Indians in London, in relation to 100 for whites. Subsequent studies have been summarised by [Lynn \(2006\)](#) who gives 22 studies of blacks with a median IQ of 86, and 12 studies of South Asians (Indians, Pakistanis and Bangladeshis) with a median IQ of 89. It has not been possible to find any valid study of the intelligence of the Chinese in Britain.

2. Method

The UK Millennium Cohort Study (MCS) is a longitudinal birth cohort study conducted in the United Kingdom. It began with a sample of nearly 19,000 babies born between 1 September, 2000 and 31 August, 2001. The initial households were identified through the Department of Work and Pensions

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Child Benefit system (in the UK, this monetary benefit is universally received) and were selected on the basis of where the family was resident shortly after the time of birth. The sample is clustered at the electoral ward (an administrative unit level) such that disadvantaged residential areas and areas with a high proportion of ethnic minority people are over-represented. Surveys were carried out when cohort members were aged about 9 months (MCS1), 3 years (MCS2) and 5 years (MCS3). At MCS1, 18,552 families were recruited to the study (corresponding to an 85% interview rate). At MCS2, a further 692 families joined the survey, giving a total of 19,244. Loss to follow-up by MCS3 reduced the sample to 15,246 (79.2%). Ethnic group was measured as a self-assigned ethnicity variable with no distinction between those born abroad and in Britain, with available responses derived from the 2001 UK census question.

In the MCS3 survey, the sample were aged 5 years and were intelligence tested with the British Ability Scale (Elliott, Smith, & McCulloch, 1996, 1997). This consists of the Naming Vocabulary test, which assesses verbal ability/expressive language by asking children to name items pictured in a booklet; the Picture Similarities test, which assesses non-verbal/problem-solving ability by asking children to place a picture card against the most similar in concept among a set of four other pictures, and the Pattern Construction test, which assesses spatial ability and consists of a set of timed tasks for children, copying and constructing patterns with coloured tiles and cubes.

The three sets of IQ scores were standardised and combined to form a total score with a mean = 100 and SD = 15. 14,863 cohort members completed the British Ability Scales (BAS) tests. The sample analysed comprises 14,860 cohort members who provided information on both IQ tests and ethnicity.

3. Results

Table 1 shows the numbers for each ethnic and racial group, the mean IQs and standard deviations (SDs), and *ds* (the differences between the whites and the other ethnic groups in standard deviation units calculated from the white SD). The right hand column gives the statistical significance of the differences between the whites and the ethnic and racial minorities calculated using ANOVA post hoc multiple

comparison tests and shows that the Indians, Pakistanis, Bangladeshis and Black Africans obtained significantly lower IQs than whites. In addition, there were significant differences between some of the ethnic minority groups, namely between Mixed and Pakistani ($p < .001$), between Mixed and Bangladeshi ($p < .01$); between Mixed and Black African ($p < .05$); and between Indian and Pakistani/Bangladeshi/Black African ($p < .001$). There were no significant differences in IQs between Pakistanis, Bangladeshis, and Black Africans.

The results for the educational qualifications of the mothers ($n = 14,391$) and fathers ($n = 10,597$) of the children are shown in Table 2. The last rows give the means of the educational qualifications. The educational qualifications are given as NVQs (National Vocational Qualifications) coded as follows: NVQ 1 is equivalent to 1–5 GCSEs (General Certificate of Education) at grades D–E; NVQ 2 is equivalent to 1–5 GCSEs at grades A*–C; NVQ 3 is equivalent to 1–5 A levels; NVQ 4 is equivalent to BTEC Higher National Certificate (HNC) or Higher National Diploma (HND); and NVQ 5 is equivalent to a university degree. For the total sample, the correlation coefficients between maternal education and children's IQs were $r = .30$ ($p < .001$) and between paternal education and children's IQs $r = .27$ ($p < .001$). For the ethnic minority groups without whites, $r = .38$ ($p < .001$) between maternal education and children's IQs and $r = .36$ ($p < .001$) between paternal education and children's IQs. Thus, the associations between parental education and children's IQs are stronger for the ethnic minority groups than for the whites. For the whites alone, the correlations were $r = .29$ and $r = .25$ ($p < .001$) respectively.

4. Intelligence, educational attainment and earnings

We now examine the relation between the race differences in intelligence and differences in educational attainment and earnings. Data for these are summarised in Table 3. Column 2 gives race differences in intelligence from Table 1, column 3 gives differences in math at age 11 years for all children in England attending state schools in England in 2003. This testing was carried out under the direction of the Government DfES (Department for Education & Skills, 2003) under a programme known as Key Stage 2. Approximately 7% of children attend

Table 1
IQs of 5 year olds in the United Kingdom in the Millennium Cohort Study (MCS).

Group	N	Mean	SD	<i>d</i>	ANOVA	
					Multiple group comparison †	<i>p</i>
White	12,417	100.87	14.61	–	–	–
Mixed	424	99.73	15.25	–.08	2-1	.988
Indian	377	96.87	14.80	–.27	3-1	.033
Pakistani	664	85.62	14.90	–1.04	4-1	.000
Bangladeshi	275	86.00	16.28	–1.02	5-1	.000
Black Caribbean	170	96.68	15.28	–.29	6-1	.426
Black African	294	90.02	14.49	–.74	7-1	.000
Other Black	34	91.95	15.58	–.61	8-1	.736
Other Asian	104	94.11	15.75	–.46	9-1	.148
Chinese	20	102.06	14.88	.08	10-1	1.000
Other ethnic group	81	93.16	16.83	–.53	11-1	.058
Total	14,860	100.00	15.00	–	$F = 68.91$.000

Note: Observations (N) were unweighted; means, SD and ANOVA post hoc multiple comparison tests were weighted with UK sampling weight. † Only comparisons between white and other ethnic groups were presented.

Table 2
Parental education and children's ethnicity in the MCS.

NVQs	White %	Mixed %	Indian %	Pakistani %	Bangladeshi %	Black Caribbean %	Black African %	Other Black %	Other Asian %	Chinese %	Other groups %
<i>Mothers</i>											
None	8.0	11.8	16.0	36.5	43.1	12.6	22.3	28.1	30.4	19.0	15.5
NVQ 1	7.5	4.3	4.6	9.6	7.0	5.8	3.0	0	2.6	0	2.0
NVQ 2	29.6	23.3	16.7	21.9	22.0	22.0	12.4	19.3	9.2	10.0	18.7
NVQ 3	15.2	15.3	15.4	11.9	11.8	14.8	7.4	15.2	12.4	10.9	18.4
NVQ 4	31.7	29.9	35.1	11.5	14.6	30.2	32.0	33.2	31.0	52.8	33.0
NVQ 5	8.0	15.4	12.2	8.4	1.5	14.7	22.9	4.3	14.5	7.2	12.5
Mean	2.8	2.9	2.9	1.8	1.5	2.9	2.9	2.4	2.2	3.0	2.9
<i>Fathers</i>											
None	8.0	6.2	14.5	39.4	47.9	9.3	11.6	42.3	20.6	26.3	20.5
NVQ 1	6.1	3.2	3.4	5.9	6.6	11.7	1.3	0	3.7	0	1.6
NVQ 2	27.6	20.0	17.6	17.4	18.7	17.1	11.3	0	16.0	19.5	0.5
NVQ 3	15.9	14.8	11.2	10.0	7.5	10.3	6.5	5.5	21.5	1.4	8.4
NVQ 4	30.2	38.1	31.9	13.1	9.3	34.2	33.6	35.5	21.0	31.0	45.3
NVQ 5	12.2	17.7	21.3	14.2	10.0	17.4	35.6	16.6	17.2	21.8	23.8
Mean	2.9	3.3	3.1	1.9	1.5	3.0	3.6	2.4	2.7	2.8	3.3

independent schools and about half of these participated voluntarily in the assessment. Children attending these independent schools come largely from affluent white families and perform well in educational tests, so the exclusion of some of them is likely to have reduced the attainment scores of the whites by a small but negligible amount. On the basis of their performance in the tests, the children were graded into levels 2, 3, 4, and 5. The DfES has released the results as percentages of the racial and ethnic groups passing at levels 4 and 5. These are shown in column 3 of Table 3.

Column 4 gives race differences in the educational attainment of 16-year-olds for 2004 that have also been recorded by the DfES (Department for Educational & Skills, 2005). The measure is the percentage of the racial groups who achieve 5 or more grade A–C passes in the subjects (mathematics, English, physics, history, etc.) taken in the public General Certificate of Secondary Education (GCSE) examination, normally taken at the age of 16 years. Performance for each subject is graded A to G and the DfES scored the results as A = 7, B = 6, C = 5 ... G = 1 for each subject taken and summed these scores to produce a total. The most academically able students normally take nine subjects giving a maximum total score of 63. A limitation of the data is that it only gives results for students in state schools. It did not include those in fee paying independent schools that comprise about 7% of the school student population and are largely used by the higher socioeconomic status whites. The students attending these perform much better than those in

the state schools in GCSE examinations. The effect of this will be that the true scores of the whites will have been a little higher than those given in Table 3.

Column 5 gives race differences in the educational attainment of 17- and 18-year-olds expressed as the percentages obtaining top scores of 26–30 in the A-level examinations for those applying for university for 1996–2000 given by Leslie (2005). These examinations are normally taken in three or four subjects, each of which is graded from A to E, and which are scored as A = 10, B = 8, C = 6, etc. Column 6 gives race differences in the average weekly male earnings given in a survey carried out by the T.U.C. (Trades Union Congress, 2002).

5. Discussion

There are six points of interest in the results. First, the Pakistanis and Bangladeshis (IQs = 86.74 and 87.90) obtained approximately the same IQs as those in the 12 previous studies of South Asians in Britain with a median IQ of 89. However, in the present study the Indians (IQ 97.54) performed significantly better and there is a substantial and significant ($p < .001$) IQ difference of approximately 10 IQ points between these and the Pakistanis and Bangladeshis. This difference is likely attributable principally to the greater educational qualifications of the parents of the Indians than of the Pakistanis and Bangladeshis shown in Table 2. This IQ advantage of the Indians is consistent with their greater attainment in education and earnings as compared with Pakistanis and Bangladeshis shown in Table 3.

Second, the three groups of Africans obtained lower IQs than the whites with IQs of 96.68 (Black Caribbeans), 90.02 (Black Africans) and 91.95 (Other Blacks). These IQs are higher than those in the 22 previous studies summarised by Lynn (2006) in which Africans obtained a median IQ of 86. These results suggest that the intelligence of Africans has increased relative to that of whites in recent years. However, this apparent improvement may be in part attributable to the young age at which the children were tested. Black children tend to mature faster than white children in the first years of life (Lynn, 1998) and they enter puberty a bit earlier (Sun, 2002). Evidence based on experience in the United

Table 3
Race differences in intelligence, educational attainment and earnings.

	IQ	Math Age 11 2003	GCSE Age 16 2004	A level Age 18 1996–2000	Weekly earnings 2001
White	100.87	74	52	13.8	332
Indian	96.87	80	67	11.3	327
Pakistani	85.62	61	45	6.1	182
Bangladeshi	86.00	66	48	6.6	182
Black Caribbean	96.68	61	36	2.3	225
Black African	90.02	64	43	2.3	225
Chinese	102.06	89	74	16.8	368

States has shown that black-white IQ differences become larger when children get older (Meisenberg, 2009).

Third, the Chinese obtained a higher IQ than the whites by 1.2 IQ points. Although the size of the sample was very small, this result is useful as the first study to provide an IQ for the Chinese in Britain.

Fourth, the results show that the race differences in IQs are present in 5 year olds. This refutes the claims sometimes made that the lower IQs of the racial minorities are attributable to poor schooling and/or the prejudice of teachers. For example: “a poor quality curriculum coupled with poor quality instruction, a poorly prepared teacher, and limited resources add up to poor performance on so-called objective tests” (Ladson-Billings, 2004, p. 91).

Fifth, there are two points of interest in the relation between parental education and children's ethnicity shown in Table 2. First, the Indian mothers and fathers have higher educational qualifications than do the Pakistanis and Bangladeshis consistent with the higher IQs of the Indian children shown in Table 1, and the better performance of Indians in education and earnings shown in Table 3. The better performance of Indians than of the Pakistanis and Bangladeshis in all these respects is likely attributable to selective migration of Indians to the United Kingdom, as compared with that of Pakistanis and Bangladeshis. Second, there is an anomaly in the high educational qualifications of the Black Caribbeans and the Black Africans and the low IQs of their children. The high educational qualifications of these two groups is likely attributable to selective migration of those with good educational qualifications to the United Kingdom, and the low IQs of their children are likely attributable to regression to the mean of the lower African IQ discussed by Jensen (1998, pp. 467–472).

Sixth, the racial differences in IQs are broadly but not wholly consistent with the differences in educational attainment and earnings shown in Table 3. In math at age 11 years Chinese performed best followed by the Indians, then by the whites, and finally by the Pakistanis, Bangladeshi, and the Africans. The same

rank order was present for GCSE performance at age 16. The better performance of Indians than of whites are anomalous results. However, these are not present in the A level results at age 18 where the Chinese performed best and whites performed better than the Indians; Pakistanis and Bangladeshis came next, while Blacks performed worst. In adult weekly earnings the rank order was similar with the Chinese performing best followed by whites and then by Indians. However, Blacks came next, while Pakistanis and Bangladeshis performed worst. Part of the explanation for the poor earnings of the Pakistanis and Bangladeshis may be that many of them have achieved relatively lower educational qualifications because they have a poorer command of English compared than those from other ethnic minority groups.

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