

# **Passing through school: the evolution of attainment of England's ethnic minorities**

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## 1 Introduction

1.1 This report updates the research carried out in Wilson et al (2005)<sup>1</sup>, and uses the latest pupil census (PLASC/NPD) to track pupils' progress through school from Key Stage 1 (KS1; age 7) to Key Stage 4 (GCSEs and equivalent; age 16). The focus is on the different trajectories followed by different ethnic groups, both in the raw data and once we account for correlating variables such as gender, income, and the neighbourhoods in which the pupils live.

1.2 The present study includes two key extensions to the original analyses:

(a) Using PLASC/NPD 2007 we are now able to track the same cohort through from KS1 to KS4, so we can analyse how the cohort of students who took GCSEs in 2007 have done, relative to their peers, since the age of 7. We have carried out all the analyses using two datasets:

- (i) a balanced panel, i.e. including only those students for whom we have data at every Key Stage;
- (ii) cross sections, i.e. including all students for whom we have data at each Key Stage separately.

The advantage of (i) is that differences in performance at different ages cannot be due to selection, since exactly the same group of students are present each time. The advantage of (ii) is that it uses all available data. Problems in interpretation may arise if there are significant differences between the two samples. We include both sets of analyses in this report. The key point to note is that for all students other than those with Black African ethnicity there is very little difference in the results across the two datasets. This concurs with our previous work, and derives from the extent of recent immigration for this group. Appendix Figure A1 illustrates the differences between the balanced panel and the cross sections at KS3 (age 14) and KS4 for Black African students.

This summary refers to the balanced panel results unless otherwise stated.

(b) There are now more disaggregated ethnicity categories available. We can therefore investigate the mixed heritage groups for the first time, as well as those who identify themselves as Traveller/Gypsy. Table 1 contains details of the sample. Note that the numbers in some of the groups are small; in particular there are very small numbers in the Traveller/Gypsy category. This needs to be borne in mind when interpreting the results.

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<sup>1</sup> Wilson, D, Burgess, S and Briggs, A (2005) *The dynamics of school attainment of England's ethnic minorities*, CMPO DP 05/130, CMPO, University of Bristol. Forthcoming in the *Journal of Population Economics*, 2009.

## 2 Data and Methods

2.1 We use PLASC/NPD 2007 from which we obtain the pupils' test score history at each Key Stage of the National Curriculum, at ages 7 (KS1); 11 (KS2, the end of primary schooling); 14 (KS3) and 16 (KS4 or GCSEs, the end of compulsory education). PLASC/NPD also contains the following individual characteristics: ethnicity; gender; month of birth; eligibility for free school meals (FSM; an indicator of family poverty); an indicator of special educational needs (SEN); and each pupil's full home postcode.

2.2 Some of the pupil characteristics are time-varying: FSM-eligibility; SEN status; school attended; home postcode. We measure all of these variables at one date only, taking them all from the 2007 census.

2.3 We focus on state school pupils in England, and carry out the analyses on both the balanced panel and cross sections, as outlined above. Table 1 provides details of our sample sizes by ethnicity, gender, and FSM-eligibility.

2.4 Using pupils' postcodes, we match in data on neighbourhoods. We use two measures of neighbourhood: the MOSAIC classification at postcode level<sup>2</sup>, and the Income Deprivation Affecting Children Index (IDACI), measured at Super Output Area level. Our favoured specification includes the IDACI index.

2.5 We want to compare the progress through the Key Stages of different ethnic groups. Because Key Stage tests are scored differently at the different stages, we standardise each Key Stage score. Results for all but the value-added analysis are therefore presented in units of standard deviation of scores, separately for each age. So a value of -0.1 for a group at KS2, for example, means that the average test score for that group is 10% of a standard deviation of test scores below the mean, the standard deviation being for all KS2 scores of that cohort.

2.6 The methods used in the analyses for this report replicate those of our original work (see footnote 1) and are explained in great detail there. One extension to note: in some of the regressions (Results section 3.5) we include dummy variables interacting ethnicity, gender and FSM status. This is to allow the effect of FSM-eligibility on attainment to vary by ethnicity and gender.

2.7 For our analyses of differences across ethnic groups in the value-added between Key Stages, we again use the DfES (now DCSF) method of calculating value-added, detailed on page 14 of Wilson et al (2005).

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<sup>2</sup> For more information see <http://www.experian.co.uk/business/products/data/113.html>

### **3 Results**

3.1 We start this results section with the observation that the key results from our previous analyses are again found using the more recent data.

3.2 Here we briefly summarise these results, plus our additional findings, below, referencing the relevant Figures and Tables included in this report.

#### **3.3 Raw attainment gaps**

##### **By ethnicity: Figures 1a-b**

3.3.1 We find that all quantitatively numerous minority ethnic groups show rapid progression, relative to White students, between KS3 and KS4 (top two panels of the Figures). The exceptions to this are the Mixed Heritage groups, White Irish and Traveller/Gypsy. This is one case in point where it is important to bear in mind the caveat on our results in cases where the groups contain very small numbers.

3.3.2 The South Asian groups make progress relative to White students throughout compulsory schooling, including Pakistani and Bangladeshi students who start from a low attainment level at KS1.

3.3.3 By contrast, Black Caribbean and Black Other groups exhibit a relative decline from the age of 7 to 14 (KS3), with the Black African trajectory much flatter. All three groups then progress faster on average between KS3 and KS4 as described above.

3.3.4 Notwithstanding the more rapid progress of most minority groups, the levels of attainment of some groups at age 16 are below that of White students on average. This is true for Black Caribbean; Black Other; Pakistani; Traveller/Gypsy; Mixed Heritage White and Black Caribbean; Mixed Heritage White and Black African. For some groups, the level is only marginally below white students, for others considerably so.

##### **By ethnicity and eligibility for free school meals (FSM): Figures 2a-b & 3a-b**

3.3.5 When we additionally split the sample by FSM-eligibility, we find similar patterns to those described for the whole sample above.

3.3.6 The key point to note, across all ethnic groups, is the vertical shift downwards when comparing FSM-eligible students to those who are not eligible.

##### **By ethnicity and gender: Figures 4a-b & 5a-b**

3.3.7 When we split the sample by gender, we find that female students, in general, achieve higher attainment levels at the age of 16 than male students.

3.3.8 Much of their relative gain comes between the ages of 14 and 16, particularly among the South Asian groups, while the performance of White, Traveller/Gypsy and Mixed Heritage boys declines in this age range.

### **By ethnicity, gender and FSM-eligibility: Figures 6a-b & 7a-b**

3.3.9 The relative performance of FSM-eligible, White (British and Irish) boys declines through secondary school (ages 11-16), with no reversal in that trend after age 14. This is not the case for FSM-eligible White girls, nor for most minority ethnic FSM-eligible boys, who generally reverse the trend post-14.

3.3.10 In general, FSM-eligible female students progress faster than their male peers between KS3 and KS4.

## **3.4 Conditional attainment gaps**

3.4.1 Following the same method as our earlier paper, we now include individual controls for gender, FSM status (as a proxy for poverty), month of birth, special educational needs (SEN) status, and two characterisations of neighbourhood, MOSAIC and the IDACI index of child deprivation.

3.4.2 In Table 2d we show the impact on the estimated ethnicity factors of adding these controls to the age 16 regression. Column 1 has no controls and so simply replicates the raw figures shown in Figure 1. We add individual controls in Column 2. Unsurprisingly, these add a lot to the explanatory power of the model – raising the  $R^2$  from 0.008 to 0.168. This change in the  $R^2$  makes an important point: ethnicity itself explains very little of the difference between scores, less than 1%. But including gender and poverty and the other variables raises this considerably.

3.4.3 We adopt specification 3 of Table 2d (which includes the IDACI index as our neighbourhood variable) and run this set of controls on tests at each Key Stage. The results are in Table 4a. Poverty has a significant, negative, effect at all test ages<sup>3</sup>.

3.4.4 These regressions produce a set of conditional ethnicity effects and for convenience we present the ethnicity coefficients from Table 4a graphically in Figure 8a. Since ‘White’ is the omitted category in the regressions, the lines should be compared to zero to judge relative progress.

3.4.5 Again, the results of our 2005 analysis are largely repeated for the KS1 – KS4 balanced panel:

3.4.6 South Asian groups progress faster than White students, regardless of their relative starting points at KS1.

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<sup>3</sup> Recall that we only measure the time-varying characteristics such as FSM-eligibility at one date, 2007.

3.4.7 The picture for the Black groups is more mixed. While all Black groups start above Whites at KS1, the performance of Black Caribbean and Black Other students relatively declines on average until age 14, but they regain their advantage through more rapid progress between 14 and 16. Black African students on average perform better than their White peers throughout compulsory schooling, once individual factors are controlled for.

3.4.8 Conditional on these individual factors, White students are out-performed at KS4 by all other ethnic groups apart from Mixed Heritage White and Black Caribbean (marginally below) and Traveller/Gypsy (who through all analyses perform relatively extremely poorly).

### **3.5 Interaction of FSM-eligibility, gender and ethnicity**

3.5.1 Using the same model as above, we now include dummy variables interacting ethnicity and FSM status. This is to allow the effect of FSM-eligibility on attainment to vary by ethnicity.

3.5.2 The results of the FSM interactions are shown in Tables 7a-b. They are consistent with the unconditional FSM and ethnicity test score gaps shown in Figures 2a-b and 3a-b. FSM-eligible pupils attain, on average, lower scores across all Key Stages and all ethnic groups, with the exception of Chinese and Bangladeshi students. For these two groups FSM status makes little difference to attainment.

3.5.3 To allow flexibility in the effect of FSM-eligibility across gender as well as ethnicity, we run a further model which includes ethnicity, FSM and gender interactions.

3.5.4 The results of the FSM and gender interactions with ethnicity are shown in Tables 9a-d. Many of the additional coefficients are insignificant, and, as there is no difference in the  $R^2$ , it is clear that these interactions are not adding much explanatory power to the model. The results are largely consistent with Figures 6a-b and 7a-b, and highlight the poor and declining relative performance of FSM-eligible White boys through secondary school.

### **3.6 Value-added gaps**

3.6.1 We now follow each pupil through the tests at different ages, and measure progress following the DfES (now DCSF) approach to value-added. Again, this replicates our 2005 methodology. We use GCSE points as the metric.

3.6.2 As expected, given the patterns of relative progress described so far, in general minority ethnic groups have higher value-added than White students on average, both between KS2 and KS4 and between KS3 and KS4 (see Table 6).

3.6.3 When we include interactions for FSM-eligibility with ethnicity, we confirm that the value-added of minority ethnic groups is higher relative to White pupils through secondary school (see Table 8).

3.6.3 Finally, also including gender interactions as above suggests that this relative slow progress between KS2 and KS4 among White students is particularly strong among FSM-eligible boys (see Table 10).

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**Table 1: Sample Sizes by Ethnicity, Gender & FSM**

Ethnicity	Sample Size (Balanced Panel)					Percentage of sample (Balanced Panel)
	Male FSM	Female FSM	Male Non-FSM	Female Non-FSM	Total	
Black Caribbean	618	763	2,177	2,375	5,933	1.23
Black African	678	705	1,505	1,545	4,433	0.92
Black Other	198	205	691	642	1,736	0.36
Indian	537	515	4,623	4,696	10,371	2.15
Pakistani	1,763	1,750	3,549	3,493	10,555	2.19
Bangladeshi	948	1,134	930	1,017	4,029	0.84
Chinese	68	84	579	595	1,326	0.28
Other Asian	185	186	916	960	2,247	0.47
White and Asian	143	155	936	941	2,175	0.45
White and Black Caribbean	487	568	1,665	1,861	4,581	0.95
White and Black African	91	113	347	337	888	0.18
Other	675	684	2,362	2,356	6,077	1.26
White British	17,565	19,285	191,041	190,763	418,654	86.89
White Irish	107	123	775	750	1,755	0.36
Traveller/Gypsy	23	35	30	53	141	0.03
Other White	497	462	3,004	2,954	6,917	1.44
<b>Total</b>	<b>24,583</b>	<b>26,767</b>	<b>215,130</b>	<b>215,338</b>	<b>481,818</b>	<b>100.00</b>

**Table 2a: Regressions of standardised values of Key Stage 1 scores for balanced panel**

	Explanatory Variables	(1)	(2)	(3)	(4)
Ethnic Group	Black Caribbean	-0.168*** (0.0130)	-0.0215* (0.0117)	0.101*** (0.0117)	0.0188 (0.0121)
	Black African	-0.200*** (0.0150)	-0.0459*** (0.0135)	0.103*** (0.0135)	-0.0144 (0.0143)
	Black Other	-0.191*** (0.0239)	-0.0632*** (0.0215)	0.0594*** (0.0214)	-0.00848 (0.0216)
	Indian	-0.0665*** (0.00989)	-0.0981*** (0.00890)	-0.0683*** (0.00883)	-0.110*** (0.00958)
	Pakistani	-0.530*** (0.00981)	-0.385*** (0.00888)	-0.301*** (0.00885)	-0.354*** (0.0103)
	Bangladeshi	-0.596*** (0.0157)	-0.416*** (0.0143)	-0.277*** (0.0142)	-0.397*** (0.0149)
	Chinese	0.0570** (0.0274)	-0.00217 (0.0246)	0.0295 (0.0244)	-0.0201 (0.0246)
	Other Asian	-0.0481** (0.0210)	-0.0493*** (0.0189)	-0.00255 (0.0188)	-0.0697*** (0.0190)
	White Asian	0.140*** (0.0214)	0.155*** (0.0192)	0.168*** (0.0191)	0.126*** (0.0191)
	White and Black Caribbean	-0.101*** (0.0148)	0.0233* (0.0133)	0.0968*** (0.0132)	0.0767*** (0.0133)
	White and Black African	-0.0364 (0.0334)	0.0606** (0.0301)	0.133*** (0.0299)	0.0835*** (0.0299)
	Other	-0.117*** (0.0129)	-0.0273** (0.0116)	0.0342*** (0.0115)	-0.0350*** (0.0117)
	White Irish	0.0993*** (0.0238)	0.137*** (0.0214)	0.172*** (0.0213)	0.116*** (0.0212)
	Traveller/ Gypsy	-0.847*** (0.0838)	-0.490*** (0.0754)	-0.494*** (0.0749)	-0.443*** (0.0744)
	Other White	-0.126*** (0.0121)	-0.0928*** (0.0109)	-0.0661*** (0.0108)	-0.142*** (0.0109)
	Personal Characteristics	Gender (=1 if female)		0.141*** (0.00259)	0.147*** (0.00257)
Free School Meal (=1 if has FSM)			-0.385*** (0.00430)	-0.259*** (0.00445)	-0.239*** (0.00446)
SEN(=1 if SEN without statement)			-0.879*** (0.00383)	-0.841*** (0.00381)	-0.826*** (0.00382)
SEN(=1 if SEN with statement)			-1.498*** (0.0113)	-1.481*** (0.0112)	-1.471*** (0.0113)
Month of Birth		No	Yes	Yes	Yes
Neighbourhood Characteristics	IDACI	No	No	Yes	No
	MOSAIC classification	No	No	No	Yes
Observations		481818	481818	480150	470389
R-squared		0.010	0.199	0.215	0.231

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 2b: Regressions of standardised values of Key Stage 2 scores for balanced panel**

	Explanatory Variables	(1)	(2)	(3)	(4)	
Ethnic Group	Black Caribbean	-0.344*** (0.0130)	-0.177*** (0.0118)	-0.0404*** (0.0117)	-0.164*** (0.0121)	
	Black African	-0.239*** (0.0150)	-0.0766*** (0.0136)	0.0879*** (0.0136)	-0.0835*** (0.0143)	
	Black Other	-0.284*** (0.0239)	-0.147*** (0.0217)	-0.0117 (0.0215)	-0.116*** (0.0216)	
	Indian	-0.00272 (0.00989)	-0.0383*** (0.00895)	-0.00459 (0.00886)	-0.0627*** (0.00958)	
	Pakistani	-0.532*** (0.00980)	-0.378*** (0.00894)	-0.284*** (0.00888)	-0.343*** (0.0103)	
	Bangladeshi	-0.366*** (0.0157)	-0.170*** (0.0144)	-0.0148 (0.0143)	-0.165*** (0.0149)	
	Chinese	0.392*** (0.0274)	0.334*** (0.0248)	0.369*** (0.0245)	0.296*** (0.0246)	
	Other Asian	0.0832*** (0.0210)	0.0817*** (0.0191)	0.133*** (0.0189)	0.0390** (0.0190)	
	White Asian	0.212*** (0.0214)	0.221*** (0.0194)	0.234*** (0.0192)	0.177*** (0.0191)	
	White and Black Caribbean	-0.168*** (0.0148)	-0.0291** (0.0134)	0.0523*** (0.0133)	0.0193 (0.0133)	
	White and Black African	-0.0141 (0.0334)	0.0954*** (0.0303)	0.175*** (0.0300)	0.108*** (0.0299)	
	Other	-0.00528 (0.0129)	0.0879*** (0.0117)	0.156*** (0.0116)	0.0593*** (0.0117)	
	White Irish	0.177*** (0.0238)	0.214*** (0.0215)	0.251*** (0.0213)	0.172*** (0.0212)	
	Traveller/ Gypsy	-0.942*** (0.0838)	-0.531*** (0.0759)	-0.529*** (0.0752)	-0.486*** (0.0744)	
	Other White	0.0320*** (0.0121)	0.0659*** (0.0109)	0.0967*** (0.0108)	-0.00710 (0.0109)	
	Personal Characteristics	Gender (=1 if female)		-0.0516*** (0.00261)	-0.0455*** (0.00258)	-0.0428*** (0.00257)
		Free School Meal (=1 if has FSM)		-0.393*** (0.00432)	-0.253*** (0.00447)	-0.229*** (0.00446)
SEN(=1 if SEN without statement)			-0.997*** (0.00385)	-0.955*** (0.00383)	-0.938*** (0.00382)	
SEN(=1 if SEN with statement)			-1.549*** (0.0114)	-1.531*** (0.0113)	-1.520*** (0.0113)	
Month of Birth		No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No	
	MOSAIC classification	No	No	No	Yes	
Observations		481818	481818	480150	470389	
R-squared		0.010	0.189	0.209	0.231	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 2c: Regressions of standardised values of Key Stage 3 scores for balanced panel**

	Explanatory Variables	(1)	(2)	(3)	(4)	
Ethnic Group	Black Caribbean	-0.406*** (0.0130)	-0.221*** (0.0117)	-0.0224* (0.0115)	-0.175*** (0.0118)	
	Black African	-0.204*** (0.0150)	-0.0168 (0.0136)	0.221*** (0.0133)	0.00708 (0.0139)	
	Black Other	-0.385*** (0.0239)	-0.229*** (0.0216)	-0.0340 (0.0211)	-0.169*** (0.0210)	
	Indian	0.140*** (0.00988)	0.106*** (0.00891)	0.155*** (0.00870)	0.0890*** (0.00934)	
	Pakistani	-0.464*** (0.00980)	-0.280*** (0.00890)	-0.145*** (0.00872)	-0.217*** (0.0100)	
	Bangladeshi	-0.342*** (0.0157)	-0.0976*** (0.0143)	0.127*** (0.0140)	-0.0601*** (0.0146)	
	Chinese	0.594*** (0.0273)	0.540*** (0.0247)	0.588*** (0.0241)	0.496*** (0.0240)	
	Other Asian	0.227*** (0.0210)	0.234*** (0.0190)	0.308*** (0.0185)	0.196*** (0.0185)	
	White Asian	0.284*** (0.0214)	0.296*** (0.0193)	0.316*** (0.0188)	0.247*** (0.0186)	
	White and Black Caribbean	-0.272*** (0.0148)	-0.117*** (0.0133)	0.00195 (0.0130)	-0.0405*** (0.0130)	
	White and Black African	-0.0589* (0.0334)	0.0689** (0.0301)	0.186*** (0.0295)	0.0961*** (0.0292)	
	Other	0.0223* (0.0128)	0.130*** (0.0116)	0.229*** (0.0113)	0.109*** (0.0114)	
	White Irish	0.181*** (0.0238)	0.221*** (0.0214)	0.276*** (0.0209)	0.182*** (0.0207)	
	Traveller/ Gypsy	-0.929*** (0.0837)	-0.486*** (0.0755)	-0.490*** (0.0738)	-0.448*** (0.0726)	
	Other White	0.0881*** (0.0121)	0.128*** (0.0109)	0.172*** (0.0106)	0.0435*** (0.0106)	
	Personal Characteristics	Gender (=1 if female)		-0.0299*** (0.00260)	-0.0210*** (0.00254)	-0.0178*** (0.00251)
		Free School Meal (=1 if has FSM)		-0.502*** (0.00430)	-0.299*** (0.00439)	-0.276*** (0.00435)
		SEN(=1 if SEN without statement)		-1.031*** (0.00383)	-0.971*** (0.00376)	-0.951*** (0.00373)
SEN(=1 if SEN with statement)			-1.368*** (0.0113)	-1.343*** (0.0111)	-1.332*** (0.0110)	
Month of Birth		No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No	
	MOSAIC classification	No	No	No	Yes	
Observations		481818	481818	480150	470389	
R-squared		0.012	0.196	0.237	0.270	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 2d: Regressions of standardised values of Key Stage 4 scores for balanced panel**

	Explanatory Variables	(1)	(2)	(3)	(4)
Ethnic Group	Black Caribbean	-0.213***	-0.0443***	0.0993***	0.0257**
		(0.0130)	(0.0119)	(0.0119)	(0.0122)
	Black African	0.0484***	0.220***	0.392***	0.281***
		(0.0150)	(0.0138)	(0.0138)	(0.0145)
	Black Other	-0.234***	-0.0859***	0.0545**	-0.0110
		(0.0240)	(0.0220)	(0.0218)	(0.0218)
	Indian	0.404***	0.373***	0.408***	0.364***
		(0.00990)	(0.00907)	(0.00897)	(0.00968)
	Pakistani	-0.0729***	0.0989***	0.197***	0.145***
		(0.00982)	(0.00905)	(0.00899)	(0.0104)
	Bangladeshi	0.0912***	0.315***	0.476***	0.357***
		(0.0158)	(0.0146)	(0.0145)	(0.0151)
	Chinese	0.780***	0.731***	0.766***	0.710***
		(0.0274)	(0.0251)	(0.0248)	(0.0249)
	Other Asian	0.330***	0.336***	0.389***	0.319***
		(0.0211)	(0.0193)	(0.0191)	(0.0192)
	White Asian	0.230***	0.238***	0.252***	0.205***
		(0.0214)	(0.0196)	(0.0194)	(0.0193)
White and Black Caribbean	-0.247***	-0.107***	-0.0215	-0.0293**	
	(0.0148)	(0.0136)	(0.0134)	(0.0135)	
White and Black African	-0.0519	0.0671**	0.154***	0.118***	
	(0.0335)	(0.0307)	(0.0304)	(0.0302)	
Other	0.0804***	0.180***	0.252***	0.186***	
	(0.0129)	(0.0118)	(0.0117)	(0.0118)	
White Irish	0.0829***	0.120***	0.162***	0.107***	
	(0.0238)	(0.0218)	(0.0216)	(0.0215)	
Traveller/ Gypsy	-1.033***	-0.650***	-0.664***	-0.616***	
	(0.0839)	(0.0769)	(0.0761)	(0.0752)	
Other White	0.146***	0.185***	0.217***	0.141***	
	(0.0121)	(0.0111)	(0.0109)	(0.0110)	
Personal Characteristics	Gender (=1 if female)		0.127***	0.134***	0.138***
			(0.00264)	(0.00261)	(0.00260)
	Free School Meal (=1 if has FSM)		-0.468***	-0.321***	-0.284***
			(0.00438)	(0.00452)	(0.00451)
	SEN(=1 if SEN without statement)		-0.965***	-0.920***	-0.897***
		(0.00390)	(0.00388)	(0.00386)	
SEN(=1 if SEN with statement)		-1.048***	-1.028***	-1.014***	
		(0.0115)	(0.0114)	(0.0114)	
Month of Birth	No		Yes	Yes	Yes
	Yes				
Neighbourhood Characteristics	IDACI	No	No	Yes	No
	MOSAIC classification	No	No	No	Yes
Observations		481818	481818	480150	470389
R-squared		0.008	0.168	0.190	0.214

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 3a: Regressions of standardised values of Key Stage 1 scores for cross-sections**

	Explanatory Variables	(1)	(2)	(3)	(4)	
Ethnic Group	Black Caribbean	-0.145*** (0.0124)	-0.000935 (0.0108)	0.120*** (0.0108)	0.0345*** (0.0111)	
	Black African	-0.160*** (0.0145)	-0.0254** (0.0126)	0.121*** (0.0126)	-0.00189 (0.0133)	
	Black Other	-0.157*** (0.0229)	-0.0362* (0.0199)	0.0824*** (0.0198)	0.0109 (0.0199)	
	Indian	-0.0270*** (0.00965)	-0.0795*** (0.00840)	-0.0524*** (0.00833)	-0.0922*** (0.00900)	
	Pakistani	-0.510*** (0.00929)	-0.364*** (0.00814)	-0.282*** (0.00809)	-0.331*** (0.00939)	
	Bangladeshi	-0.567*** (0.0149)	-0.389*** (0.0131)	-0.251*** (0.0130)	-0.370*** (0.0136)	
	Chinese	0.118*** (0.0268)	0.0283 (0.0233)	0.0582** (0.0231)	0.00488 (0.0233)	
	Other Asian	-0.0281 (0.0203)	-0.0453** (0.0177)	-0.000352 (0.0175)	-0.0667*** (0.0177)	
	White Asian	0.139*** (0.0204)	0.145*** (0.0178)	0.156*** (0.0176)	0.114*** (0.0176)	
	White and Black Caribbean	-0.0981*** (0.0139)	0.0322*** (0.0121)	0.104*** (0.0121)	0.0828*** (0.0121)	
	White and Black African	-0.0211 (0.0315)	0.0757*** (0.0274)	0.147*** (0.0272)	0.0951*** (0.0272)	
	Other	-0.0970*** (0.0122)	-0.0184* (0.0106)	0.0423*** (0.0106)	-0.0298*** (0.0107)	
	White Irish	0.0955*** (0.0226)	0.135*** (0.0197)	0.168*** (0.0195)	0.111*** (0.0195)	
	Traveller/ Gypsy	-1.105*** (0.0655)	-0.611*** (0.0570)	-0.607*** (0.0566)	-0.570*** (0.0562)	
	Other White	-0.112*** (0.0115)	-0.0882*** (0.00998)	-0.0622*** (0.00990)	-0.140*** (0.01000)	
	Personal Characteristics	Gender (=1 if female)		0.135*** (0.00239)	0.140*** (0.00237)	0.143*** (0.00237)
		Free School Meal (=1 if has FSM)		-0.383*** (0.00379)	-0.257*** (0.00393)	-0.238*** (0.00393)
SEN(=1 if SEN without statement)			-0.904*** (0.00333)	-0.861*** (0.00332)	-0.842*** (0.00333)	
SEN(=1 if SEN with statement)			-1.697*** (0.00794)	-1.669*** (0.00787)	-1.652*** (0.00788)	
Month of Birth		No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No	
	MOSAIC classification	No	No	No	Yes	
Observations		532947	532947	530957	520130	
R-squared		0.010	0.250	0.267	0.282	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 3b: Regressions of standardised values of Key Stage 2 scores for cross-sections**

	Explanatory Variables	(1)	(2)	(3)	(4)
Ethnic Group	Black Caribbean	-0.370***	-0.192***	-0.0584***	-0.181***
		(0.0116)	(0.0101)	(0.0101)	(0.0104)
	Black African	-0.363***	-0.200***	-0.0458***	-0.207***
		(0.0120)	(0.0105)	(0.0105)	(0.0111)
	Black Other	-0.268***	-0.131***	-0.00286	-0.106***
		(0.0214)	(0.0187)	(0.0186)	(0.0186)
	Indian	0.0208**	-0.0356***	-0.00539	-0.0605***
		(0.00921)	(0.00805)	(0.00796)	(0.00856)
	Pakistani	-0.540***	-0.380***	-0.291***	-0.345***
		(0.00886)	(0.00780)	(0.00774)	(0.00889)
	Bangladeshi	-0.397***	-0.193***	-0.0411***	-0.186***
		(0.0142)	(0.0125)	(0.0124)	(0.0130)
	Chinese	0.394***	0.303***	0.335***	0.264***
		(0.0249)	(0.0217)	(0.0215)	(0.0216)
	Other Asian	-0.0237	-0.0238	0.0262*	-0.0608***
		(0.0177)	(0.0155)	(0.0153)	(0.0154)
	White Asian	0.186***	0.189***	0.201***	0.144***
		(0.0195)	(0.0171)	(0.0169)	(0.0168)
	White and Black Caribbean	-0.169***	-0.0232*	0.0560***	0.0235**
		(0.0137)	(0.0120)	(0.0119)	(0.0119)
White and Black African	-0.0501*	0.0538**	0.127***	0.0607**	
	(0.0295)	(0.0258)	(0.0255)	(0.0255)	
Other	-0.0853***	0.0101	0.0773***	-0.0209**	
	(0.0112)	(0.00978)	(0.00969)	(0.00981)	
White Irish	0.158***	0.192***	0.229***	0.151***	
	(0.0219)	(0.0192)	(0.0190)	(0.0189)	
Traveller/ Gypsy	-1.243***	-0.716***	-0.689***	-0.673***	
	(0.0613)	(0.0536)	(0.0533)	(0.0526)	
Other White	-0.0529***	-0.0141	0.0211**	-0.0810***	
	(0.0103)	(0.00904)	(0.00895)	(0.00903)	
Personal Characteristics	Gender (=1 if female)		-0.0462***	-0.0404***	-0.0380***
			(0.00236)	(0.00233)	(0.00232)
	Free School Meal (=1 if has FSM)		-0.401***	-0.264***	-0.240***
			(0.00370)	(0.00383)	(0.00383)
	SEN(=1 if SEN without statement)		-1.020***	-0.973***	-0.953***
			(0.00328)	(0.00327)	(0.00326)
SEN(=1 if SEN with statement)		-1.744***	-1.715***	-1.696***	
		(0.00800)	(0.00792)	(0.00790)	
Month of Birth	No		Yes	Yes	Yes
	Yes		No	No	No
Neighbourhood Characteristics	IDACI	No	No	Yes	No
	MOSAIC classification	No	No	No	Yes
Observations		551267	551267	549191	537784
R-squared		0.013	0.246	0.266	0.287

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%



**Table 3c: Regressions of standardised values of Key Stage 3 scores for cross-sections**

	Explanatory Variables	(1)	(2)	(3)	(4)	
Ethnic Group	Black Caribbean	-0.479*** (0.0116)	-0.290*** (0.0105)	-0.0907*** (0.0103)	-0.239*** (0.0106)	
	Black African	-0.451*** (0.0107)	-0.262*** (0.00971)	-0.0432*** (0.00959)	-0.219*** (0.0100)	
	Black Other	-0.442*** (0.0210)	-0.282*** (0.0190)	-0.0932*** (0.0186)	-0.221*** (0.0185)	
	Indian	0.136*** (0.00908)	0.101*** (0.00819)	0.149*** (0.00800)	0.0887*** (0.00853)	
	Pakistani	-0.494*** (0.00896)	-0.308*** (0.00814)	-0.175*** (0.00798)	-0.241*** (0.00906)	
	Bangladeshi	-0.412*** (0.0142)	-0.160*** (0.0129)	0.0624*** (0.0127)	-0.118*** (0.0132)	
	Chinese	0.548*** (0.0233)	0.498*** (0.0210)	0.543*** (0.0205)	0.468*** (0.0205)	
	Other Asian	0.0310* (0.0164)	0.0665*** (0.0148)	0.141*** (0.0145)	0.0469*** (0.0145)	
	White Asian	0.265*** (0.0197)	0.277*** (0.0178)	0.296*** (0.0174)	0.228*** (0.0172)	
	White and Black Caribbean	-0.283*** (0.0142)	-0.128*** (0.0128)	-0.0106 (0.0125)	-0.0495*** (0.0125)	
	White and Black African	-0.123*** (0.0290)	-0.000892 (0.0261)	0.113*** (0.0256)	0.0264 (0.0254)	
	Other	-0.0668*** (0.0109)	0.0495*** (0.00988)	0.150*** (0.00967)	0.0332*** (0.00973)	
	White Irish	0.153*** (0.0222)	0.201*** (0.0200)	0.256*** (0.0196)	0.161*** (0.0194)	
	Traveller/ Gypsy	-1.014*** (0.0743)	-0.566*** (0.0670)	-0.527*** (0.0657)	-0.512*** (0.0645)	
	Other White	-0.00136 (0.0100)	0.0539*** (0.00904)	0.105*** (0.00885)	-0.0183** (0.00888)	
	Personal Characteristics	Gender (=1 if female)		-0.0272*** (0.00248)	-0.0187*** (0.00242)	-0.0155*** (0.00240)
		Free School Meal (=1 if has FSM)		-0.499*** (0.00403)	-0.303*** (0.00411)	-0.281*** (0.00408)
		SEN(=1 if SEN without statement)		-1.016*** (0.00364)	-0.957*** (0.00357)	-0.938*** (0.00354)
SEN(=1 if SEN with statement)			-1.369*** (0.0106)	-1.347*** (0.0103)	-1.335*** (0.0102)	
Month of Birth		No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No	
	MOSAIC classification	No	No	No	Yes	
Observations		526104	526104	524020	513039	
R-squared		0.017	0.201	0.241	0.274	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 3d: Regressions of standardised values of Key Stage 4 scores for cross-sections**

	Explanatory Variables	(1)	(2)	(3)	(4)	
Ethnic Group	Black Caribbean	-0.218*** (0.0111)	-0.0482*** (0.00992)	0.0998*** (0.00986)	0.0135 (0.0101)	
	Black African	-0.147*** (0.00940)	-0.00726 (0.00845)	0.152*** (0.00844)	0.0527*** (0.00886)	
	Black Other	-0.229*** (0.0195)	-0.101*** (0.0174)	0.0374** (0.0173)	-0.0302* (0.0173)	
	Indian	0.385*** (0.00876)	0.331*** (0.00784)	0.367*** (0.00773)	0.329*** (0.00825)	
	Pakistani	-0.0953*** (0.00844)	0.0731*** (0.00759)	0.171*** (0.00752)	0.132*** (0.00854)	
	Bangladeshi	-0.00866 (0.0134)	0.213*** (0.0120)	0.379*** (0.0119)	0.258*** (0.0124)	
	Chinese	0.585*** (0.0212)	0.521*** (0.0189)	0.559*** (0.0187)	0.520*** (0.0188)	
	Other Asian	-0.00298 (0.0141)	0.00991 (0.0126)	0.0673*** (0.0125)	0.0282** (0.0126)	
	White Asian	0.199*** (0.0189)	0.198*** (0.0169)	0.213*** (0.0166)	0.169*** (0.0166)	
	White and Black Caribbean	-0.246*** (0.0135)	-0.103*** (0.0121)	-0.0186 (0.0119)	-0.0290** (0.0119)	
	White and Black African	-0.0541** (0.0270)	0.0423* (0.0242)	0.125*** (0.0239)	0.0931*** (0.0238)	
	Other	-0.0519*** (0.00986)	0.0458*** (0.00883)	0.124*** (0.00874)	0.0553*** (0.00885)	
	White Irish	0.0434** (0.0213)	0.0817*** (0.0190)	0.126*** (0.0188)	0.0684*** (0.0186)	
	Traveller/ Gypsy	-1.366*** (0.0531)	-0.935*** (0.0475)	-0.881*** (0.0471)	-0.874*** (0.0464)	
	Other White	-0.0666*** (0.00879)	-0.0372*** (0.00786)	0.00871 (0.00778)	-0.0536*** (0.00787)	
	Personal Characteristics	Gender (=1 if female)		0.124*** (0.00235)	0.130*** (0.00232)	0.134*** (0.00231)
		Free School Meal (=1 if has FSM)		-0.450*** (0.00365)	-0.304*** (0.00377)	-0.271*** (0.00375)
SEN(=1 if SEN without statement)			-0.966*** (0.00326)	-0.916*** (0.00324)	-0.890*** (0.00323)	
SEN(=1 if SEN with statement)			-1.278*** (0.00772)	-1.250*** (0.00763)	-1.228*** (0.00759)	
Month of Birth		No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No	
	MOSAIC classification	No	No	No	Yes	
Observations		581918	581918	579395	567122	
R-squared		0.008	0.207	0.231	0.257	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 4a: Regressions of standardised values of all Key Stage scores with IDACI controls for balanced panel**

	Explanatory Variables	KS1	KS2	KS3	KS4
Ethnic Group	Black Caribbean	0.101***	-0.0404***	-0.0224*	0.0993***
		(0.0117)	(0.0117)	(0.0115)	(0.0119)
	Black African	0.103***	0.0879***	0.221***	0.392***
		(0.0135)	(0.0136)	(0.0133)	(0.0138)
	Black Other	0.0594***	-0.0117	-0.0340	0.0545**
		(0.0214)	(0.0215)	(0.0211)	(0.0218)
	Indian	-0.0683***	-0.00459	0.155***	0.408***
		(0.00883)	(0.00886)	(0.00870)	(0.00897)
	Pakistani	-0.301***	-0.284***	-0.145***	0.197***
		(0.00885)	(0.00888)	(0.00872)	(0.00899)
	Bangladeshi	-0.277***	-0.0148	0.127***	0.476***
		(0.0142)	(0.0143)	(0.0140)	(0.0145)
	Chinese	0.0295	0.369***	0.588***	0.766***
		(0.0244)	(0.0245)	(0.0241)	(0.0248)
	Other Asian	-0.00255	0.133***	0.308***	0.389***
		(0.0188)	(0.0189)	(0.0185)	(0.0191)
	White Asian	0.168***	0.234***	0.316***	0.252***
		(0.0191)	(0.0192)	(0.0188)	(0.0194)
	White and Black Caribbean	0.0968***	0.0523***	0.00195	-0.0215
		(0.0132)	(0.0133)	(0.0130)	(0.0134)
White and Black African	0.133***	0.175***	0.186***	0.154***	
	(0.0299)	(0.0300)	(0.0295)	(0.0304)	
Other	0.0342***	0.156***	0.229***	0.252***	
	(0.0115)	(0.0116)	(0.0113)	(0.0117)	
White Irish	0.172***	0.251***	0.276***	0.162***	
	(0.0213)	(0.0213)	(0.0209)	(0.0216)	
Traveller/ Gypsy	-0.494***	-0.529***	-0.490***	-0.664***	
	(0.0749)	(0.0752)	(0.0738)	(0.0761)	
Other White	-0.0661***	0.0967***	0.172***	0.217***	
	(0.0108)	(0.0108)	(0.0106)	(0.0109)	
Personal Characteristics	Gender (=1 if female)	0.147***	-0.0455***	-0.0210***	0.134***
		(0.00257)	(0.00258)	(0.00254)	(0.00261)
	Free School Meal (=1 if has FSM)	-0.259***	-0.253***	-0.299***	-0.321***
		(0.00445)	(0.00447)	(0.00439)	(0.00452)
SEN(=1 if SEN without statement)	-0.841***	-0.955***	-0.971***	-0.920***	
	(0.00381)	(0.00383)	(0.00376)	(0.00388)	
SEN(=1 if SEN with statement)	-1.481***	-1.531***	-1.343***	-1.028***	
	(0.0112)	(0.0113)	(0.0111)	(0.0114)	
Observations		480150	480150	480150	480150
R-squared		0.215	0.209	0.237	0.190

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 4b: Regressions of standardised values of all Key Stage scores with IDACI controls for cross-sections**

	Explanatory Variables	KS1	KS2	KS3	KS4
Ethnic Group	Black Caribbean	0.120***	-0.0584***	-0.0907***	0.0998***
		(0.0108)	(0.0101)	(0.0103)	(0.00986)
	Black African	0.121***	-0.0458***	-0.0432***	0.152***
		(0.0126)	(0.0105)	(0.00959)	(0.00844)
	Black Other	0.0824***	-0.00286	-0.0932***	0.0374**
		(0.0198)	(0.0186)	(0.0186)	(0.0173)
	Indian	-0.0524***	-0.00539	0.149***	0.367***
		(0.00833)	(0.00796)	(0.00800)	(0.00773)
	Pakistani	-0.282***	-0.291***	-0.175***	0.171***
		(0.00809)	(0.00774)	(0.00798)	(0.00752)
	Bangladeshi	-0.251***	-0.0411***	0.0624***	0.379***
		(0.0130)	(0.0124)	(0.0127)	(0.0119)
	Chinese	0.0582**	0.335***	0.543***	0.559***
		(0.0231)	(0.0215)	(0.0205)	(0.0187)
	Other Asian	-0.000352	0.0262*	0.141***	0.0673***
		(0.0175)	(0.0153)	(0.0145)	(0.0125)
	White Asian	0.156***	0.201***	0.296***	0.213***
		(0.0176)	(0.0169)	(0.0174)	(0.0166)
	White and Black Caribbean	0.104***	0.0560***	-0.0106	-0.0186
		(0.0121)	(0.0119)	(0.0125)	(0.0119)
White and Black African	0.147***	0.127***	0.113***	0.125***	
	(0.0272)	(0.0255)	(0.0256)	(0.0239)	
Other	0.0423***	0.0773***	0.150***	0.124***	
	(0.0106)	(0.00969)	(0.00967)	(0.00874)	
White Irish	0.168***	0.229***	0.256***	0.126***	
	(0.0195)	(0.0190)	(0.0196)	(0.0188)	
Traveller/ Gypsy	-0.607***	-0.689***	-0.527***	-0.881***	
	(0.0566)	(0.0533)	(0.0657)	(0.0471)	
Other White	-0.0622***	0.0211**	0.105***	0.00871	
	(0.00990)	(0.00895)	(0.00885)	(0.00778)	
Personal Characteristics	Gender (=1 if female)	0.140***	-0.0404***	-0.0187***	0.130***
		(0.00237)	(0.00233)	(0.00242)	(0.00232)
	Free School Meal (=1 if has FSM)	-0.257***	-0.264***	-0.303***	-0.304***
		(0.00393)	(0.00383)	(0.00411)	(0.00377)
SEN(=1 if SEN without statement)	-0.861***	-0.973***	-0.957***	-0.916***	
	(0.00332)	(0.00327)	(0.00357)	(0.00324)	
SEN(=1 if SEN with statement)	-1.669***	-1.715***	-1.347***	-1.250***	
	(0.00787)	(0.00792)	(0.0103)	(0.00763)	
Observations		530957	549191	524020	579395
R-squared		0.267	0.266	0.241	0.231

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 5: Regressions of Key Stage 2 to 4 value added for balanced panel**

	Explanatory Variables	(1)	(2)	(3)	(4)
Ethnic Group	Black Caribbean	-0.732	9.271***	18.16***	18.28***
		(1.501)	(1.466)	(1.473)	(1.526)
	Black African	27.94***	38.81***	49.43***	48.37***
		(1.734)	(1.694)	(1.703)	(1.811)
	Black Other	-9.217***	0.387	8.981***	8.630***
		(2.762)	(2.693)	(2.697)	(2.728)
	Indian	59.28***	57.83***	59.99***	58.60***
		(1.142)	(1.113)	(1.111)	(1.213)
	Pakistani	35.34***	46.93***	52.98***	50.72***
		(1.132)	(1.111)	(1.113)	(1.298)
	Bangladeshi	45.17***	60.71***	70.49***	66.43***
		(1.818)	(1.786)	(1.792)	(1.890)
	Chinese	79.82***	77.77***	79.76***	78.01***
		(3.159)	(3.078)	(3.075)	(3.118)
	Other Asian	40.82***	41.86***	45.09***	43.16***
		(2.429)	(2.368)	(2.365)	(2.400)
	White Asian	14.90***	15.27***	16.15***	14.36***
		(2.469)	(2.406)	(2.402)	(2.419)
White and Black Caribbean	-21.18***	-12.95***	-7.625***	-5.871***	
	(1.706)	(1.665)	(1.666)	(1.685)	
White and Black African	-6.467*	1.339	6.935*	7.639**	
	(3.858)	(3.760)	(3.763)	(3.787)	
Other	12.13***	18.54***	23.10***	21.94***	
	(1.484)	(1.448)	(1.448)	(1.477)	
White Irish	-3.425	-1.248	1.678	0.575	
	(2.747)	(2.677)	(2.675)	(2.686)	
Traveller/ Gypsy	-69.10***	-48.80***	-51.17***	-48.11***	
	(9.673)	(9.429)	(9.427)	(9.420)	
Other White	18.28***	20.97***	23.04***	21.04***	
	(1.392)	(1.357)	(1.356)	(1.377)	
Personal Characteristics	Gender (=1 if female)		22.60***	23.02***	23.36***
			(0.324)	(0.324)	(0.326)
	Free School Meal (=1 if has FSM)		-33.95***	-24.73***	-21.52***
			(0.537)	(0.560)	(0.565)
	SEN(=1 if SEN without statement)		-53.24***	-50.46***	-48.52***
		(0.478)	(0.480)	(0.484)	
SEN(=1 if SEN with statement)		-22.30***	-21.09***	-19.93***	
		(1.415)	(1.414)	(1.424)	
Month of Birth	No	Yes	Yes	Yes	
Neighbourhood Characteristics	IDACI	No	No	Yes	No
	MOSAIC classification	No	No	No	Yes
Observations		481818	481818	480150	470389
R-squared		0.012	0.061	0.068	0.076

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 6: Regressions of all value added measures for balanced panel with IDACI controls**

	Explanatory Variables	VA KS1-2	VA KS2-4	VA KS 2-3	VA KS 3-4
Ethnic Group	Black Caribbean	-0.407***	18.16***	0.254**	16.40***
		(0.0349)	(1.473)	(0.126)	(1.306)
	Black African	0.0546	49.43***	2.635***	34.17***
		(0.0404)	(1.703)	(0.145)	(1.511)
	Black Other	-0.209***	8.981***	-0.389*	10.91***
		(0.064)	(2.697)	(0.23)	(2.392)
	Indian	0.194***	59.99***	2.837***	43.52***
		(0.0263)	(1.111)	(0.0948)	(0.985)
	Pakistani	-0.252***	52.98***	1.449***	43.74***
		(0.0264)	(1.113)	(0.095)	(0.987)
	Bangladeshi	0.692***	70.49***	2.422***	56.17***
		(0.0425)	(1.792)	(0.153)	(1.589)
	Chinese	1.279***	79.76***	5.062***	51.50***
		(0.0729)	(3.075)	(0.263)	(2.728)
	Other Asian	0.504***	45.09***	3.469***	25.27***
		(0.0561)	(2.365)	(0.202)	(2.098)
White Asian	0.460***	16.15***	2.108***	4.363**	
	(0.057)	(2.402)	(0.205)	(2.131)	
White and Black Caribbean	-0.0633	-7.625***	-0.678***	-3.506**	
	(0.0395)	(1.666)	(0.142)	(1.478)	
White and Black African	0.271***	6.935*	0.728**	3.185	
	(0.0892)	(3.763)	(0.321)	(3.337)	
Other	0.475***	23.10***	1.753***	13.24***	
	(0.0343)	(1.448)	(0.124)	(1.284)	
White Irish	0.470***	1.678	1.153***	-4.404*	
	(0.0634)	(2.675)	(0.228)	(2.372)	
Traveller/ Gypsy	-0.678***	-51.17***	-1.342*	-45.54***	
	(0.224)	(9.427)	(0.805)	(8.362)	
Other White	0.499***	23.04***	1.584***	14.08***	
	(0.0321)	(1.356)	(0.116)	(1.202)	
Personal Characteristics	Gender (=1 if female)	-0.573***	23.02***	0.173***	21.80***
		(0.00768)	(0.324)	(0.0276)	(0.287)
	Free School Meal (=1 if has FSM)	-0.261***	-24.73***	-1.611***	-15.81***
		(0.0133)	(0.560)	(0.0478)	(0.497)
SEN(=1 if SEN without statement)	-1.392***	-50.46***	-3.343***	-32.47***	
	(0.0114)	(0.480)	(0.041)	(0.426)	
SEN(=1 if SEN with statement)	-1.810***	-21.09***	-2.403***	-9.505***	
	(0.0335)	(1.414)	(0.121)	(1.255)	
Observations		480150	480150	480150	480150
R-squared		0.06	0.068	0.061	0.041

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 7a: Regressions of standardised Key Stage 1 and 2 scores with Ethnicity & FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Key Stage 1		Key Stage 2	
			*FSM		*FSM
Ethnic Group	Black Caribbean	0.0652***	0.163***	-0.0864***	0.213***
		(0.0133)	(0.0277)	(0.0134)	(0.0278)
	Black African	0.131***	-0.0798***	0.0767***	0.0557*
		(0.0162)	(0.0293)	(0.0163)	(0.0294)
	Black Other	0.00888	0.227***	-0.0697***	0.266***
		(0.0244)	(0.0508)	(0.0245)	(0.0510)
	Indian	-0.0722***	0.0402	-0.00792	0.0354
		(0.00931)	(0.0292)	(0.00935)	(0.0294)
	Pakistani	-0.357***	0.183***	-0.333***	0.171***
		(0.0107)	(0.0190)	(0.0108)	(0.0190)
	Bangladeshi	-0.404***	0.260***	-0.171***	0.327***
		(0.0202)	(0.0284)	(0.0203)	(0.0285)
	Chinese	-0.0120	0.368***	0.337***	0.290***
		(0.0259)	(0.0770)	(0.0261)	(0.0773)
	Other Asian	-0.00655	0.0321	0.116***	0.117**
		(0.0206)	(0.0507)	(0.0206)	(0.0510)
	White Asian	0.179***	-0.0702	0.242***	-0.0451
		(0.0205)	(0.0556)	(0.0206)	(0.0558)
White and Black Caribbean	0.0826***	0.0719**	0.0259*	0.132***	
	(0.0151)	(0.0316)	(0.0151)	(0.0317)	
White and Black African	0.0841**	0.223***	0.121***	0.250***	
	(0.0341)	(0.0709)	(0.0342)	(0.0712)	
Other	0.0474***	-0.0486*	0.140***	0.0851***	
	(0.0130)	(0.0277)	(0.0131)	(0.0278)	
White Irish	0.191***	-0.134**	0.262***	-0.0779	
	(0.0228)	(0.0630)	(0.0229)	(0.0632)	
Traveller/ Gypsy	-0.418***	-0.173	-0.611***	0.226	
	(0.0972)	(0.152)	(0.0976)	(0.153)	
Other White	-0.0513***	-0.101***	0.0956***	0.0182	
	(0.0116)	(0.0313)	(0.0116)	(0.0314)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.279***		-0.287***	
		(0.00507)		(0.00509)	
	Gender (=1 if female)	0.147***		-0.0453***	
		(0.00257)		(0.00258)	
	SEN(=1 if SEN without statement)	-0.840***		-0.954***	
		(0.00381)		(0.00383)	
SEN(=1 if SEN with statement)	-1.480***		-1.530***		
	(0.0112)		(0.0113)		
Month of Birth	Yes		Yes		
	No		No		
Neighbourhood Characteristics	IDACI	Yes		Yes	
	MOSAIC classification	No		No	
Observations	480150		480150		
R-squared	0.215		0.209		

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 7b: Regressions of standardised Key Stage 3 and 4 scores with Ethnicity & FSM interactions for balanced panel and with IDACI controls**

Explanatory Variables	Key Stage 3		Key Stage 4		
		*FSM		*FSM	
Ethnic Group	Black Caribbean	-0.0734***	0.238***	0.0408***	0.283***
		(0.0131)	(0.0273)	(0.0135)	(0.0281)
	Black African	0.186***	0.137***	0.310***	0.304***
		(0.0160)	(0.0288)	(0.0165)	(0.0297)
	Black Other	-0.0914***	0.267***	-0.0251	0.376***
		(0.0241)	(0.0501)	(0.0248)	(0.0516)
	Indian	0.147***	0.0836***	0.391***	0.180***
		(0.00918)	(0.0288)	(0.00945)	(0.0297)
	Pakistani	-0.205***	0.209***	0.118***	0.281***
		(0.0106)	(0.0187)	(0.0109)	(0.0193)
	Bangladeshi	-0.0138	0.303***	0.286***	0.418***
		(0.0199)	(0.0280)	(0.0205)	(0.0288)
	Chinese	0.553***	0.315***	0.708***	0.520***
		(0.0256)	(0.0759)	(0.0263)	(0.0782)
	Other Asian	0.302***	0.0545	0.357***	0.222***
		(0.0203)	(0.0500)	(0.0209)	(0.0515)
	White Asian	0.325***	-0.0535	0.247***	0.0606
		(0.0202)	(0.0548)	(0.0208)	(0.0565)
White and Black Caribbean	-0.0223	0.126***	-0.0581***	0.194***	
	(0.0148)	(0.0311)	(0.0153)	(0.0321)	
White and Black African	0.145***	0.197***	0.135***	0.117	
	(0.0336)	(0.0699)	(0.0346)	(0.0720)	
Other	0.205***	0.130***	0.190***	0.312***	
	(0.0128)	(0.0273)	(0.0132)	(0.0282)	
White Irish	0.286***	-0.0662	0.163***	0.00779	
	(0.0225)	(0.0621)	(0.0231)	(0.0639)	
Traveller/ Gypsy	-0.559***	0.199	-0.780***	0.334**	
	(0.0958)	(0.150)	(0.0987)	(0.155)	
Other White	0.163***	0.0792**	0.192***	0.205***	
	(0.0114)	(0.0308)	(0.0118)	(0.0317)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.339***		-0.386***	
		(0.00499)		(0.00514)	
	Gender (=1 if female)	-0.0208***		0.134***	
		(0.00253)		(0.00261)	
	SEN(=1 if SEN without statement)	-0.969***		-0.919***	
		(0.00376)		(0.00387)	
SEN(=1 if SEN with statement)	-1.342***		-1.026***		
	(0.0111)		(0.0114)		
Month of Birth	Yes		Yes		
	No		No		
Neighbourhood Characteristics	IDACI	Yes		Yes	
	MOSAIC classification	No		No	
Observations	480150		480150		
R-squared	0.238		0.191		

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%



**Table 8: Regressions of KS2-KS4 value added measures with Ethnicity & FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	VA KS2-KS4	
			*FSM
Ethnic Group	Black Caribbean	13.65***	22.63***
		(1.676)	(3.487)
	Black African	38.48***	39.26***
		(2.042)	(3.681)
	Black Other	2.423	31.62***
		(3.073)	(6.394)
	Indian	57.66***	23.52***
		(1.171)	(3.680)
	Pakistani	45.93***	25.57***
		(1.349)	(2.386)
	Bangladeshi	56.39***	32.32***
		(2.543)	(3.573)
	Chinese	74.12***	50.86***
		(3.265)	(9.685)
	Other Asian	41.85***	22.37***
		(2.586)	(6.385)
	White Asian	14.67***	13.09*
		(2.584)	(6.998)
White and Black Caribbean	-10.66***	16.69***	
	(1.894)	(3.972)	
White and Black African	8.884**	-4.850	
	(4.288)	(8.922)	
Other	15.36***	38.05***	
	(1.639)	(3.490)	
White Irish	0.740	8.946	
	(2.867)	(7.924)	
Traveller/ Gypsy	-60.11***	26.87	
	(12.23)	(19.18)	
Other White	19.44***	28.06***	
	(1.459)	(3.933)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-31.30***	
		(0.638)	
	Gender (=1 if female)	23.06***	
		(0.324)	
	SEN(=1 if SEN without statement)	-50.33***	
(0.480)			
SEN(=1 if SEN with statement)	-20.80***		
	(1.414)		
Month of Birth	Yes		
	No		
Neighbourhood Characteristics	IDACI	Yes	
	MOSAIC classification	No	
Observations		480150	
R-squared		0.069	

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 9a: Regressions of standardised Key Stage 1 scores with Ethnicity/ Gender/ FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Key Stage 1			
			*gender	*FSM	*FSM*gender
Ethnic Group	Black Caribbean	0.0800***	-0.0286	0.135***	0.0552
		(0.0192)	(0.0265)	(0.0411)	(0.0556)
	Black African	0.133***	-0.00358	-0.0703*	-0.0208
		(0.0231)	(0.0323)	(0.0417)	(0.0585)
	Black Other	0.0299	-0.0433	0.192***	0.0688
		(0.0340)	(0.0488)	(0.0720)	(0.102)
	Indian	-0.0797***	0.0148	-0.00665	0.0912
		(0.0132)	(0.0186)	(0.0410)	(0.0585)
	Pakistani	-0.367***	0.0185	0.181***	0.00125
		(0.0151)	(0.0213)	(0.0268)	(0.0379)
	Bangladeshi	-0.379***	-0.0478	0.222***	0.0752
		(0.0292)	(0.0403)	(0.0416)	(0.0569)
	Chinese	-0.0298	0.0348	0.530***	-0.288*
		(0.0370)	(0.0519)	(0.115)	(0.155)
	Other Asian	-0.0302	0.0461	-0.0507	0.163
		(0.0294)	(0.0411)	(0.0719)	(0.101)
	White Asian	0.171***	0.0149	-0.0525	-0.0344
		(0.0291)	(0.0411)	(0.0803)	(0.111)
	White and Black Caribbean	0.0872***	-0.00915	0.0310	0.0786
		(0.0219)	(0.0301)	(0.0463)	(0.0633)
White and Black African	0.109**	-0.0511	0.110	0.214	
	(0.0478)	(0.0681)	(0.105)	(0.142)	
Other	0.0537***	-0.0126	-0.112***	0.124**	
	(0.0184)	(0.0260)	(0.0393)	(0.0555)	
White Irish	0.207***	-0.0338	-0.170*	0.0704	
	(0.0320)	(0.0456)	(0.0916)	(0.126)	
Traveller/ Gypsy	-0.401**	-0.0272	0.152	-0.535*	
	(0.162)	(0.202)	(0.246)	(0.313)	
Other White	-0.0365**	-0.0298	-0.109**	0.00882	
	(0.0163)	(0.0232)	(0.0436)	(0.0626)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.238***			
		(0.00716)			
	Gender (=1 if female)	0.154***			
		(0.00288)			
	FSM*Gender	-0.0795***			
		(0.00969)			
	SEN(=1 if SEN without statement)	-0.841***			
(0.00381)					
SEN(=1 if SEN with statement)	-1.482***				
	(0.0112)				
Month of Birth	Yes				
	No				
Neighbourhood Characteristics	IDACI	Yes			
	MOSAIC classification	No			
Observations	480150				
R-squared	0.215				

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 9b: Regressions of standardised Key Stage 2 scores with Ethnicity/ Gender/ FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Key Stage 2			
			*gender	*FSM	*FSM*gender
Ethnic Group	Black Caribbean	-0.129***	0.0812***	0.196***	0.0316
		(0.0193)	(0.0266)	(0.0412)	(0.0559)
	Black African	0.0429*	0.0664**	0.0808*	-0.0518
		(0.0231)	(0.0324)	(0.0419)	(0.0587)
	Black Other	-0.0858**	0.0332	0.146**	0.233**
		(0.0341)	(0.0490)	(0.0722)	(0.102)
	Indian	-0.0198	0.0236	-0.0384	0.146**
		(0.0133)	(0.0187)	(0.0412)	(0.0587)
	Pakistani	-0.337***	0.00713	0.179***	-0.0217
		(0.0151)	(0.0214)	(0.0269)	(0.0381)
	Bangladeshi	-0.186***	0.0288	0.315***	0.0249
		(0.0293)	(0.0405)	(0.0417)	(0.0571)
	Chinese	0.333***	0.00781	0.303***	-0.0176
		(0.0371)	(0.0521)	(0.116)	(0.156)
	Other Asian	0.0874***	0.0550	0.0707	0.0892
		(0.0295)	(0.0413)	(0.0722)	(0.102)
	White Asian	0.228***	0.0278	-0.0905	0.0856
		(0.0292)	(0.0412)	(0.0807)	(0.112)
	White and Black Caribbean	0.0108	0.0284	0.0858*	0.0880
		(0.0220)	(0.0302)	(0.0465)	(0.0635)
White and Black African	0.120**	0.00270	0.157	0.173	
	(0.0480)	(0.0684)	(0.105)	(0.143)	
Other	0.113***	0.0543**	0.0664*	0.0333	
	(0.0185)	(0.0261)	(0.0395)	(0.0557)	
White Irish	0.247***	0.0299	-0.106	0.0522	
	(0.0321)	(0.0458)	(0.0920)	(0.127)	
Traveller/ Gypsy	-0.475***	-0.214	0.0593	0.276	
	(0.162)	(0.203)	(0.247)	(0.315)	
Other White	0.0975***	-0.00386	0.0274	-0.0261	
	(0.0164)	(0.0233)	(0.0438)	(0.0628)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.242***			
		(0.00719)			
	Gender (=1 if female)	-0.0411***			
		(0.00289)			
	FSM*Gender	-0.0863***			
		(0.00973)			
	SEN(=1 if SEN without statement)	-0.954***			
(0.00383)					
SEN(=1 if SEN with statement)	-1.531***				
	(0.0113)				
Month of Birth	Yes				
	No				
Neighbourhood Characteristics	IDACI	Yes			
	MOSAIC classification	No			
Observations	480150				
R-squared	0.209				

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 9c: Regressions of standardised Key Stage 3 scores with Ethnicity/ Gender/ FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Key Stage 3			
			*gender	*FSM	*FSM*gender
Ethnic Group	Black Caribbean	-0.128***	0.104***	0.204***	0.0608
		(0.0189)	(0.0261)	(0.0405)	(0.0548)
	Black African	0.117***	0.135***	0.151***	-0.0308
		(0.0227)	(0.0318)	(0.0411)	(0.0576)
	Black Other	-0.125***	0.0701	0.166**	0.193*
		(0.0335)	(0.0481)	(0.0709)	(0.100)
	Indian	0.119***	0.0551***	0.00509	0.156***
		(0.0130)	(0.0183)	(0.0404)	(0.0576)
	Pakistani	-0.219***	0.0268	0.185***	0.0435
		(0.0148)	(0.0210)	(0.0264)	(0.0374)
	Bangladeshi	-0.0262	0.0235	0.297***	0.0143
		(0.0288)	(0.0398)	(0.0410)	(0.0561)
	Chinese	0.568***	-0.0298	0.368***	-0.0869
		(0.0365)	(0.0511)	(0.114)	(0.153)
	Other Asian	0.263***	0.0754*	0.00823	0.0901
		(0.0290)	(0.0405)	(0.0709)	(0.100)
	White Asian	0.305***	0.0400	-0.0770	0.0432
		(0.0287)	(0.0405)	(0.0792)	(0.110)
	White and Black Caribbean	-0.0393*	0.0320	0.0875*	0.0740
		(0.0216)	(0.0297)	(0.0457)	(0.0624)
White and Black African	0.154***	-0.0174	0.174*	0.0492	
	(0.0471)	(0.0672)	(0.103)	(0.140)	
Other	0.182***	0.0462*	0.0865**	0.0832	
	(0.0181)	(0.0256)	(0.0388)	(0.0547)	
White Irish	0.292***	-0.0115	-0.129	0.121	
	(0.0315)	(0.0449)	(0.0903)	(0.124)	
Traveller/ Gypsy	-0.389**	-0.266	-0.00658	0.338	
	(0.159)	(0.199)	(0.242)	(0.309)	
Other White	0.157***	0.0131	0.0618	0.0289	
	(0.0161)	(0.0228)	(0.0429)	(0.0616)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.292***			
		(0.00705)			
	Gender (=1 if female)	-0.0190***			
		(0.00284)			
	FSM*Gender	-0.0902***			
		(0.00955)			
	SEN(=1 if SEN without statement)	-0.970***			
(0.00376)					
SEN(=1 if SEN with statement)	-1.343***				
	(0.0111)				
Month of Birth	Yes				
	No				
Neighbourhood Characteristics	IDACI	Yes			
	MOSAIC classification	No			
Observations	480150				
R-squared	0.238				

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Table 9d: Regressions of standardised Key Stage 4 scores with Ethnicity/ Gender/ FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Key Stage 4			
			*gender	*FSM	*FSM*gender
Ethnic Group	Black Caribbean	-0.0152	0.107***	0.221***	0.109*
		(0.0195)	(0.0269)	(0.0417)	(0.0565)
	Black African	0.262***	0.0937***	0.339***	-0.0693
		(0.0234)	(0.0328)	(0.0423)	(0.0594)
	Black Other	-0.0676**	0.0877*	0.281***	0.182*
		(0.0345)	(0.0495)	(0.0731)	(0.103)
	Indian	0.373***	0.0344*	0.114***	0.133**
		(0.0134)	(0.0189)	(0.0417)	(0.0594)
	Pakistani	0.0709***	0.0953***	0.257***	0.0446
		(0.0153)	(0.0217)	(0.0272)	(0.0385)
	Bangladeshi	0.233***	0.100**	0.404***	0.0235
		(0.0296)	(0.0410)	(0.0422)	(0.0578)
	Chinese	0.695***	0.0265	0.653***	-0.237
		(0.0376)	(0.0527)	(0.117)	(0.157)
	Other Asian	0.343***	0.0278	0.170**	0.102
		(0.0298)	(0.0417)	(0.0730)	(0.103)
	White Asian	0.239***	0.0157	0.0791	-0.0360
		(0.0295)	(0.0417)	(0.0816)	(0.113)
	White and Black Caribbean	-0.0744***	0.0311	0.174***	0.0370
		(0.0222)	(0.0306)	(0.0470)	(0.0643)
White and Black African	0.179***	-0.0908	0.0717	0.0952	
	(0.0485)	(0.0692)	(0.106)	(0.145)	
Other	0.175***	0.0295	0.299***	0.0226	
	(0.0187)	(0.0264)	(0.0399)	(0.0563)	
White Irish	0.164***	-0.00221	0.0244	-0.0300	
	(0.0325)	(0.0463)	(0.0930)	(0.128)	
Traveller/ Gypsy	-0.657***	-0.191	0.317	0.0202	
	(0.164)	(0.205)	(0.249)	(0.318)	
Other White	0.183***	0.0181	0.194***	0.0208	
	(0.0166)	(0.0235)	(0.0442)	(0.0635)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-0.362***			
		(0.00727)			
	Gender (=1 if female)	0.131***			
		(0.00293)			
	FSM*Gender	-0.0453***			
		(0.00984)			
	SEN(=1 if SEN without statement)	-0.919***			
(0.00387)					
SEN(=1 if SEN with statement)	-1.026***				
	(0.0114)				
Month of Birth	Yes				
	No				
Neighbourhood Characteristics	IDACI	Yes			
	MOSAIC classification	No			
Observations	480150				
R-squared	0.191				

Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

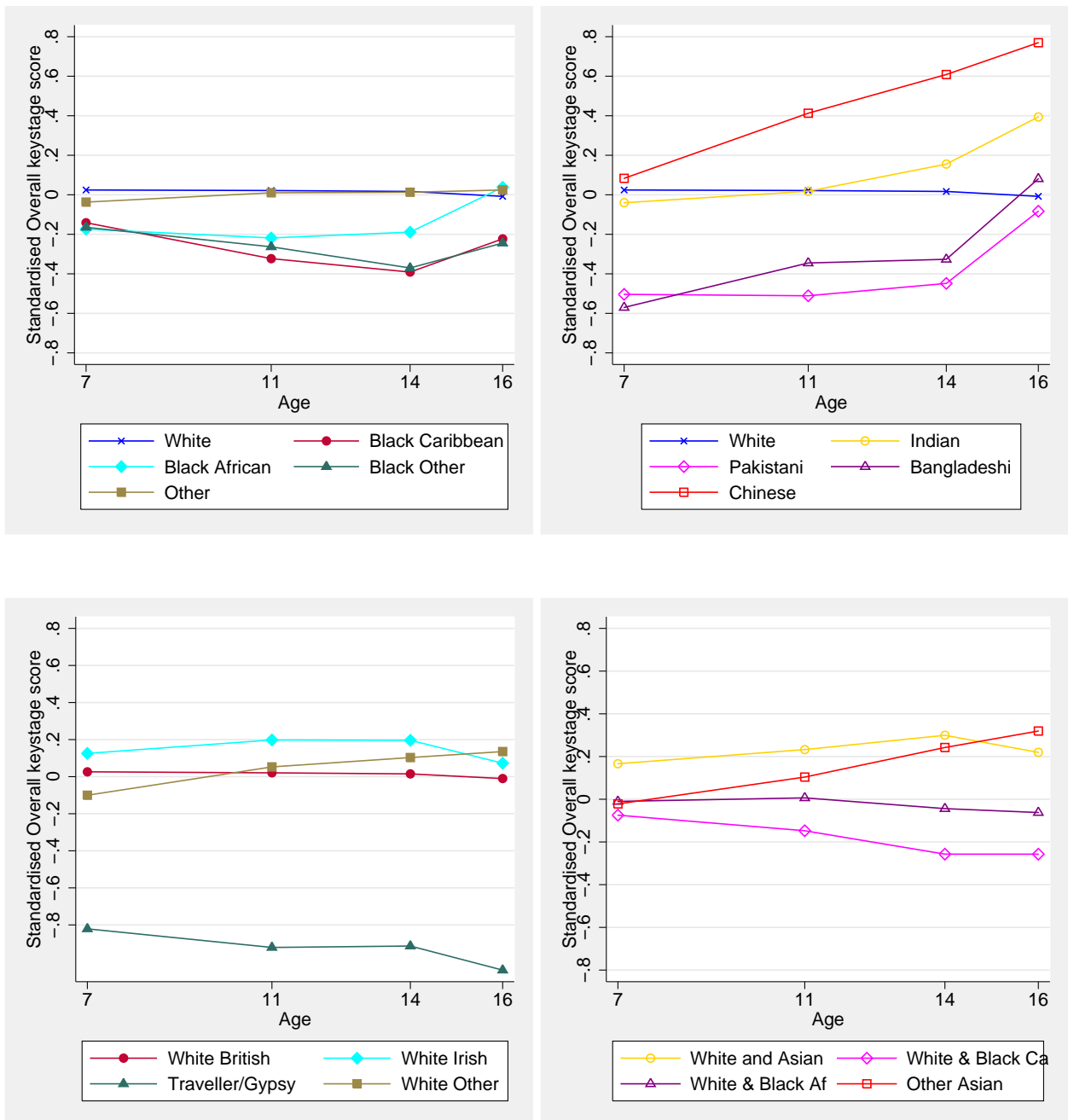
**Table 10: Regressions of KS2-KS4 value added measures with Ethnicity/ Gender/ FSM interactions for balanced panel and with IDACI controls**

	Explanatory Variables	Value Added Key Stage 2-4			
			*gender	*FSM	*FSM*gender
Ethnic Group	Black Caribbean	9.012***	8.921***	15.10***	13.14*
		(2.416)	(3.335)	(5.165)	(7.001)
	Black African	34.32***	8.205**	41.84***	-5.110
		(2.901)	(4.061)	(5.245)	(7.359)
	Black Other	-2.707	10.57*	27.86***	6.987
		(4.272)	(6.139)	(9.054)	(12.79)
	Indian	56.26***	2.789	20.17***	6.912
		(1.662)	(2.341)	(5.161)	(7.359)
	Pakistani	39.15***	13.65***	21.15***	8.789*
		(1.895)	(2.683)	(3.372)	(4.769)
	Bangladeshi	49.77***	12.69**	31.43***	1.071
		(3.674)	(5.075)	(5.230)	(7.162)
	Chinese	73.20***	1.813	68.70***	-32.04
		(4.654)	(6.529)	(14.51)	(19.49)
	Other Asian	42.19***	-0.651	18.48**	7.747
		(3.697)	(5.170)	(9.048)	(12.77)
	White Asian	14.74***	-0.144	19.16*	-11.60
		(3.659)	(5.166)	(10.11)	(14.01)
	White and Black Caribbean	-11.59***	1.818	17.64***	-1.840
		(2.752)	(3.787)	(5.830)	(7.964)
White and Black African	15.36**	-13.19	-3.075	-1.713	
	(6.014)	(8.574)	(13.17)	(17.92)	
Other	15.79***	-0.873	37.93***	0.263	
	(2.313)	(3.273)	(4.950)	(6.979)	
White Irish	1.992	-2.563	14.12	-9.499	
	(4.022)	(5.734)	(11.53)	(15.88)	
Traveller/ Gypsy	-55.63***	-6.828	37.18	-17.98	
	(20.35)	(25.46)	(30.90)	(39.43)	
Other White	18.10***	2.691	24.94***	6.530	
	(2.053)	(2.917)	(5.483)	(7.870)	
Personal Characteristics	Free School Meal (=1 if has FSM)	-31.74***			
		(0.901)			
	Gender (=1 if female)	22.17***			
		(0.363)			
	FSM*Gender	0.868			
		(1.220)			
	SEN(=1 if SEN without statement)	-50.30***			
(0.480)					
SEN(=1 if SEN with statement)	-20.81***				
	(1.414)				
Month of Birth	Yes				
	No				
Neighbourhood Characteristics	IDACI	Yes			
	MOSAIC classification	No			
Observations	480150				
R-squared	0.069				

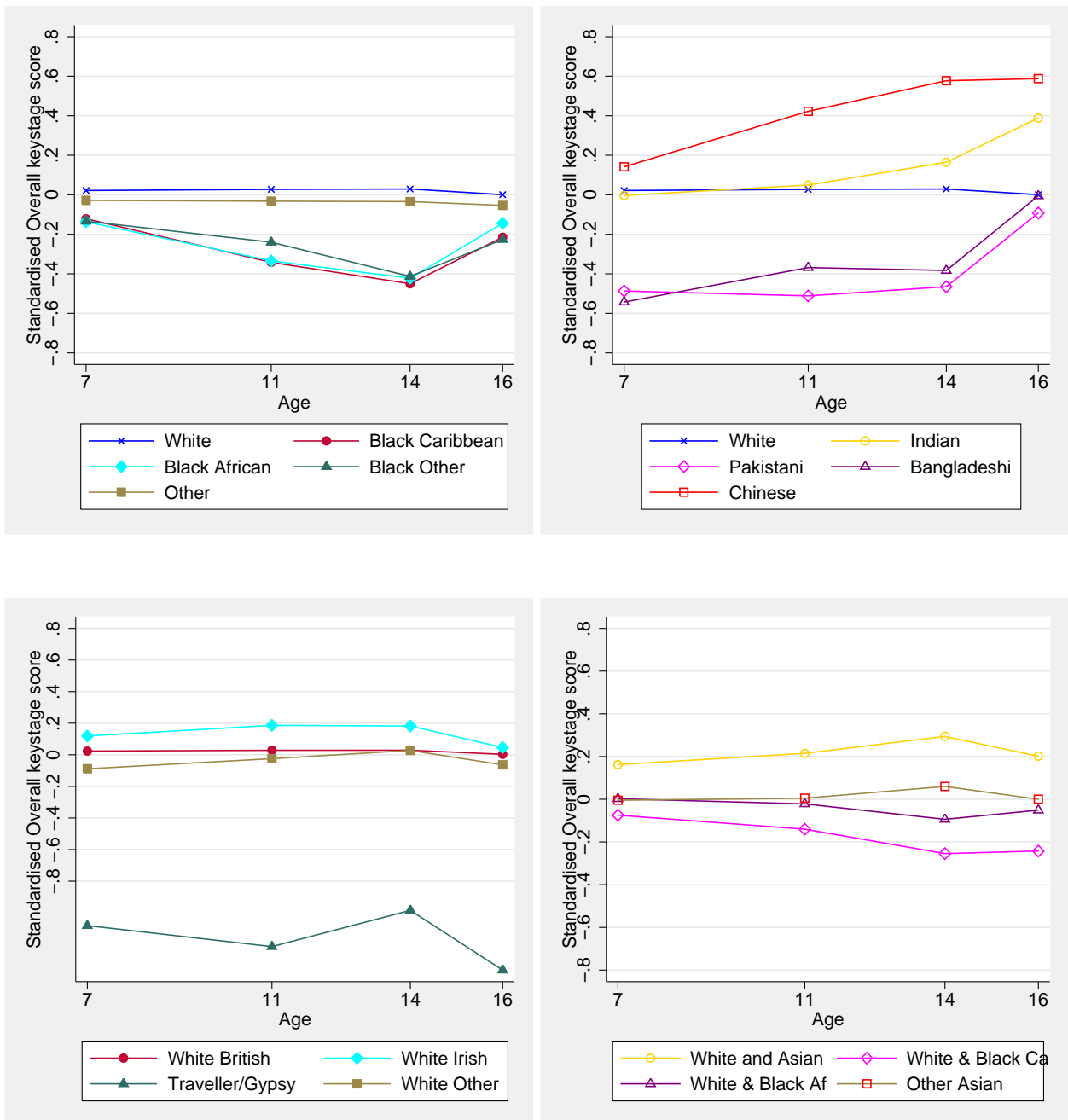
Standard errors in parentheses

\* Significant at 10% \*\* Significant at 5% \*\*\* Significant at 1%

**Figure 1a: Overall standardised score for balanced panel**



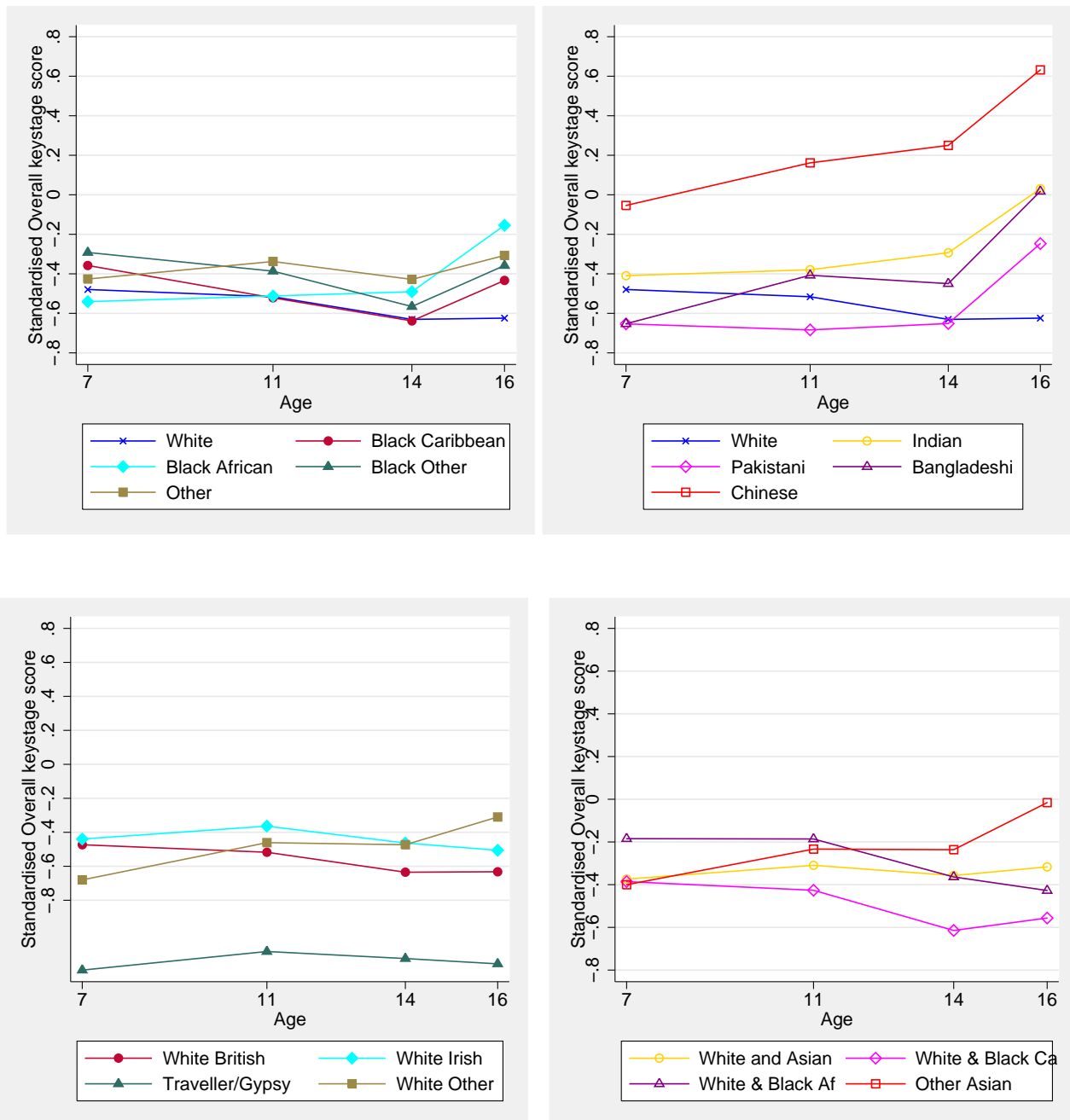
**Figure 1b: Overall standardised score for cross-sections**





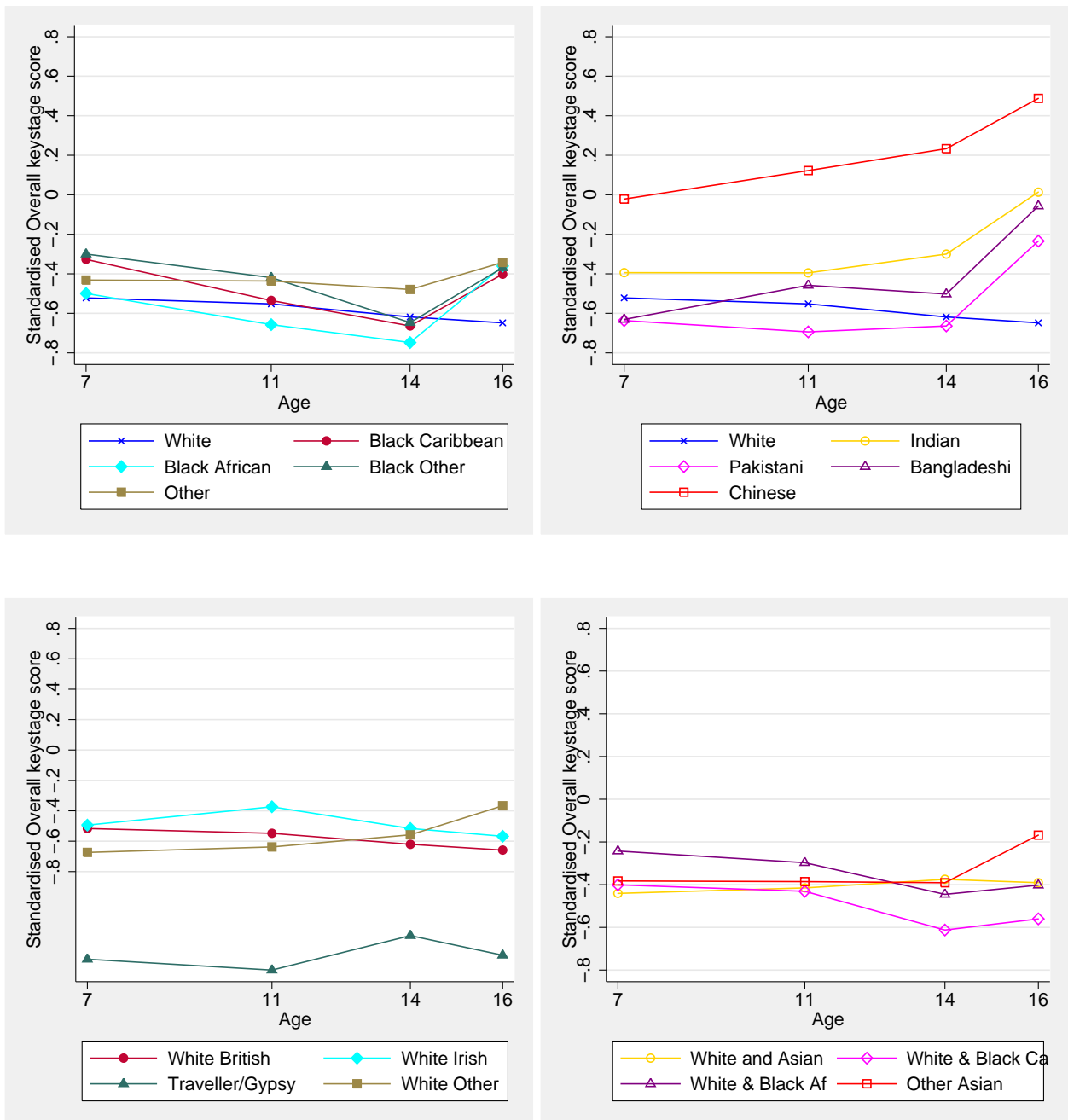
**Figure 2a: Overall standardised score for balanced panel**

**Pupils with FSM Status**



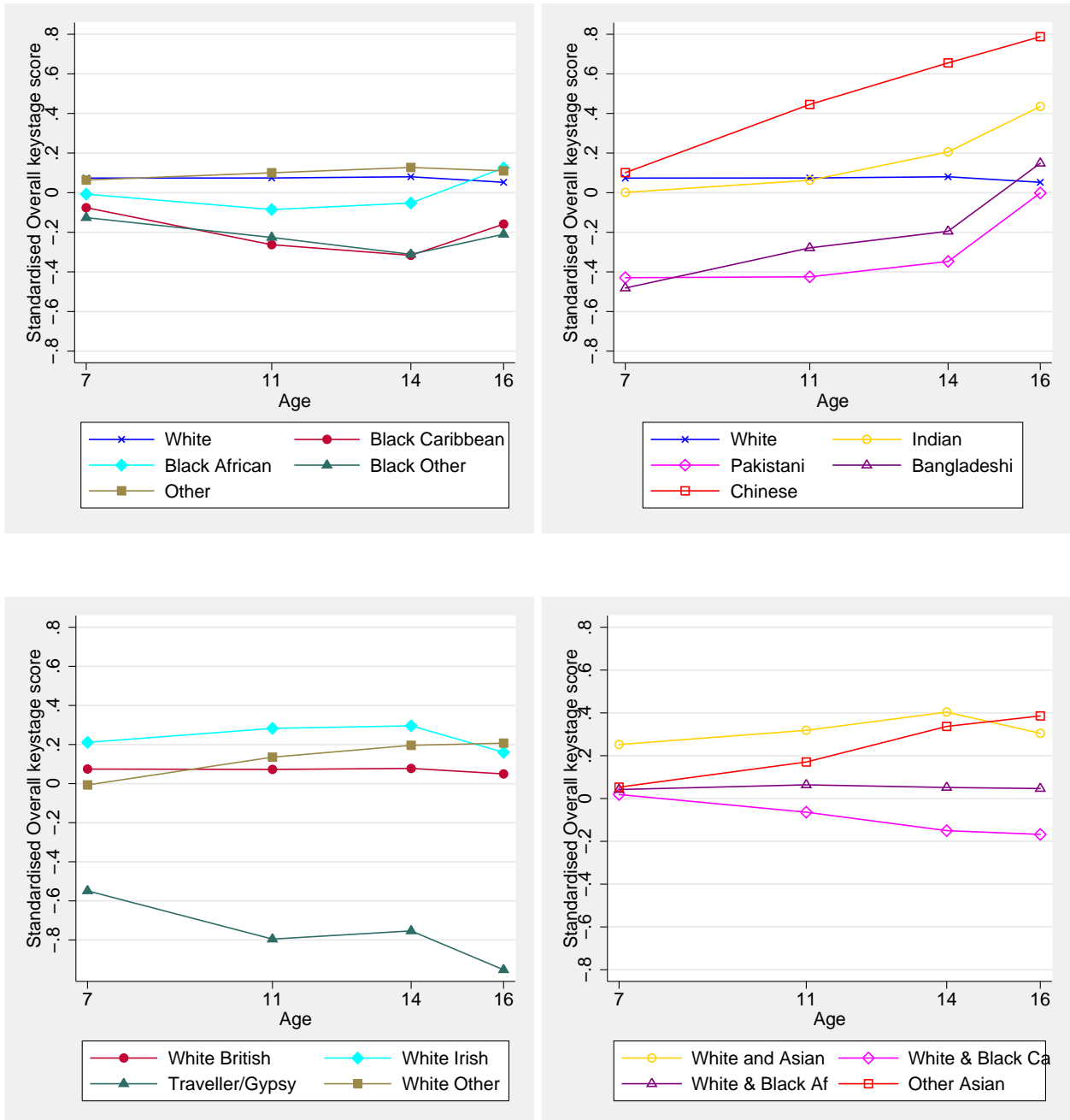
**Figure 2b: Overall standardised score for cross-sections**

**Pupils with FSM Status**



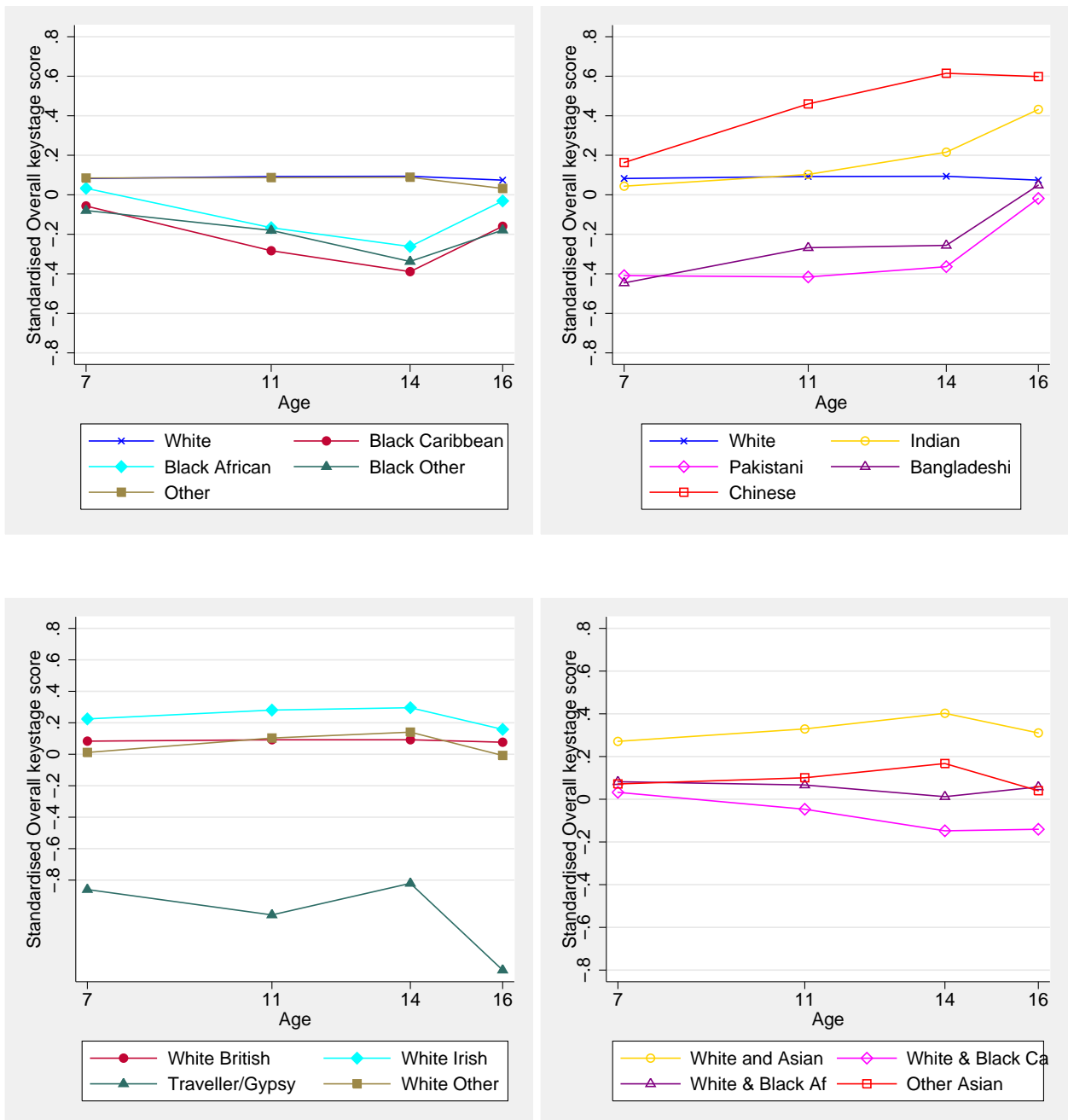
**Figure 3a: Overall standardised score for balanced panel**

**Pupils without FSM Status**



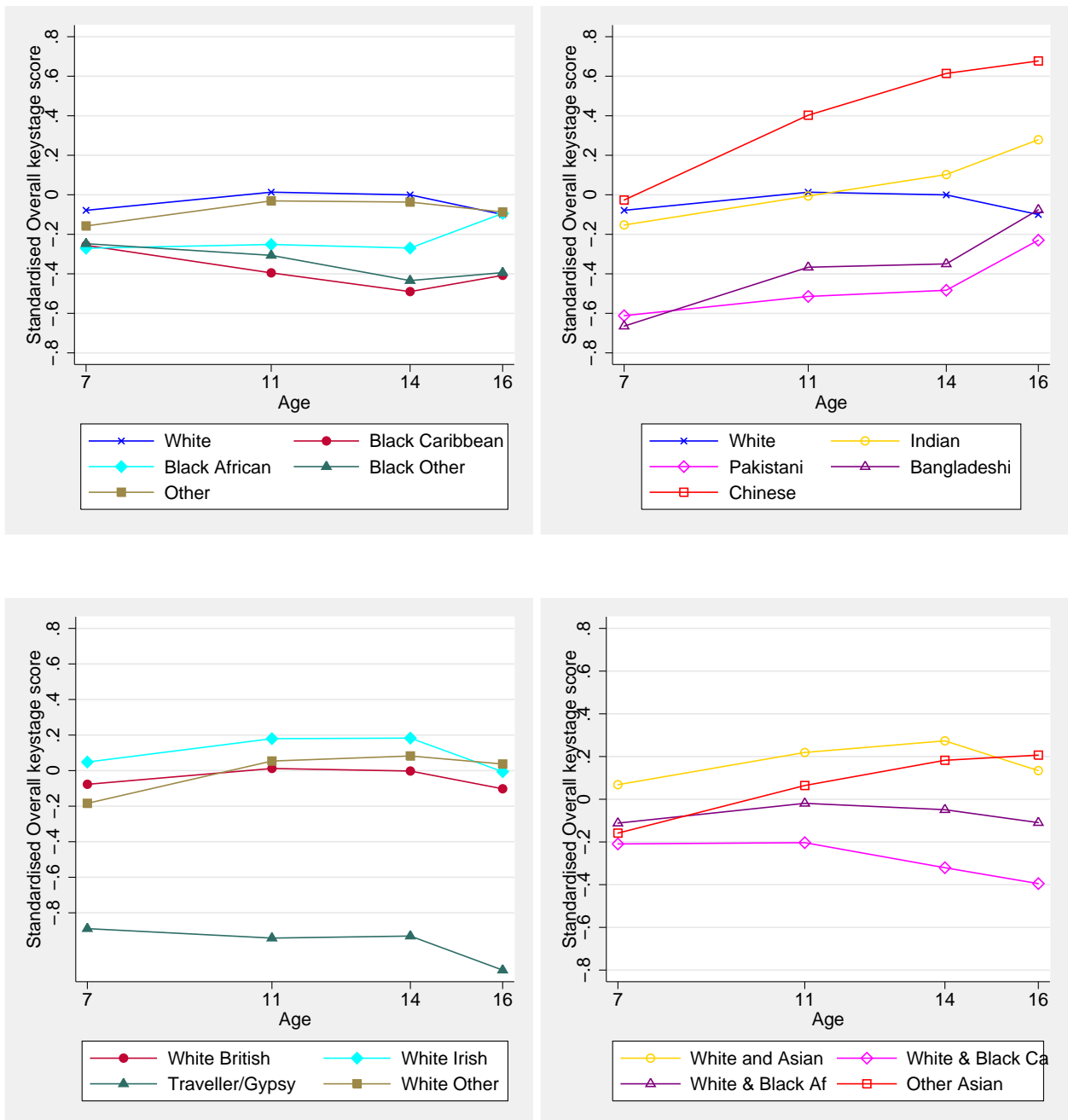
**Figure 3b: Overall standardised score for cross-sections**

**Pupils without FSM Status**



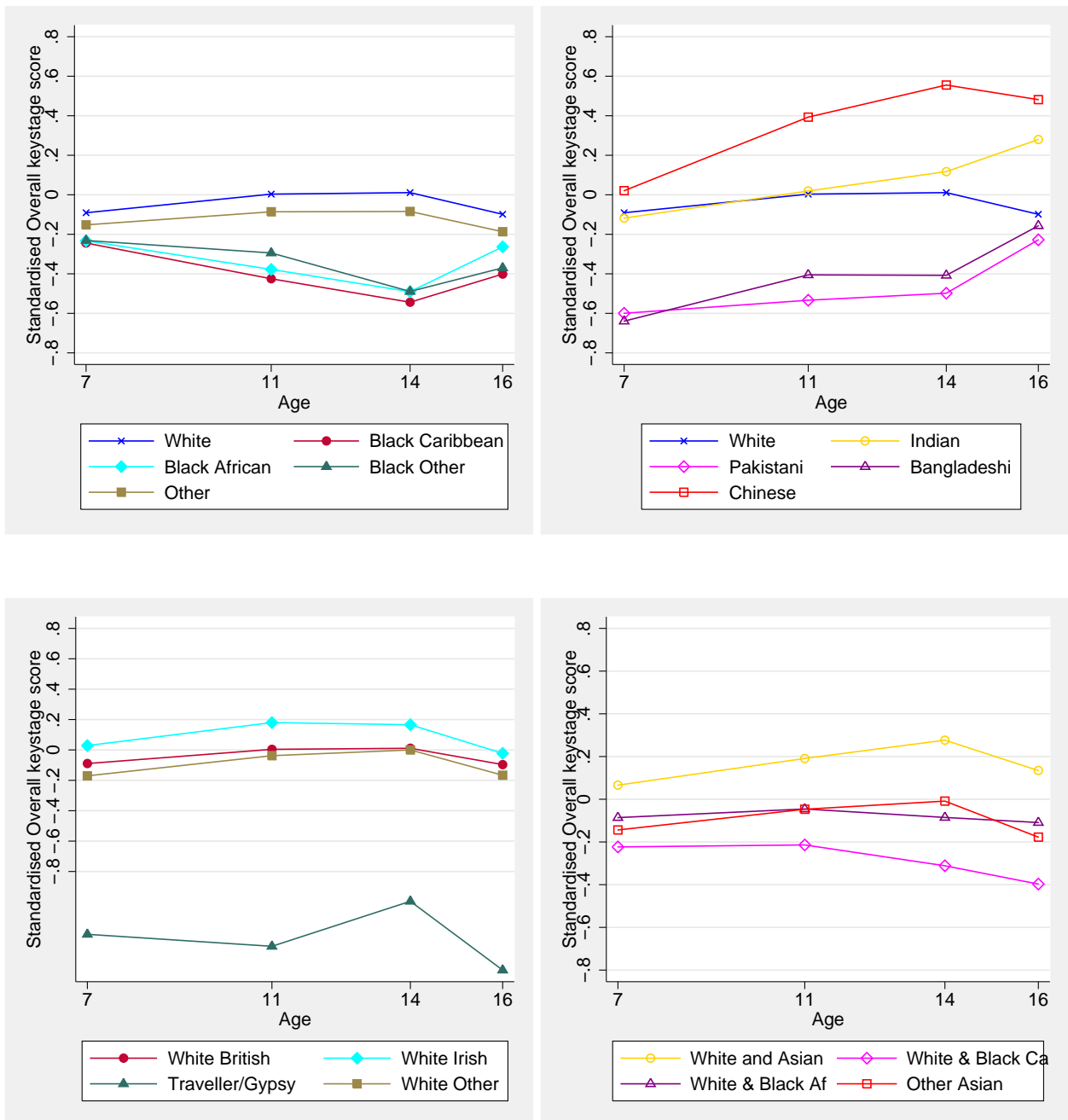
**Figure 4a: Overall standardised score for balanced panel**

**For Male Pupils**



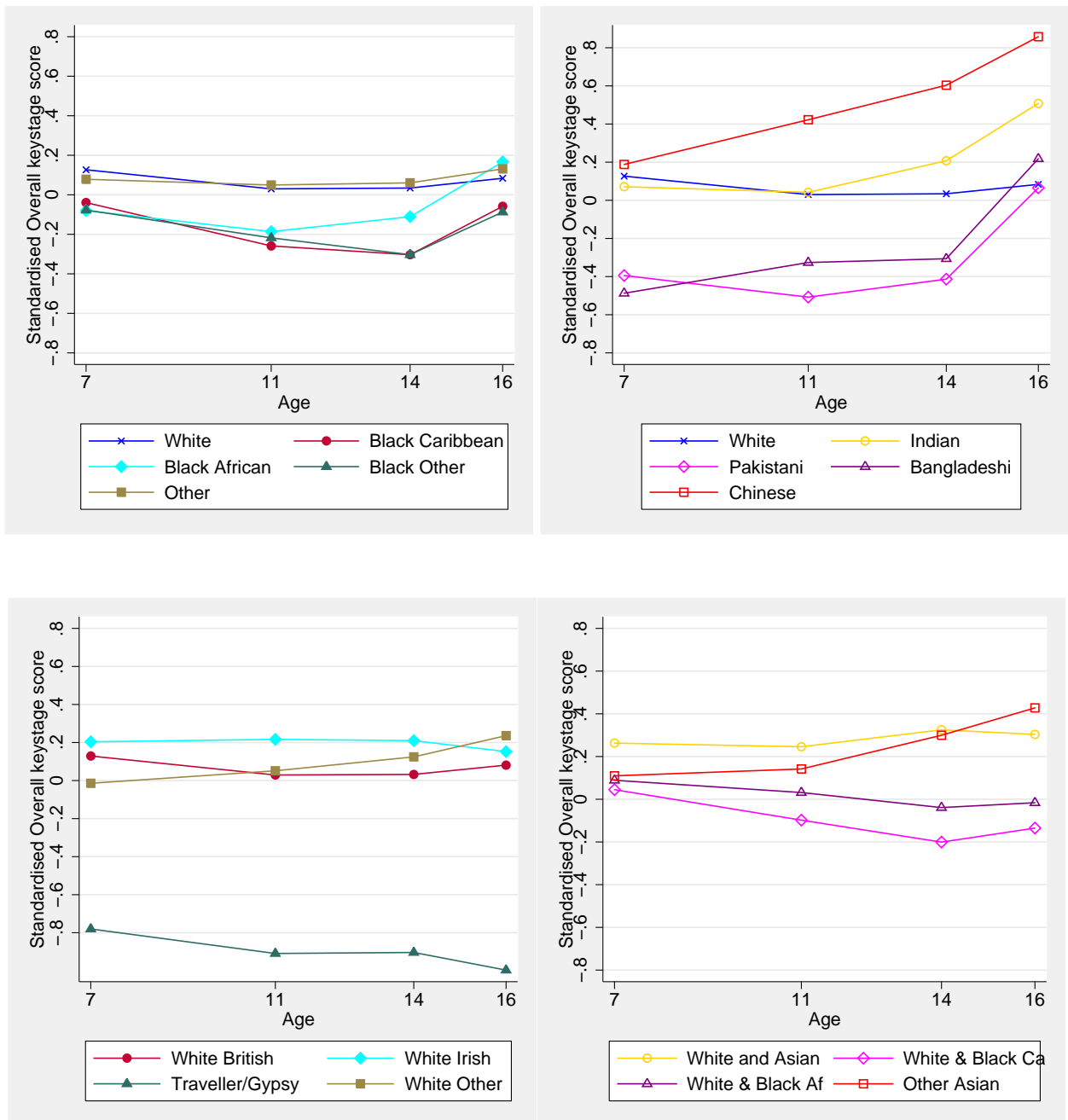
**Figure 4b: Overall standardised score for cross-sections**

**For Male Pupils**



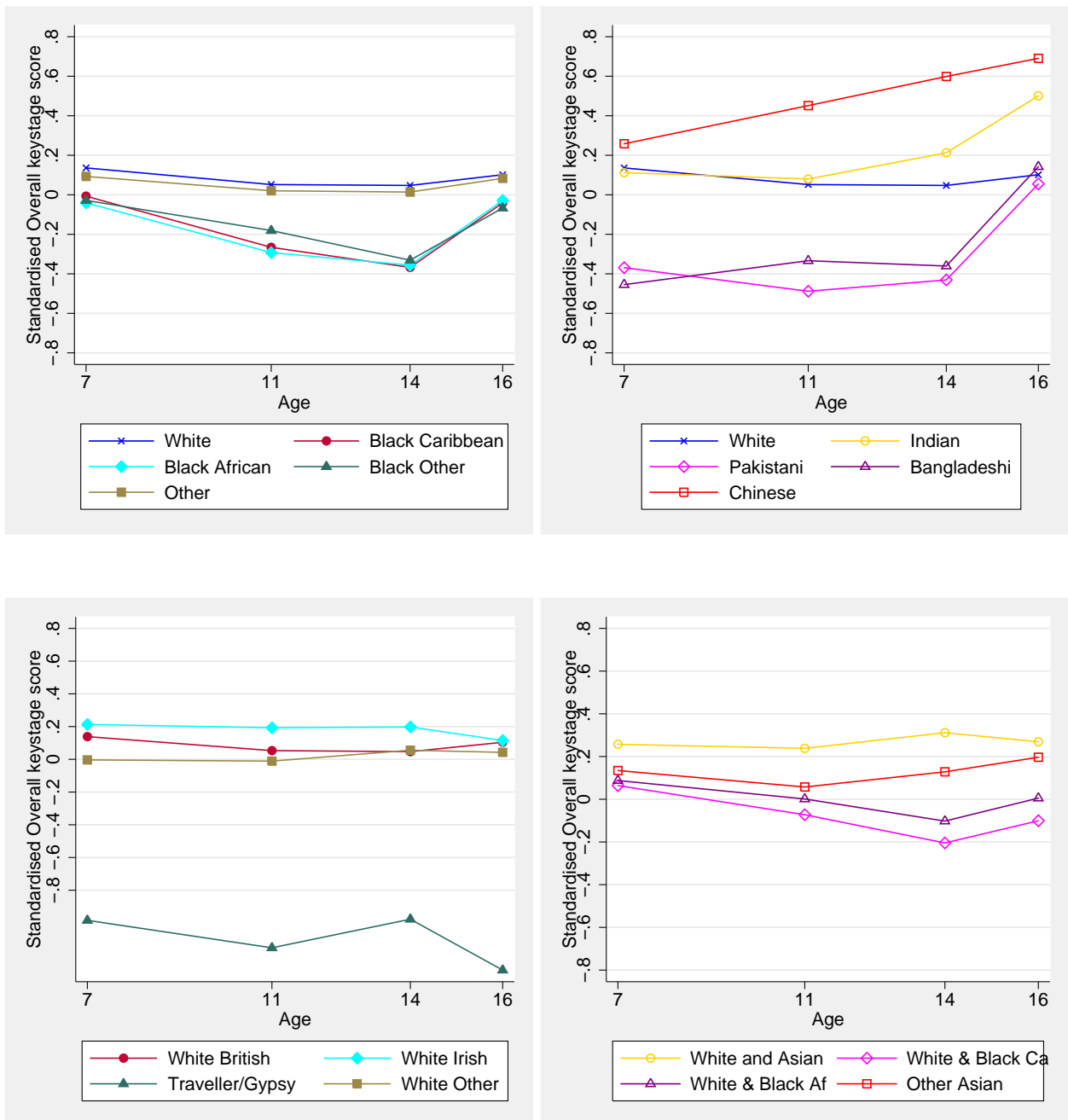
**Figure 5a: Overall standardised score for balanced panel**

**For Female Pupils**



**Figure 5b: Overall standardised score for cross-sections**

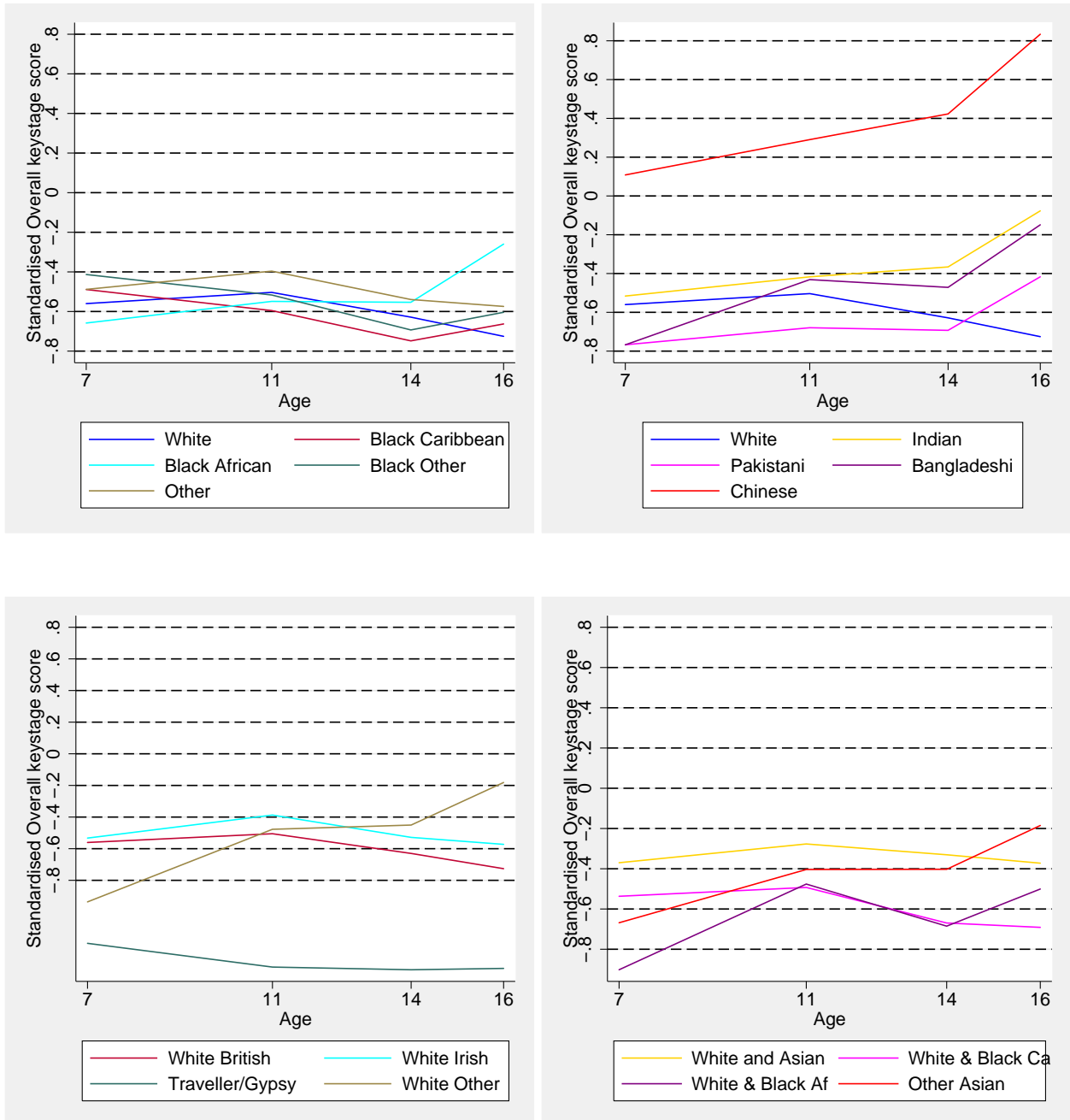
**For Female Pupils**





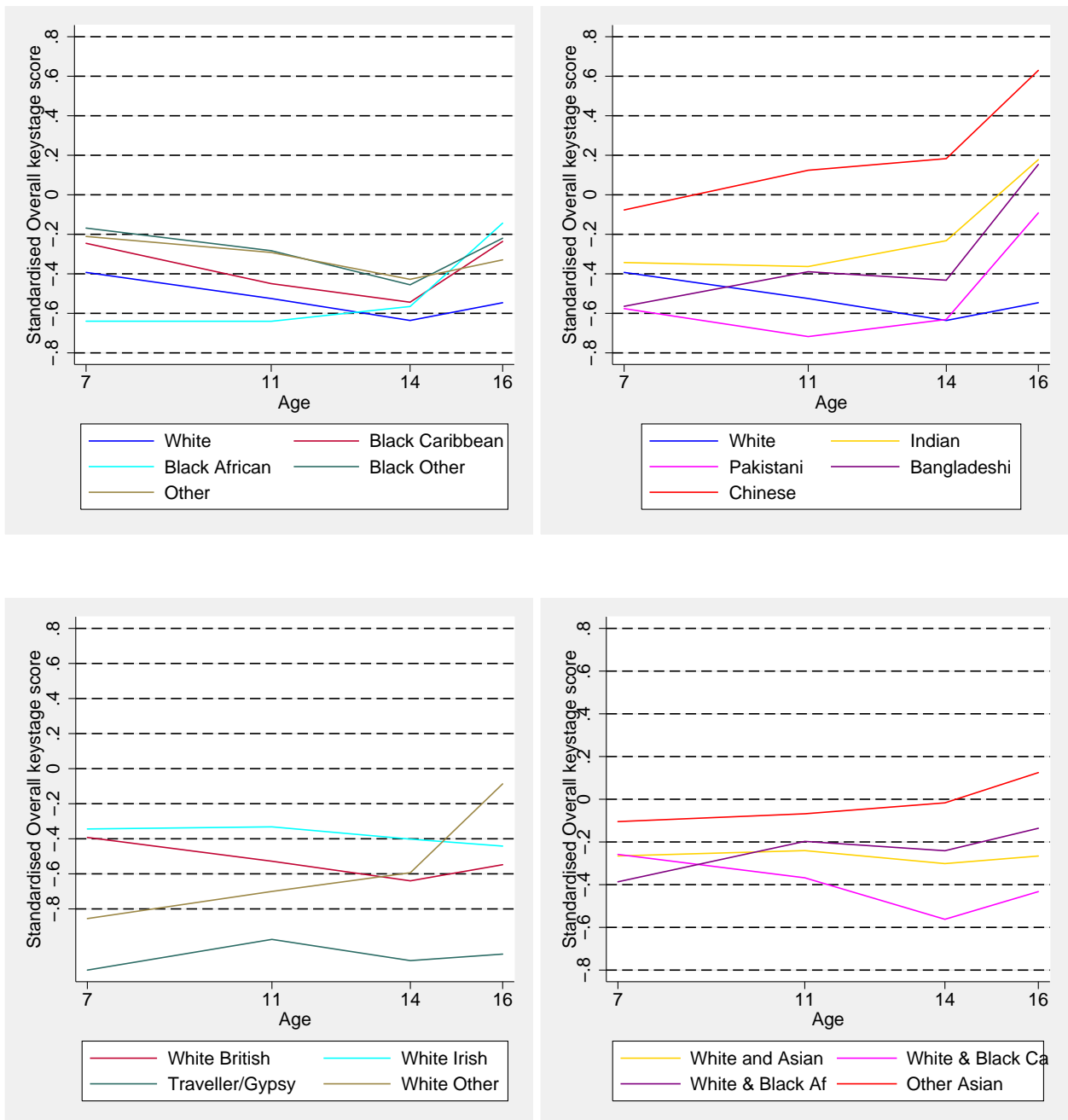
**Figure 6a: Overall standardised score for balanced panel**

**For FSM Male Pupils**



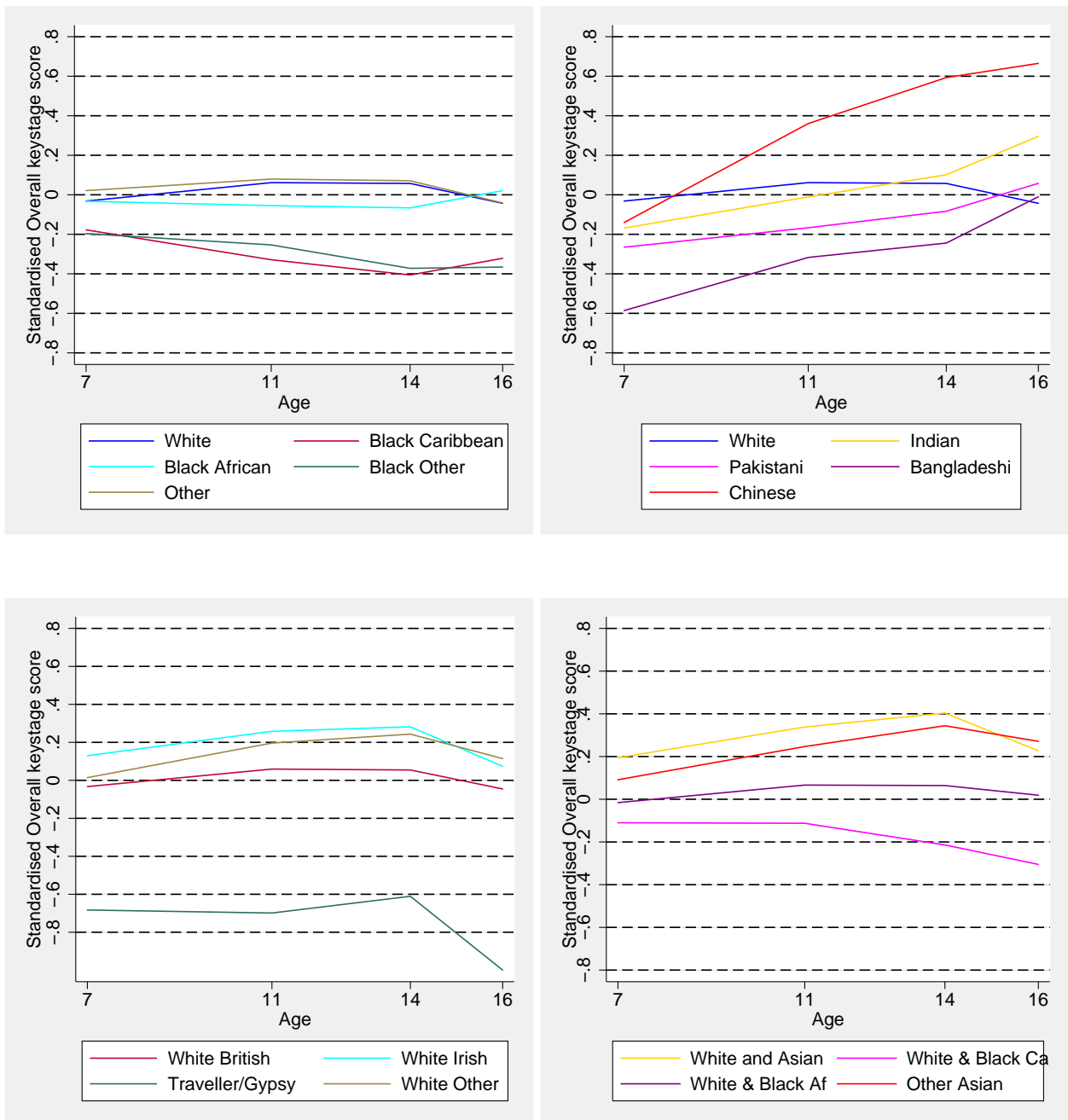
**Figure 6b: Overall standardised score for balanced panel**

**For FSM Female Pupils**



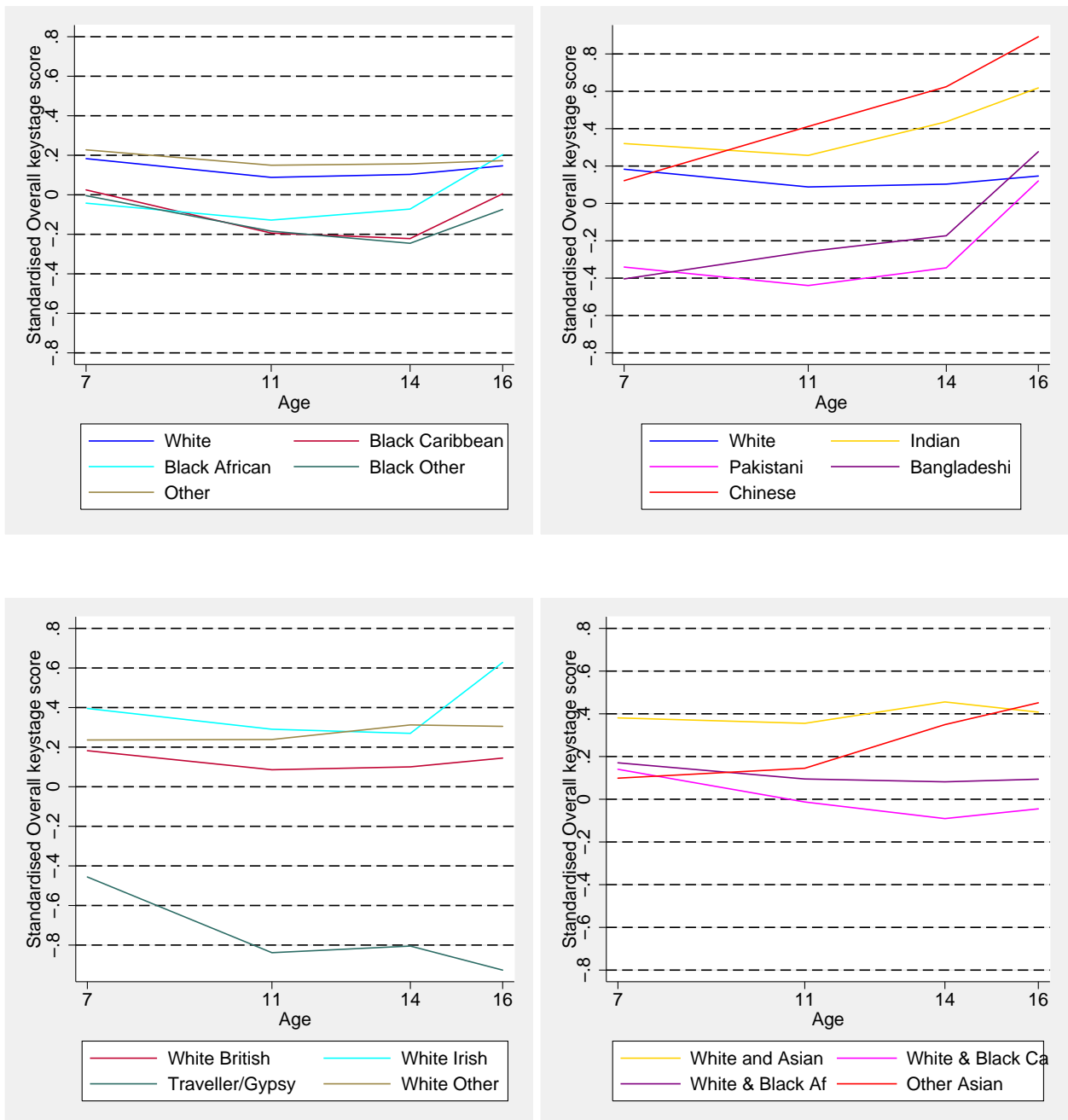
**Figure 7a: Overall standardised score for balanced panel**

**For Non-FSM Male Pupils**



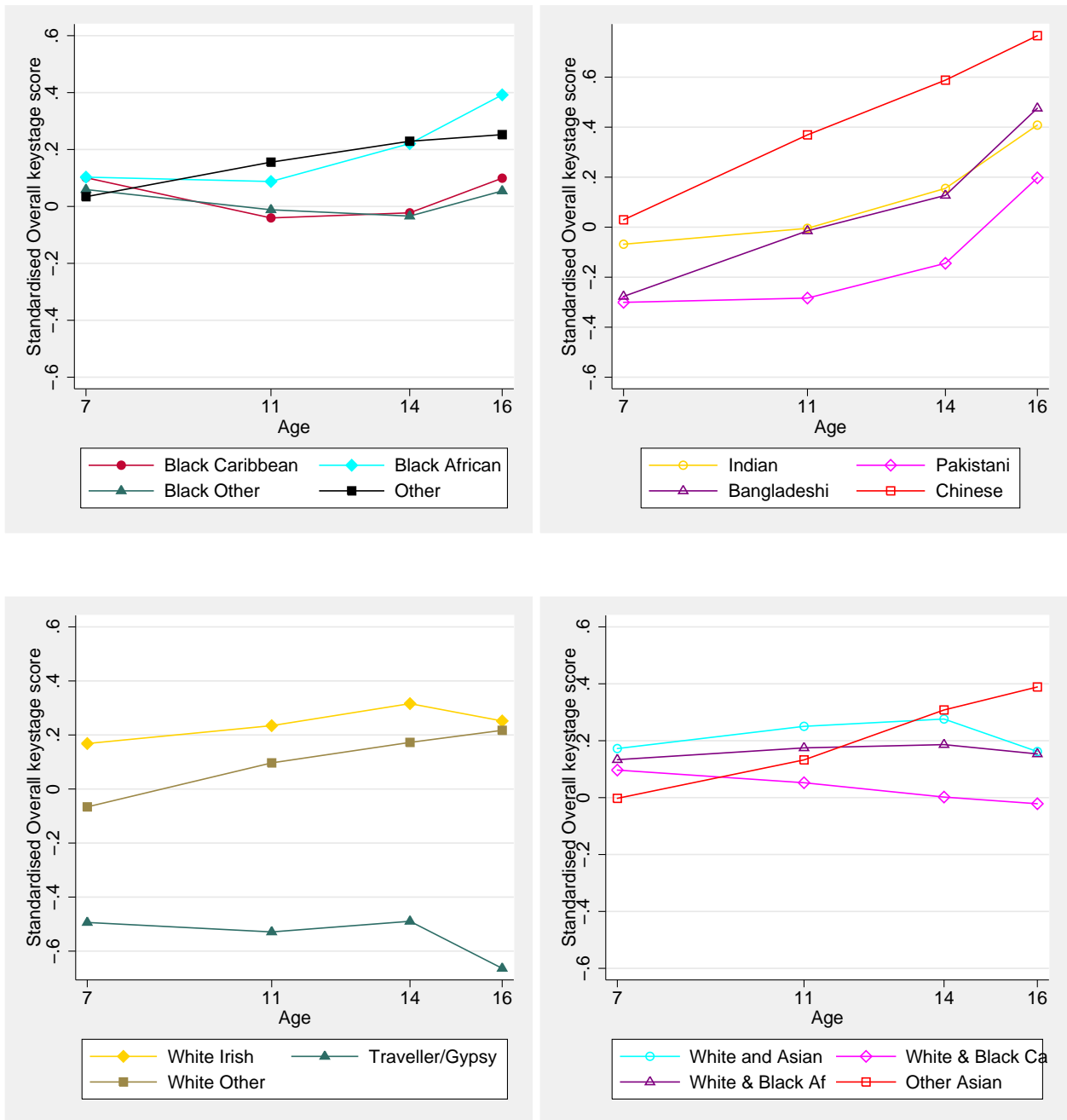
**Figure 7b: Overall standardised score for balanced panel**

**For Non-FSM Female Pupils**



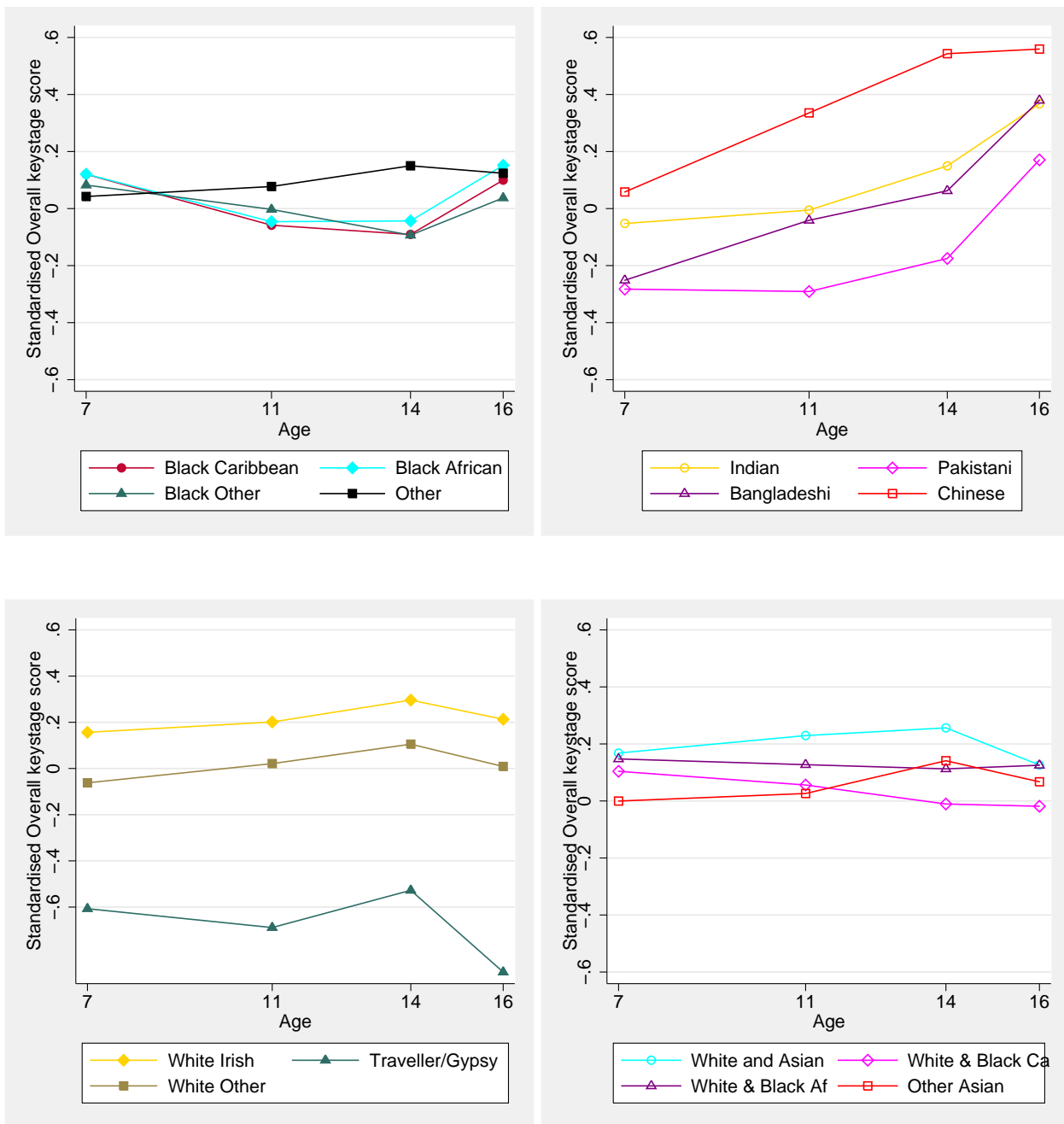
**Figure 8a: 'Group'- White British ethnicity conditional gaps in standardised score for balanced panel**

**With IDACI controls**



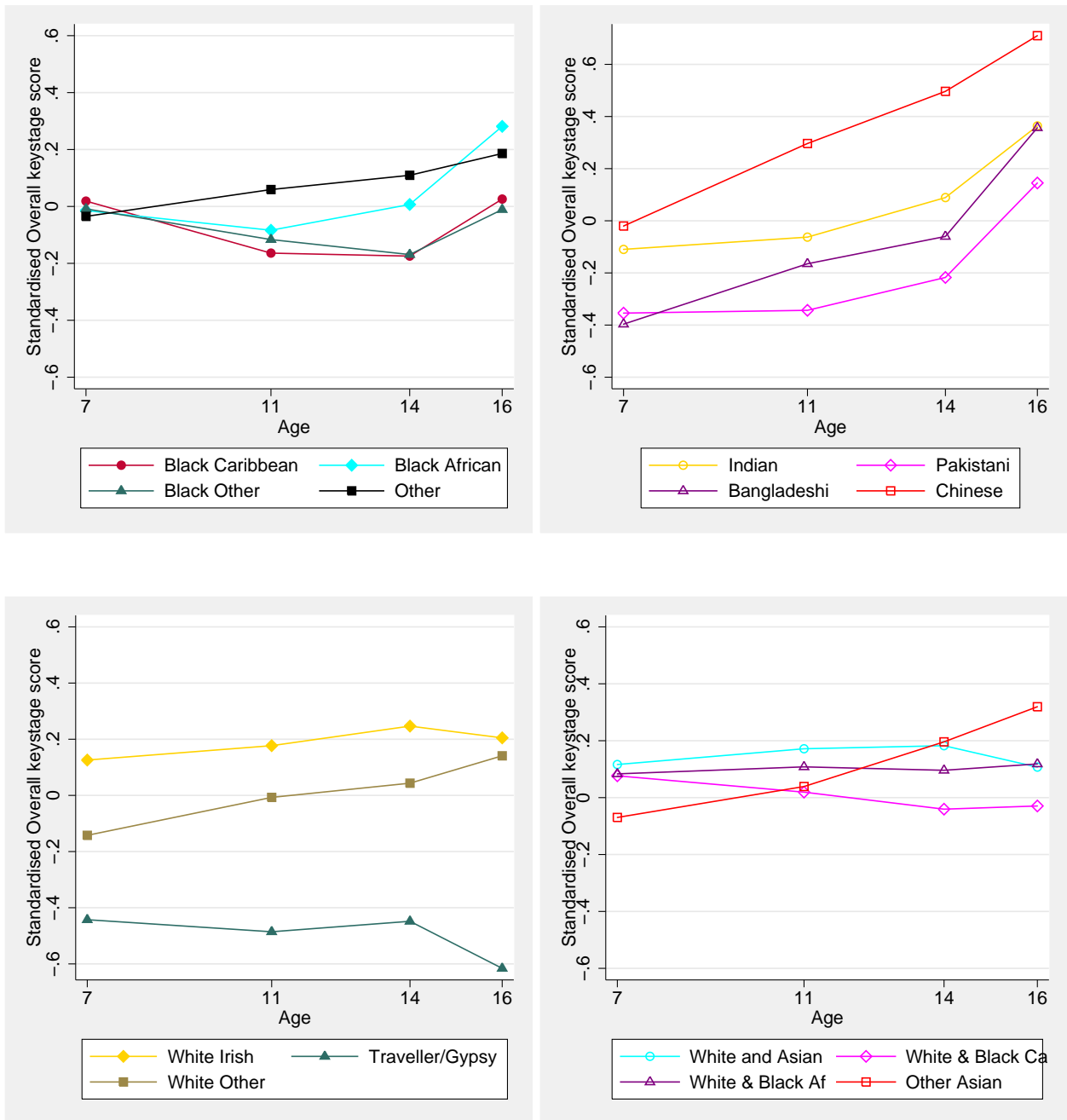
**Figure 8b: 'Group' - White British ethnicity conditional gaps in standardised score for cross sections**

**With IDACI controls**



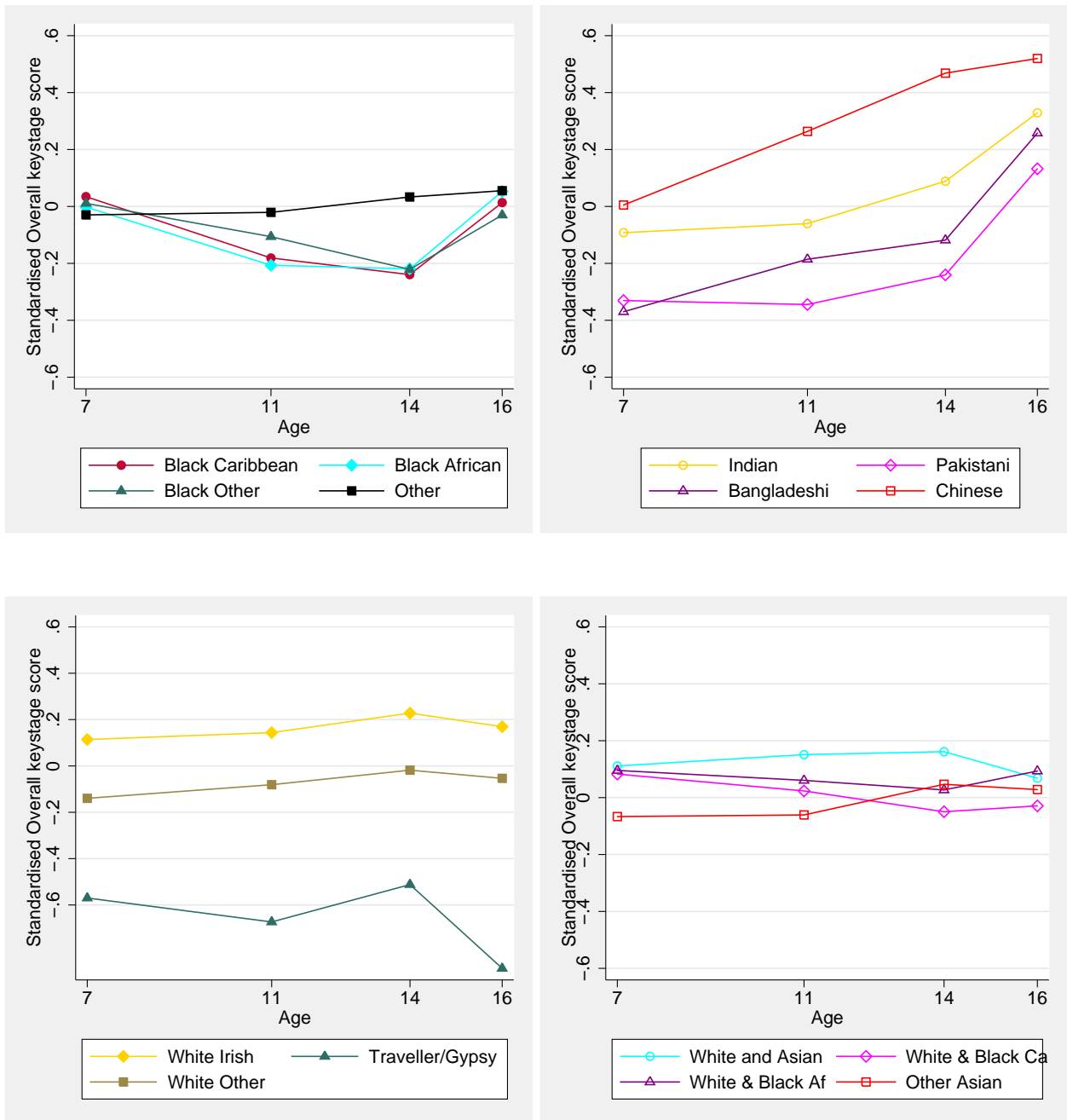
**Figure 9a: ‘Group’- White British ethnicity conditional gaps in standardised score for balanced panel**

**With MOSAIC controls**



**Figure 9b: ‘Group’-White British ethnicity conditional gaps in standardised score for cross sections**

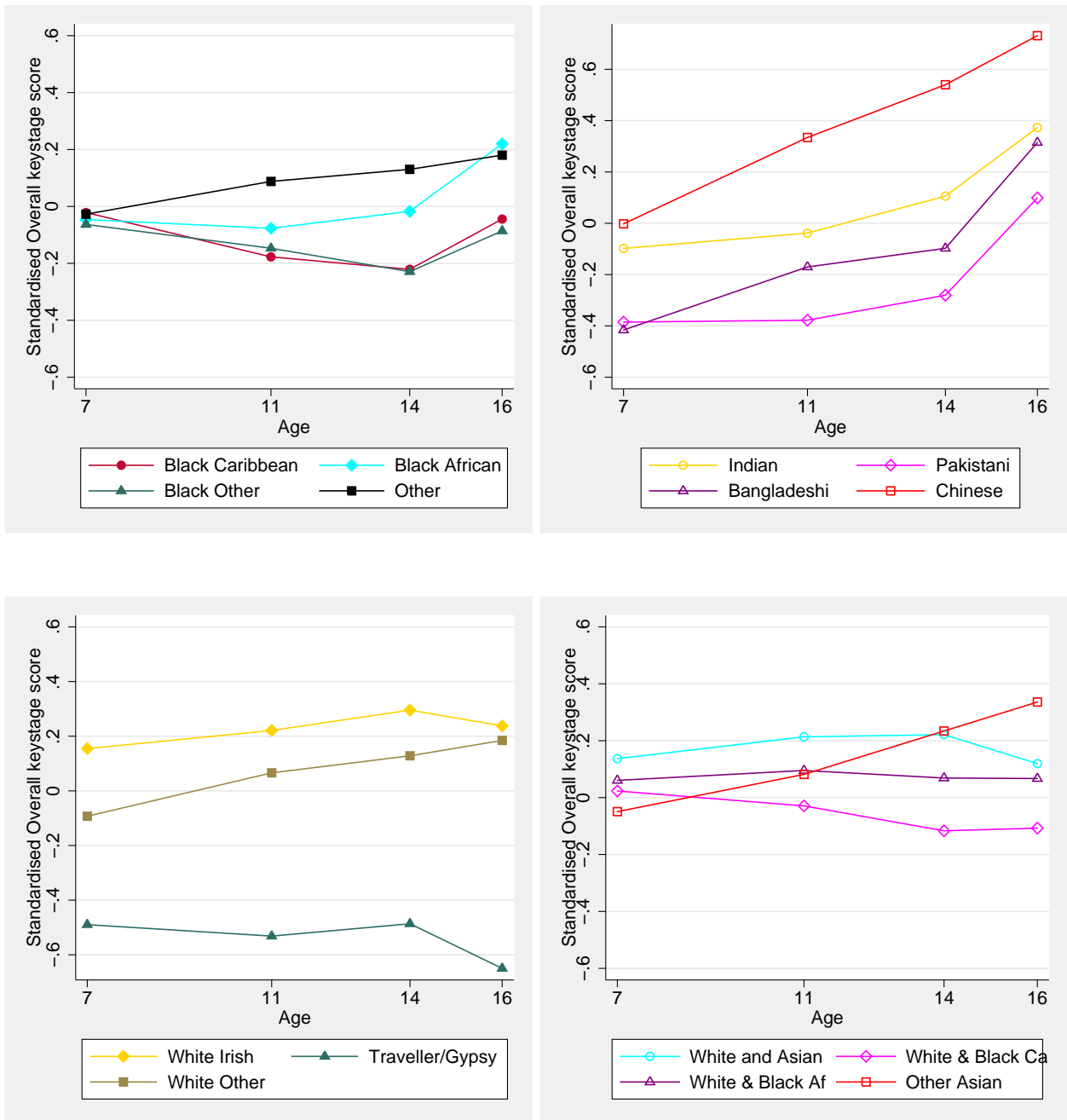
**With MOSAIC controls**





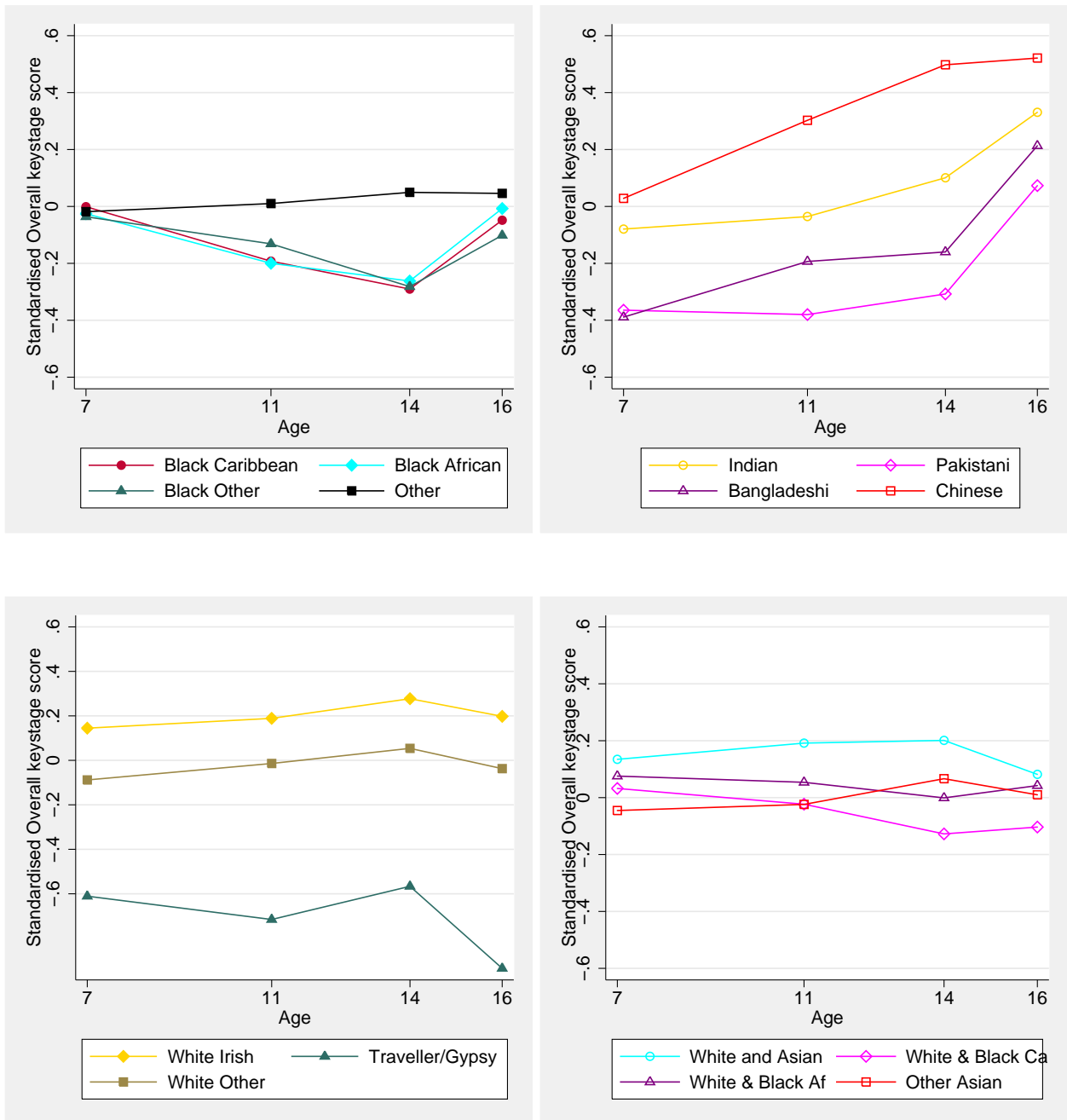
**Figure 10a: 'Group'- White British ethnicity conditional gaps in standardised score for balanced panel**

**No Neighbourhood controls**



**Figure 10b: ‘Group’- White British ethnicity conditional gaps in standardised score for cross sections**

**No Neighbourhood controls**



## Appendix

**Table A1: Sample Size – Balanced Panel as % of all observations at key-stage**

Ethnicity		KS1	KS2	KS3	KS4	KS1 or KS2	KS3 or KS4
<b>Black Caribbean</b>		90.96	79.21	80.25	72.21	92.44	80.56
<b>Black African</b>		92.59	63.86	50.75	38.58	95.25	51.03
<b>Black Other</b>		91.18	80.18	77.78	66.21	93.03	78.06
<b>Indian</b>		95.34	86.97	84.72	78.13	96.53	85.11
<b>Pakistani</b>		89.73	81.75	83.78	73.57	92.08	84.05
<b>Bangladeshi</b>		89.32	81.10	82.14	71.68	93.31	82.75
<b>Chinese</b>		95.67	82.82	72.66	59.60	97.21	73.34
<b>White</b>		90.27	88.51	93.85	85.67	91.75	94.60
	<b>White British</b>	90.29	88.84	94.44	86.63	91.74	95.19
	<b>White Irish</b>	90.18	85.15	87.88	79.56	92.42	88.46
	<b>Traveller/Gypsy</b>	61.04	53.61	79.21	40.06	65.89	81.03
	<b>Other White</b>	90.34	73.52	69.18	52.41	92.81	69.75
<b>Other</b>		90.37	78.70	77.11	63.55	92.29	77.67
	<b>Other Asian</b>	93.16	70.82	60.91	44.69	95.13	61.29
	<b>White and Asian</b>	91.23	83.75	85.73	77.51	93.07	86.38
	<b>White and Black Caribbean</b>	88.97	85.87	92.77	83.23	90.41	93.11
	<b>White and Black African</b>	88.62	77.96	75.64	65.25	90.80	76.95
	<b>Other</b>	90.39	75.54	72.60	58.29	92.67	73.22

**Table A2: Observations missing some Key Stage score data before age 14**

<b>Ethnicity</b>	<b>Number of observations missing in KS1/KS2/both</b>	<b>Number of observations in cross-sections</b>	<b>Proportion of observations missing in KS1/KS2/both</b>
<b>Black Caribbean</b>	1,812	8,275	21.90
<b>Black African</b>	6,904	11,586	59.59
<b>Black Other</b>	758	2,638	28.73
<b>Indian</b>	2,535	13,358	18.98
<b>Pakistani</b>	2,690	14,443	18.62
<b>Bangladeshi</b>	1,246	5,696	21.88
<b>Chinese</b>	881	2,251	39.14
<b>Other Asian</b>	2,678	5,070	52.82
<b>White and Asian</b>	477	2,836	16.82
<b>White &amp; Black Caribbean</b>	429	5,545	7.74
<b>White &amp; Black African</b>	394	1,384	28.47
<b>Other</b>	3,919	10,548	37.15
<b>White British</b>	27,021	487,890	5.54
<b>White Irish</b>	314	2,228	14.09
<b>Traveller/Gypsy</b>	140	362	38.67
<b>Other White</b>	5,821	13,337	43.65

**Figure A1: Attainment of Black Africans pupils; those in the Balanced Panel vs those present for KS3 and KS4 but missing KS1, KS2 or both**

