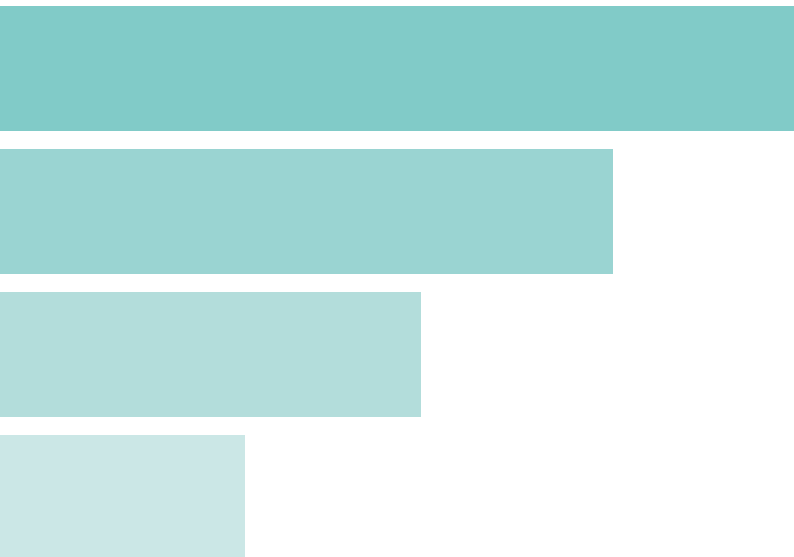# BACKGROUND TO SUCCESS

Differences in A-level entries by ethnicity, neighbourhood and gender

Pam Sammons, Katalin Toth & Kathy Sylva
University of Oxford Department of Education

November 2015

The persistence of an attainment gap throughout secondary school has been the subject of much research by the Sutton Trust, and finding solutions a key task of our sister charity, the Education Endowment Foundation. As today's second report in our research series drawing on the EPPSE longitudinal cohort shows, gender, ethnicity and place all play their part.

As the attainment of minority ethnic communities has improved in recent years – itself a great achievement - there has been increasing concern about the performance of white working class children, particularly boys. At the same time, the remarkable gains made by London schools including for disadvantaged pupils have not been matched in other parts of the country, particularly in coastal towns and Northern cities.

Background to Success shows how these disparities – already evident in GCSE results – manifest themselves in the extent to which disadvantaged pupils continue their studies and take A-levels. This new research from Professor Pam Sammons, Dr Katalin Toth and Professor Kathy Sylva at Oxford University sheds valuable new light on the extent to which young people from disadvantaged backgrounds are missing out and some reasons why.

The report shows that disadvantaged boys were three times less likely to enter A-levels than their more advantaged peers, and a similar though less marked gap exists with girls. It also confirms the remarkable success of Indian students, and the improved success of Bangladeshi students.

Importantly, it shows that living in a disadvantaged neighbourhood reduces the likelihood of disadvantaged students doing A-levels. As the Government reviews the funding system, including the historic extra resources in such areas, it will be important to recognise the impact of this double disadvantage, and to examine ways in which the extra resources applied to these areas could attract similar attention and accountability as the pupil premium.

The report and the first in the series, *Subject to Background*, have other important policy implications. The universal application of the pupil premium to disadvantaged pupils is important, as is the potential to enable some of the funding to support enrichment outside school. Study and reading opportunities should not be a middle class preserve, and students need much better careers advice. We need also to see what lessons from London can be more widely applied.

I am very grateful to the researchers for their work on this report, the second of four reports for the Sutton Trust drawing on data from the Effective Pre-School, Primary and Secondary Education (EPPSE) cohort. I hope it provides food for thought as the spending review approaches.

SIR PETER LAMPL
Chairman, Sutton Trust and The Education Endowment Foundation

EXECUTIVE SUMMARY

This report investigates patterns of academic attainment for different subgroups of a longitudinal sample of more than 3,000 students whose educational outcomes were studied across different phases of school and pre-school from age three to age 18. In this report, we study equity differences in outcomes for different groups of students and illustrate the powerful role of background factors such as gender, ethnicity and disadvantage in shaping educational outcomes, success and educational futures.

The report is the second in a series produced for the Sutton Trust studying AS and A-level outcomes for students and the drivers of academic success in advanced level studies. The first report considered the drivers of better outcomes for high attaining students (the 'bright but poor').[1] Here we examine outcomes for all students and the important role of background in shaping academic success post 16 in more depth. We specifically focus on gender, ethnicity, geographical areas (students were drawn from five regions), family disadvantage and 'place poverty' related to the local neighbourhood in which students lived based on their post codes.[i] The research focuses on the likelihood that students go on to take academic courses at AS or A-level, and their attainment during key stage 5 (KS5) when students were in Year 12 and Year 13 of secondary education (attending school or colleges) for advanced level qualifications.

While past research has pointed to the role of the early years home learning environment (early HLE), pre-school and school influences, this report shows that background factors (individual, family and neighbourhood) remain powerful and long lasting influences that shape the chances of academic success post 16 and which either individually or in combination reduce the chances of advanced level study.

Key Findings

Gender

1. Boys were significantly less likely to have continued onto an academic route post 16 than girls.[ii]

2. The absence of KS5 data (indicating students did not continue to advanced courses) is especially evident for disadvantaged boys, almost 60% of the disadvantaged boys in this sample did not continue on an academic route.

Socially disadvantaged students are the most likely not to continue on an academic route. A part of this reflects their lower attainment at age 16 in GCSE examinations, which reduces their

---

[i] Represented by the % FSM at school level, % white British population in the neighbourhood and two indicators of neighbourhood disadvantage, the *Index of Multiple Disadvantage* (IMD) and the *Income Deprivation Affecting Children Index* (IDACI).

[ii] Meaning that they were less likely to have KS5 academic data available, including AS and A-level results.

opportunity to undertake advanced level courses. The adverse impact of disadvantage is particularly noted for boys. Disadvantaged boys were significantly less likely to go on to advanced level studies up to age 18 pointing to the combined influence of gender and disadvantage in shaping outcomes for such adolescents.

3.   Disadvantaged boys were almost three times less likely to go on to enter four or more AS-level exams or to enter three or more A-level exams than other more advantaged boys.

4.   Disadvantaged girls were also significantly less likely to have continued their academic career than more advantaged girls, although the achievement gap was less marked. For this group 45% lacked KS5 data, compared with 60% for boys.

5.   Disadvantaged girls were much less likely to enter four or more AS-level exams than other girls, and almost four times less likely to enter three or more A-levels than other girls.

Ethnicity

6.   Students of white UK heritage, white European heritage or of mixed race were less likely to have progressed to advanced level courses than students from other ethnic groups.

7.   Almost half of Indian students entered four or more AS-level exams and approximately half entered three or more A-levels, almost double the equivalent percentage for white UK students.

8.   White UK disadvantaged boys were significantly less likely to enter four or more AS-levels or three or more A-levels than other white UK boys.

9.   Students who were eligible for or received free school meals in Year 11 were less likely to have progressed to advanced level studies post 16. They were almost three times less likely to take four or AS-levels or to take three or more A-levels than other students (those not entitled to free school meals).

Place

10.   Students who lived in poor neighbourhoods (measured by the Income Deprivation Affecting Children Index (IDACI) on the percentage of children living in poverty) were less likely to go on to advanced level courses than students who lived in more affluent neighbourhoods.

11. Disadvantaged students of white UK heritage who lived in the poorest neighbourhoods were less likely to enter advanced level courses than disadvantaged students of white UK heritage who lived in more affluent neighbourhoods. Only around 29% of disadvantaged white UK boys living in the poorest neighbourhoods went onto advanced level study compared with around 46% of disadvantaged white UK boys living in the most affluent neighbourhoods. Place poverty thus seems to compound family disadvantage for such boys.

12. Similar significant differences in the likelihood of taking advanced level courses were identified for disadvantaged white UK girls who lived in the poorest neighbourhoods compared with disadvantaged white UK girls living in the most affluent neighbourhoods.

Additional background factors

To test the strength of different background factors in shaping students outcomes in KS5 at advanced level we used statistical models to test the effects of various factors simultaneously so we could establish their relative importance. While controlling for students' individual characteristics (gender, age), family factors (ethnicity, free school meal eligibility, salary) and neighbourhood characteristics,[iii] we found that:

13. Girls were significantly more likely to enter at least one AS-level or A-level examination, to enter three or more A-levels and to obtain higher KS5 total scores than boys.

14. Indian or Bangladeshi students were significantly more likely to enter at least one AS-level or A-level examination, to enter four or more AS-levels, and three or more A-levels and to obtain higher total AS/A-level points than white British students.

15. Students who lived in more disadvantaged neighbourhoods, (those that scored higher on the IDACI), were significantly less likely to enter four or more AS-levels or three or more A-level examinations than students living in more advantaged neighbourhoods (who scored less highly on this index). Students who grew up in a neighbourhood with higher unemployment rates were also significantly less likely to enter three or more A-level exams than students whose neighbourhood had lower unemployment rates.

16. Students who had attended a secondary school with higher proportions of students eligible for free school meals (indicating higher levels of disadvantage at school level or in the neighbourhood) were also significantly less likely to enter any AS/A-levels, to enter four or more AS-levels and three or more A-levels and to obtain lower scores on the total KS5 points, AS-level points and A-level points.

[iii] We are only presenting here the statistically significant effects of the key groups of interest to this report (gender, ethnicity and place poverty). Other background characteristics were also found to be statistically significant and the full set of results is available in the Appendix.

Taken together, these results again point to the powerful influence of different aspects of student background in shaping educational outcomes, particularly for 17 and 18 year-olds at advanced level. The findings show that a range of factors remained important. They confirm that there is no 'level playing field' and that differences that emerged early in children's lives continue to affect outcomes and life chances into adolescence beyond the age of 16. Some young people are much less likely to progress onto advanced level studies than others. This matters because advanced level studies are important in determining the likelihood of entering higher education and are closely linked to future earning potential. As the Sutton Trust has reported elsewhere, graduates of Russell Group universities benefit from a substantial premium in their future earning power.[2]

Of particular importance is the way such factors seem to combine to reduce the chance of entering AS or A-levels. Being a boy and disadvantaged, especially being a white disadvantaged boy from the UK greatly reduced the likelihood of advanced level studies. In addition, living in a poor neighbourhood when young (especially one with a higher concentration of children living in poverty), also has a negative impact.

In our first Sutton Trust report based on the EPPSE sample, we explored the role of the early years' home learning environment, opportunities for enrichment during adolescence in KS3, and pre-school and school influences that can help to promote better outcomes. The focus of this report remains on the continued powerful effects of background that shape the chances of success and the likelihood of going on to advanced level studies in England. It is important for policymakers to recognise the way different influences combine to shape outcomes if they are to develop the most appropriate policy responses to address the longstanding problems of educational inequity in life chances and outcomes. We recognise that there has been an historic trend to fund schools serving more disadvantaged pupils more favourably, and this has been sustained and further emphasised by the introduction of the pupil premium, something the IFS has analysed.[3] However, it is of concern that historic patterns of more favourable funding for local authorities serving more disadvantaged communities were reversed through austerity policies and cuts after 2010 that particularly affected such authorities. As the recent analyses by the Joseph Rowntree Foundation illustrate, there has been a break in the historic link between disadvantage and local authority funding. The foundation noted that 'In 2010/11, the most deprived councils had an extra 45% of expenditure per head to cope with additional needs. By 2014/15, this had been reduced to 17%.'[4]

In light of the research results presented, here we argue that the government should be careful as it moves to try to promote 'fair funding' – a national funding formula - not to assume that all pupil premium pupils have the same needs regardless of where they live, and to recognise the case for extra funding of those facing 'double disadvantage' both through school and wider community budgets. More attention needs to be paid to the combined impact of place and family poverty and its implications for ensuring that the benefits of more favourable funding for disadvantaged pupils are not offset by reductions in funding that is targeted at disadvantaged communities in which many live. More explicit alignment of area based and school based policies should be undertaken to address the consequences of such 'double disadvantage.'

RECOMMENDATIONS

1. **Continued support for the pupil premium, to improve attainment for all disadvantaged pupils, while looking at the external effects that may compound the disadvantage.**

This research adds to the evidence showing the educational disadvantage incurred by young people from disadvantaged backgrounds. The pupil premium is a key lever to raise the attainment of disadvantaged pupils, and its success depends on the degree to which it is spent effectively using evidence of what works to support better outcomes for such pupils. It is important that the premium is paid for all disadvantaged pupils, without discrimination between low and high attainers. This is also particularly important in improving later access to higher education. So, to remove its current applicability to all pupils as currently targeted would send perverse signals to successful schools. In the context of creating a fairly funded system, government should also consider the external effects that may combine to compound the effects on pupils from disadvantaged backgrounds, including place poverty (living in neighbourhoods with higher proportions of poor children, attending schools serving higher proportions of disadvantaged pupils), gender and ethnicity.

2. **Support to encourage reading for pleasure, educational trips and out-of-school study opportunities should be provided to promote attainment for disadvantaged students at all ages.**

Enrichment vouchers should be funded through the pupil premium for both primary and secondary pupils. The experience of a better home learning environment in the early years but also academic enrichment activities during adolescence (including reading at home and going on educational visits and trips) also boosts later school attainment at GCSE and the chances of bright but poor students going on to gain better AS and A-level outcomes. This has implications for those responsible for planning the use of pupil premium funds in all schools because disadvantaged students, as a group, tend to have fewer enrichment opportunities at home. Support to encourage reading for pleasure, educational trips and providing studying opportunities may prove especially necessary to promote attainment for disadvantaged students. This may be particularly relevant for disadvantaged pupils living in the poorest neighbourhoods.

3. **Continue to recognise the double disadvantage experienced by pupils in the poorest communities through the funding system and stronger accountability.**

The research shows that disadvantaged pupils attending schools with large numbers of disadvantaged pupils or in neighbourhoods with high numbers of poor children, or high unemployment areas are significantly less likely to go on to advanced courses than the average for disadvantaged pupils. As the government reviews the funding system, including the historic extra resources in such areas, it will be important to recognise the impact of 'double

disadvantage' - the way living in a poor neighbourhood (place poverty) can compound the effects of family disadvantage -, and to examine ways in which the extra resources applied to these areas could attract similar attention and accountability as the pupil premium. Any incentives should reflect success against the odds achieved by schools serving such communities.

4.   **Some groups of students, particularly white working class boys, should have additional encouragement and support to enable them to engage in self-directed study, do sufficient homework and read more books, the activities that provide extra academic dividends.**

Schools should provide such opportunities where they are unlikely to be available at home. Some groups of disadvantaged students do better than others, and there have been real improvements among many under-attaining minority ethnic communities in recent years and within places like London. However, there remain real issues in other communities, particularly in coastal communities and Northern cities and especially with white working class pupils, particularly boys. Schools may need to pay particular attention to ensuring that they can promote better outcomes for white working class boys by offering additional or tailored opportunities for them to learn in and out of school. Interestingly, earlier EPPSE research for this sample revealed that some of the differences in exam success reflect variations between student groups in the time they report spending on homework ahead of their GCSEs. Out of school learning or additional study opportunities in school may reflect differences in expectations of teachers, parents and students about what is important for success. The school day is relatively short and the effects of some regular increase in study time mount up and may provide a cumulative advantage.

5.   **All pupils should receive a guaranteed level of careers advice from professional impartial advisers.**

For those facing particular disadvantage – or who are at risk of failing to reach their potential – there should be further support available. Schools and colleges should have access to professional advisers with specialist and up-to-date knowledge, including those with expertise in vocational pathways and with knowledge of entry to university. While the government is moving towards a compulsory EBacc, there is growing evidence of a gap between entry levels and attainment which could be narrowed if pupils had a clearer sense of future opportunities.

6.   **Targeted local programmes to drive up school standards.**

The experience of London boroughs in driving up performance improvements in both primary and secondary schools should be used as an example in other areas. School to school improvement was a particular strength in London and lessons can be learnt for other cities and as multi-academy trusts develop across the country. However, it should not be a one size fits all approach and it is important that each area recognises the issues facing their pupils which may sometimes differ from those in London.

Despite numerous educational reforms, gender, low income and ethnic origin remain important factors associated with educational inequalities. The gender gap between boys and girls can be detected in early educational settings and is maintained throughout children's academic careers with small variations in certain subjects. Girls seem to be ahead of boys in pre-school and primary school (especially in language and English), but also have better overall key stage 3 results and GCSE results.[5,6,7] However, at advanced level, this gap seems to get smaller across time, being at its narrowest point since the late 1990s, following a major overhaul of A-levels.[8] Girls are also less likely than boys to take certain subjects beyond the age of 16 and this can negatively affect employment prospects and earning potential.

Strand (2010) indicated that there has been a substantial change in the patterns of academic achievement of ethnic minority students over the last 20 years.[9] However, the latest review from the Department of Education (DfE) shows significant differences in academic outcomes that remain evident in relation to ethnic origin.[10] Assessment of the national data on academic attainment at age 16 from 2013/2014 found that the highest proportions of students achieving five GCSE passes at A*-C grades including English and mathematics were among the Chinese (74%), Indian (73%) and Bangladeshi students (61%). A little over half of the white British students (56%) achieved at this threshold, while the proportions of Pakistani and Black Caribbean students were smaller (51% and 47%).

The same report also highlighted the attainment gap between students eligible for free school meals (FSM) and their peers, indicating that the FSM students were 27 percentage points behind their schoolmates in achieving five A*-C GCSEs (or equivalent) grades including English and mathematics. The attainment gap due to area deprivation was even higher; only 44% of the students resident in the most deprived areas achieved at least 5 A*-C GCSEs (or equivalent) grades including English and mathematics compared with 74.5% of pupils resident in the least deprived areas.

Although each individual background characteristic has its own relevant role in accounting for differences in attainment, in reality, higher levels of educational inequalities tend to be shaped simultaneously by the combination of gender, ethnicity and disadvantage.[7] Strand (2014) showed that the GCSE results of low socioeconomic status (SES) ethnic minority students were significantly better that the results of low SES white British students. On the other hand, among better off students, only those of Indian background outperform white British students. The same author indicated that, at age 14, the attainment gap due to social disadvantage was six times larger than the gender gap and three times larger than the ethnic gap.[11]

Sample

The sample for this research is drawn from the Effective Pre-school, Primary and Secondary Education Project (EPPSE3+-16), a major large-scale, longitudinal study of the progress and development of children from pre-school through to post-compulsory education in England.[5,12,6,13,14] It has investigated various aspects of pre-school, primary and secondary school

provision that shape children's attainment, progress and development over successive phases of education up to age 16.

The original sample of 3172 children was assessed at the start of pre-school, when the children were about three years old, and their development was monitored until they entered school around the age of five. This original sample also includes over 300 'home' children who had not attended any type of pre-school and who were recruited to the study at age five, representing a comparison 'no pre-school' group. The sample was followed up across primary school into adolescence and children were assessed again at key points until the end of key stage 4 in secondary school. These young people were most recently followed through their final year of compulsory schooling and on to their post 16 educational, training and employment choices.

This Sutton Trust follow-up study investigates these students' destinations (academic/non-academic routes), their AS and A-level take up and attainment in KS5. Data provided by the Department for Education's National Pupil Database (number of AS and A-levels attained, subjects taken, KS5 grades and total point scores) were merged into the EPPSE dataset to examine these students' A-level and AS achievement and the factors that predict academic success.

In this report, we focus on the sample that could have been tracked up the age 16 (n=2812, representing 86% of the original EPPSE sample). In total, just over 60% of the main tracked sample (n=1690) went on to continue their education beyond the age of 16. In line with national figures, we found that 37% of the tracked EPPSE sample actually entered A-level exams at age 18 (n=1045).[16]

The research used descriptive statistics, multilevel logistic regression, multiple and logistic regression as appropriate to predict differences in students' examination results at AS and A-level. Odds ratios are used to show the effects of different predictors in increasing or decreasing the likelihood of good outcomes for different groups of students.

Measures

The EPPSE datasets provide rich information on these young people's lives and educational/social progress from the early years from the age of three to 18. In this report we focus particularly on gender, ethnicity, FSM status, geographical areas and measures of place poverty.

Information on changing home circumstances was collected from parents and later from students themselves (at ages 3, 7, and 14) and assessments of these students' academic, social and attitudinal development were available for eight time points as they grew up from three to 18 years of age.

Gender

In the tracked sample (n=2812), more than half of the students were boys (52%, n=1466). However, in the sample that actually continued onto a post 16 education, more than half were

girls (53%, n=890). Identical to the national figure, 54% of those who entered at least one A-level were girls (n=566).[iv]

Ethnicity

The majority of students in the EPPSE sample were of white UK heritage (74%, n=2084), while the smallest group was represented by the Bangladeshi students (1%, n=32, see Table 1). Although the numbers for non-white students are quite small, differences that are presented in this report are all statistically significant and in line with national patterns.

Table 1: Distribution based on students' ethnicity

Ethnicity	N	%
Bangladeshi	32	1.14
Black African Heritage	59	2.10
Indian	60	2.14
Any Other Ethnic Minority	63	2.24
White European Heritage	95	3.38
Black Caribbean Heritage	105	3.74
Pakistani	154	5.48
Mixed Race	158	5.62
White UK Heritage	2,084	74.16
Total	2,810	100

Geographical areas

Originally, the EPPE study included six English local authorities (LAs) in five geographical regions. These were chosen to cover provision in urban, suburban and rural areas and a range of ethnic diversity and social disadvantage. In this sample, we have similar numbers of students in each geographical area (see Table 2).

Table 2: Distribution of students in different geographical areas

Geographical areas	N	%
East Anglia	579	20.59
Shire County	539	19.17
Inner London	571	20.31
North East	544	19.35
West Midlands	579	20.59
Total	2,812	100

[iv] The Joint Council for Qualifications reported that in 2013 only 37% of all 18 year olds took A-levels – and of all this year's entrants, 54% were girls.

Free School Meals

Free school meals eligibility (FSM) has been used in the educational literature as a useful, but crude, proxy for social disadvantage. In all, 19 percent of the students (n=495) were eligible or received FSM in Year 11.[v]

Additionally, information on the percentages of white British citizens and unemployment in the neighbourhood where students lived while at school was also added from the 2001 census. From the Department for Education, we obtained data on the percentage of students eligible for free school meals for each school attended by EPPSE students. By combining these measures with other data on personal and family characteristics for the EPPSE sample both 'person' and 'place' (neighbourhood) drivers of educational outcomes can be identified and their combined effects explored to investigate educational equity gaps at advanced level in England.

Social disadvantage

In addition to the FSM indicator, we used other individual measures that are not available in national DfE data sets like family socio-economic status (SES) based on parents' occupations, parents' salary, parents' educational qualifications, and parents' employment status to identify the more 'disadvantaged' group in our sample. The EPPSE research team had also created its own *multiple disadvantage index* to classify all individual children in the sample based on their own and their families' characteristics.[1]

Students were classified as 'more disadvantaged' when they satisfied simultaneously more than one of the following criterion. Thus a student was included in the more disadvantaged group if they scored on more than one of the following: parents' occupations were of lower SES, the student received or was eligible for FSM, they had a higher score on the multiple disadvantage index or their family had low or no salary.

Place poverty

Based on home address post code, two measures of 'place' poverty - the Income Deprivation Affecting Children Index (IDACI) and the Index of Multiple Deprivation - (IMD) were added to the EPPSE dataset. The IDACI represents the percentage of children in each Standard Output Area (SOA) that live in families that are income deprived. The IMD is an 'overall measure of multiple deprivation experienced by people living in an area' combining weighted measures or levels of: crime, barriers to housing, living environment, education and skills training, health deprivation

---

[v] The FSM information collected with the EPPSE Year 11 Pupil Profile Questionnaire had a high percentage of missing values (39%). Therefore, this information was combined with the FSM information available from the National Pupil Database (NPD). Additionally, it is important to stress that the EPPSE FSM data represents the students who actually received FSM, while the NPD data indicates the students who are eligible to receive FSM. NPD 's definition of the FSM eligibility: 'Pupils should be recorded as eligible (true) only if a claim for free school meals has been made by them or on their behalf by parents and either (a) the relevant authority has confirmed their eligibility and a free school meal is currently being provided for them, or (b) the school or the LEA have seen the necessary documentation (for example, an Income Support order book) that supports their eligibility, and the administration of the free meal is to follow as a matter of process. Conversely, if students are in receipt of a free meal but there is confirmation that they are no longer eligible and entitlement will be revoked, false should be applied.'

and disability, employment and income.[16] The greater the IMD score, the greater the level of neighbourhood deprivation.

This report is the second in a series produced for the Sutton Trust studying AS and A-level outcomes for students and the drivers of academic success in advanced level studies post 16. The first report focused on a sub group of high attaining students (identified at key stage 2 in primary school) who were followed up. Here we study the full sample and explore gender, ethnicity and place poverty differences in academic outcomes during KS5 when students were in Year 12 and Year 13 of secondary education (attending school or colleges). More specifically, we examine the following academic outcomes:

- Whether or not the students continued on an academic route (a record of taking any AS or A-levels)
- The number of AS[vi] and A-levels taken[vii]
- Total points obtained at both AS and at A-levels
- Total KS5 score[viii]

Raw differences

Initially, we studied the differences in attainment for specific background characteristics in raw terms without controlling for the influence of other factors. This reveals the actual size of the equity gap in attainment for different groups.

Gender

Boys were significantly less likely to have continued onto an academic route post 16 than girls (45% of boys vs. 34% of girls had no KS5 data record).

Figure 1: Gender differences in KS5 data availability and number of AS-level exams entered
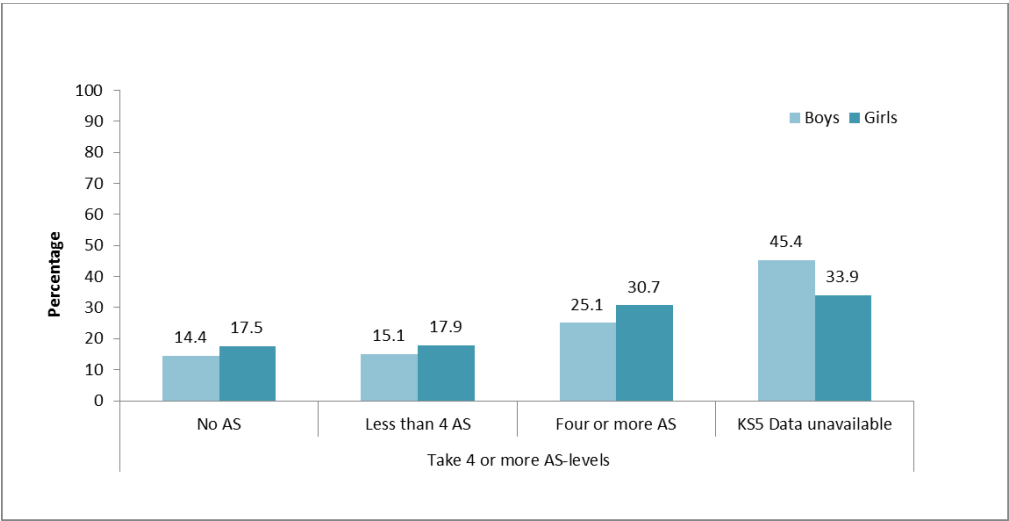
vi The numbers are based on the total number of AS-levels taken regardless whether they also took them as A-levels and regardless of the final grade (except if this was 'X').
vii The numbers are based on the number of A-levels taken regardless of the final grade (except if this was 'X', but still counted if the final grade was 'U').
viii Total KS5 scores also include points contribution from the equivalent of an A-level of other vocational and occupational like BTEC or Level 3 Key skills.

When only the students who continued onto an academic route by taking AS or A-levels (n=1690) are considered, there is no statistically significant difference between girls and boys in the number of exams taken at either level (Table A.2 and A.4 in the Appendix). In the tables we present results in terms of means (the average score for a group - M) and a measure of variation in scores for the group (the standard deviation - SD).

Girls (M=735.5, SD=249.2) obtained significantly higher total KS5 scores on average when compared with boys (M=697.9, SD=261.2). However, there are no statistically significant differences between boys and girls on KS5 AS points or on KS5 A-level points. This indicates that the main gender difference relates to the chances of going on to advanced level study rather than in overall attainment in points scores.

Free school meals (FSM)

As expected, students who were eligible for or received free school meals in Year 11 were much less likely to have KS5 data available than other students (34% vs. 58%). The FSM group of students was also almost three times less likely to take four or more AS-levels and three or more A-levels than the other students (AS-levels: 12% vs. 32%; A-levels: 12% vs. 33%, see Tables A.5 and A.6).

Geographical areas

Students from the West Midlands were the least likely to have KS5 data available, while students from Inner London were most likely. Additionally, students from the West Midlands were the least likely to enter four or more AS-levels examinations (21%) or three or more A-levels (20%), while those from the shire counties were the most likely to enter the same number of AS-levels (35%) or A-levels (38%, see Tables A.7 and A.8).

Gender and social disadvantage

The lack of KS5 data is a prominent feature when the students are socially disadvantaged. It reflects their lower attainment at GCSE, something that reduces the opportunities to undertake advanced level courses post 16, but may also reflect differences in aspirations/concerns about cost (the education maintenance allowance was abolished during the time those in the EPPSE sample were in school).

The absence of KS5 data is especially evident for disadvantaged boys; almost 60% of the disadvantaged boys had no such data. These boys were significantly less likely to go on to A-level studies post 16, pointing to the combined role of gender and disadvantage in shaping outcomes for these adolescents.

Only 24% of disadvantaged boys entered at least one AS-level exam and only 13% took four or more AS-levels. Disadvantaged boys were almost three times less likely to enter four or more AS-level exams (13% vs. 37%, see Figure 2 and Table A.9) or to enter three or more A-level exams (12% vs. 37%, see Table A.10) than more advantaged boys.

Figure 2: Disadvantaged boys and AS-levels
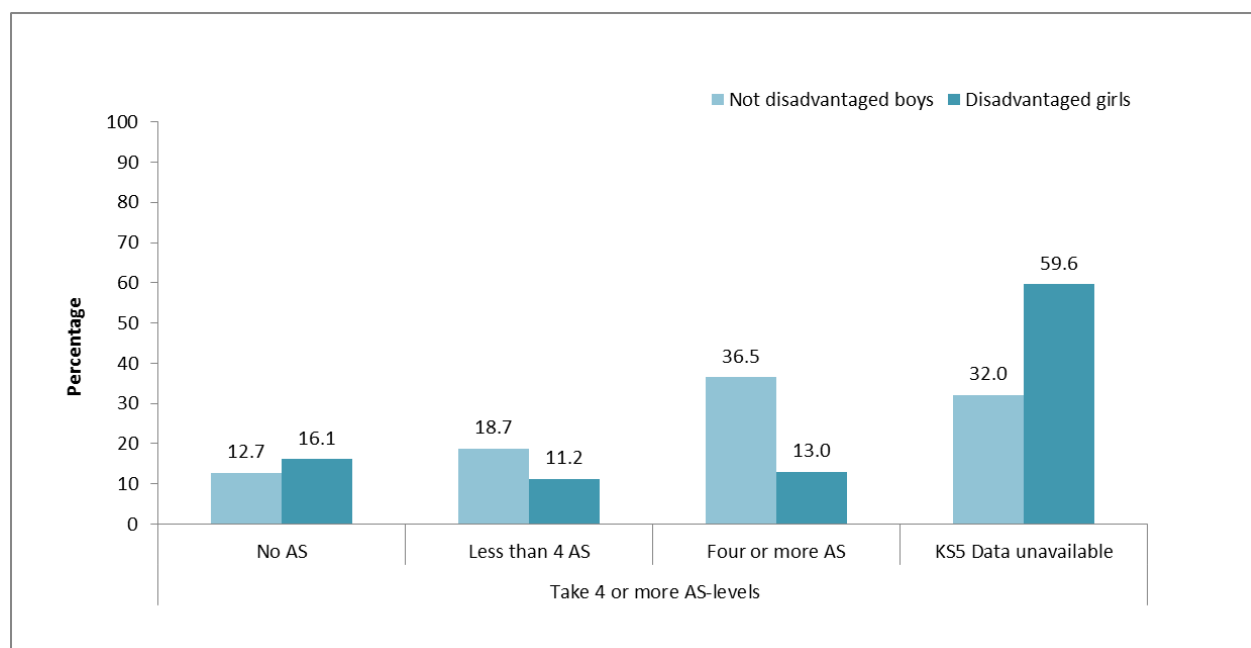
Disadvantaged boys also obtained significantly lower mean total KS5 scores (M=595.4, SD=250.9), AS-level points (M=171.8, SD=192.5) and A-level points (M=234.1, SD=328.5) than more advantaged boys (total KS5 score - M=752.7, SD=250.1; AS-level - M=296.5, SD=216.4; A-level - M=469.1, SD=371.2).

When compared to disadvantaged girls, disadvantaged boys were more likely to have missing data (indicating they did not go on to any KS5 courses) and less likely to have taken four or more AS-levels or taken three or more A-levels (see Tables A.11 and A.12).

Although the achievement gap was less marked in percentage terms, disadvantaged girls were also less likely to have KS5 data (45% of disadvantaged girls had no KS5 data, double the equivalent figure for more advantaged girls), In total, 35% of disadvantaged girls took at least one AS-level, and they were much less likely to enter four or more AS-level exams (18% vs. 43%, see Table A.13) than more advantaged girls, and almost four times less likely to enter three or more A-levels (12% vs. 46%, see Figure 3 and Table A.14) than more advantaged girls.

Figure 3: Disadvantaged girls and A-levels
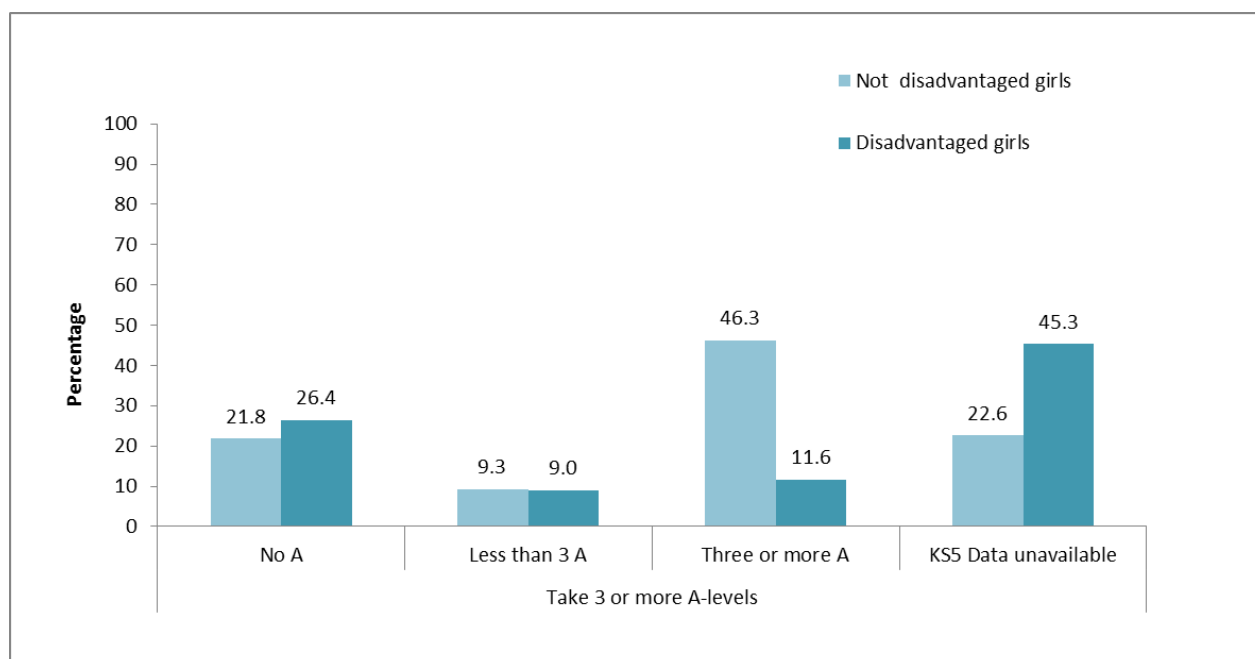
Disadvantaged girls also scored significantly below the average total KS5 score, total AS and total A-level points than more advantaged girls.

Ethnicity

Students of white UK heritage, white European heritage or of mixed race were less likely to have continued on an academic route than other groups. No KS5 data was available for 42% of these students compared with much lower figures for black African (24%) or Indian students (18%).

Almost half of the Indian students entered four or more AS-level exams and approximately half entered three or more A-levels, almost double the percentage for white UK students (see Figures 4 and 5).

Figure 4: Ethnicity and entering for or more AS-level exams

Indian — 45.0
Any Other Ethnic Minority — 33.3
Bangladeshi — 31.3
Mixed Race — 28.5
White UK Heritage — 27.8
White European Heritage — 27.4
Black African Heritage — 27.1
Black Caribbean Heritage — 26.7
Pakistani — 18.8

Four or more AS

Percentage
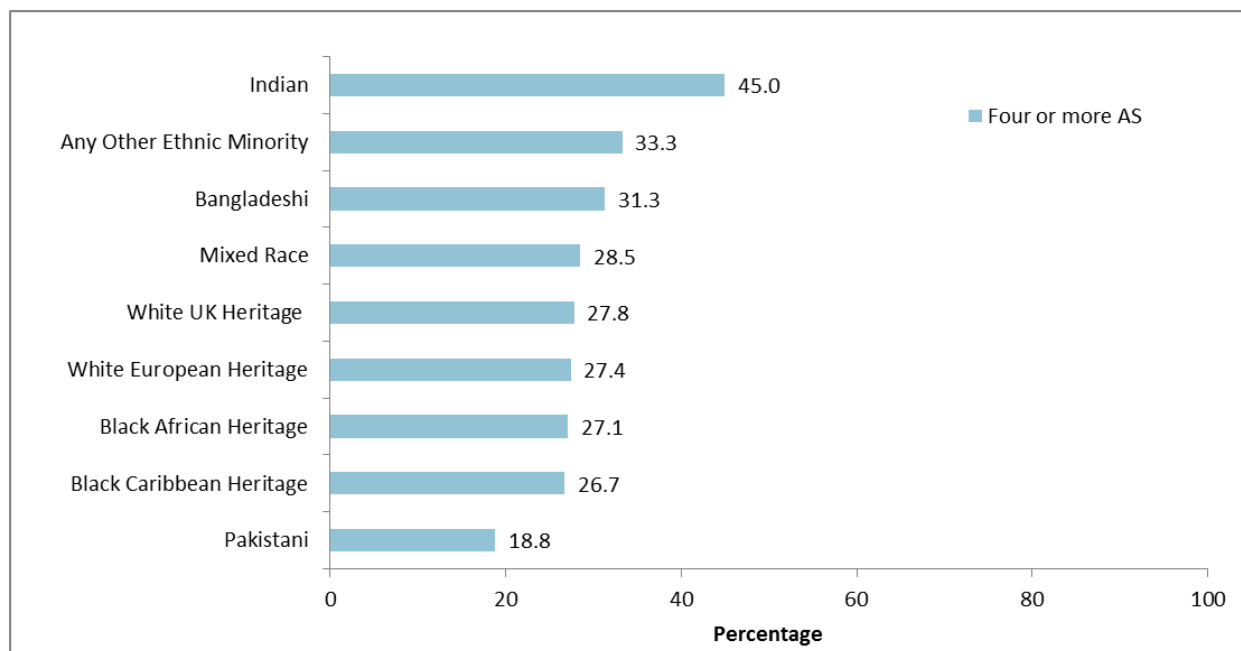
Figure 5: Ethnicity and entering three or more A-level exams

Indian — 50.0
Bangladeshi — 37.5
Black African Heritage — 32.2
Mixed Race — 31.0
White European Heritage — 29.5
White UK Heritage — 28.5
Black Caribbean Heritage — 27.6
Any Other Ethnic Minority — 23.8
Pakistani — 18.2

Three or more A

Percentage
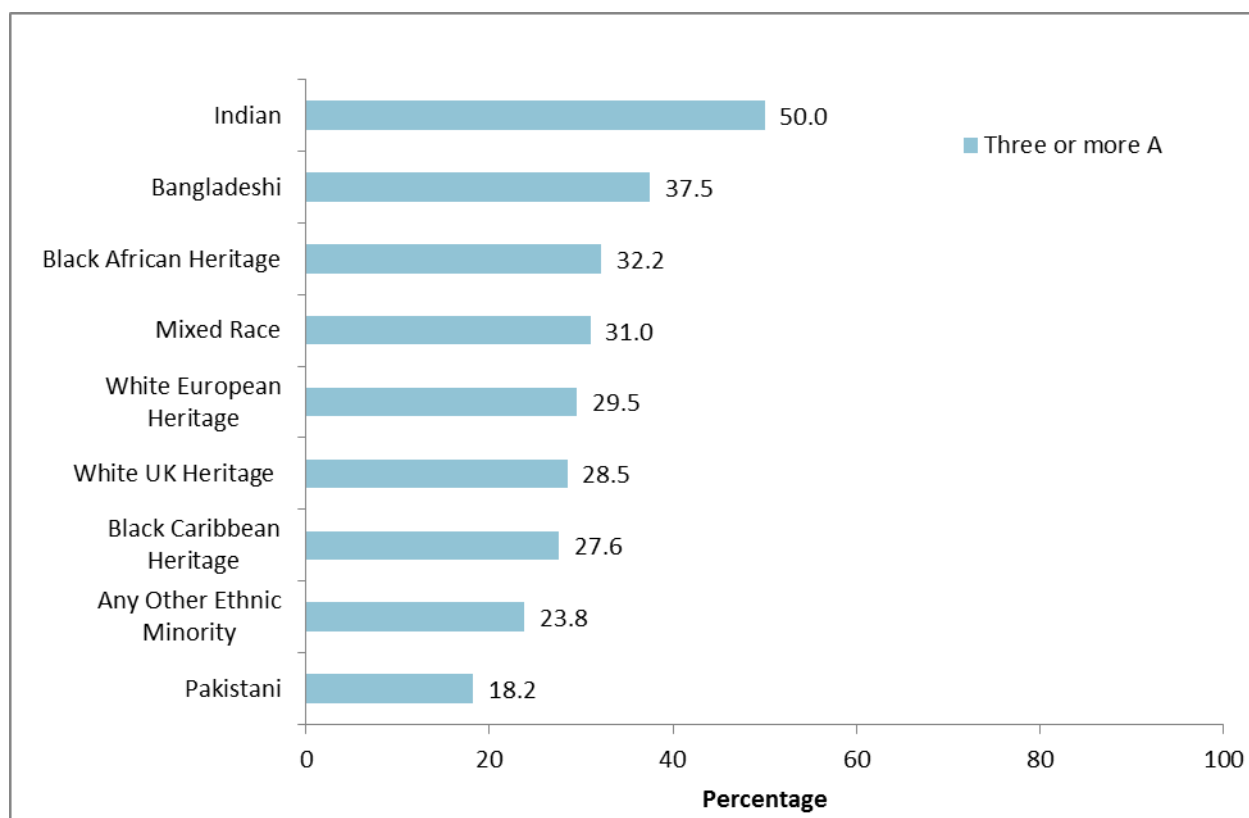
Pakistani students obtained significantly lower averages on total KS5 score (M=640.2, SD=250.6), total AS-level points (M=153.2, SD=200.1) and total A-level points (M=239.1, SD=331.5) when compared to white UK students (total KS5 score - M=734.6, SD=257.4; AS - M=271.7, SD=220.3; A-levels - M=411.8, SD=369.8).

Gender, ethnicity and social disadvantage

It is notable that white UK disadvantaged boys were significantly less likely to enter four or more AS-levels (31% vs. 55%) or three or more A-levels (27% vs. 56%) than white UK, more advantaged boys (see Tables A.16 and A.17).

Neighbourhood poverty: Combined effects

White disadvantaged boys living in more disadvantaged areas (IDACI postcodes) were significantly less likely to continue into advanced level (missing KS5 data) than white working class boys living in the least disadvantaged neighbourhoods. In all, just under 71% of white UK disadvantaged boys living in high disadvantaged areas had missing KS5 data (indicating they did not go on to advanced level study), compared with around 55% of white UK disadvantaged boys living in more affluent areas . Similar results were found for girls, 59% of white UK disadvantaged girls from poor neighbourhoods had missing KS5 data compared with 43% of white UK disadvantaged girls living in more wealthy communities (see Tables A.18 and A.19).

Net effects

The differences in outcomes presented above do not take into account the influence of other background characteristics in shaping students' AS and A-level outcomes. To identify the strength of different factors we conducted further statistical analyses. The next set of findings presents results taking into account students' individual (gender, age), family (ethnicity, FSM, salary) and neighbourhood characteristics.[ix]

Entering any AS-level examination

We used logistic regressions to investigate the net effect of gender, ethnicity and place poverty while controlling for the effects of other background factors in predicting outcomes. The likelihood is expressed as an odds ratio (OR).[x]   Students[xi] were significantly more likely to enter any AS-level examination when they were girls and of Bangladeshi, Indian or Pakistani ethnic origin (compared with white British students, see Table A.20).

However, students who attended a secondary school with a more disadvantaged student intake (higher % FSM students at school level) were significantly less likely to take AS-levels (OR=0.99).

[ix] We only present the statistically significant effects of gender, ethnicity, FSM and place poverty. Other background characteristics were also statistically significant and the full set of results are available in the Appendix.
[x] These represent the odds of achieving certain benchmark performance indicators given certain characteristics relative to the odds of the reference group. A value higher than 1 represents a positive likelihood, while a value below 1 reflects a negative likelihood.
[xi] n=2500

Entering any A-level examinations

Similar to the results presented above for the AS-level entries, the outcomes for A-level entries show that girls were more likely to take any A-levels than boys. When compared with white British students, students of Bangladeshi, Indian and black Caribbean ethnic origins were also more likely to take any A-levels.

Negative effects were found for students who had attended a secondary school with a large proportion of disadvantaged pupils or for students living in a neighbourhood that had a higher percentage of white British people. These students were significantly less likely to enter any A-levels (see Table A.21).

Taking four or more AS-levels

In addition to investigating entry to any AS or A-levels, further analyses examined how different characteristics predicted whether students entered four or more AS-levels or three or more A-levels, as these are the typical numbers of examinations that shape entry to higher education at degree level.

While controlling for other background characteristics, students of Bangladeshi, Indian and of other ethnic origin were more likely to enter four or more AS-levels than white UK students (see Table A.22 or Figure 6).

Additional to the negative effects of a higher number of FSM students in the secondary school a student had attended and of a higher number of white British citizens in the students' neighbourhood, we found a strong negative effect from the index of child poverty (IDACI). Students who were classified as living in more disadvantaged neighbourhoods on this index were less than half as likely to enter four or more AS-levels exams as those who lived in less disadvantaged neighbourhoods.[xii] Strong effects were also obtained when we tested the bottom 25% (most disadvantaged neighbourhood) against the top 25% (most advantaged) on the IDACI scale (OR=0.65).

Weaker negative effects were obtained for the more broadly based index of multiple deprivation measure of overall neighbourhood disadvantage, those living in neighbourhoods with higher scores being less likely to enter four or more AS-level exams (OR=0.99).

However, there were no statistically significant gender effects when predicting whether or not students entered four or more AS-levels.

[xii] Effect obtained on the continuous measure where higher scores reflecting more child poverty.

Figure 6: Selected statistically significant odds ratios of predicting the likelihood of entering four or more AS-levels
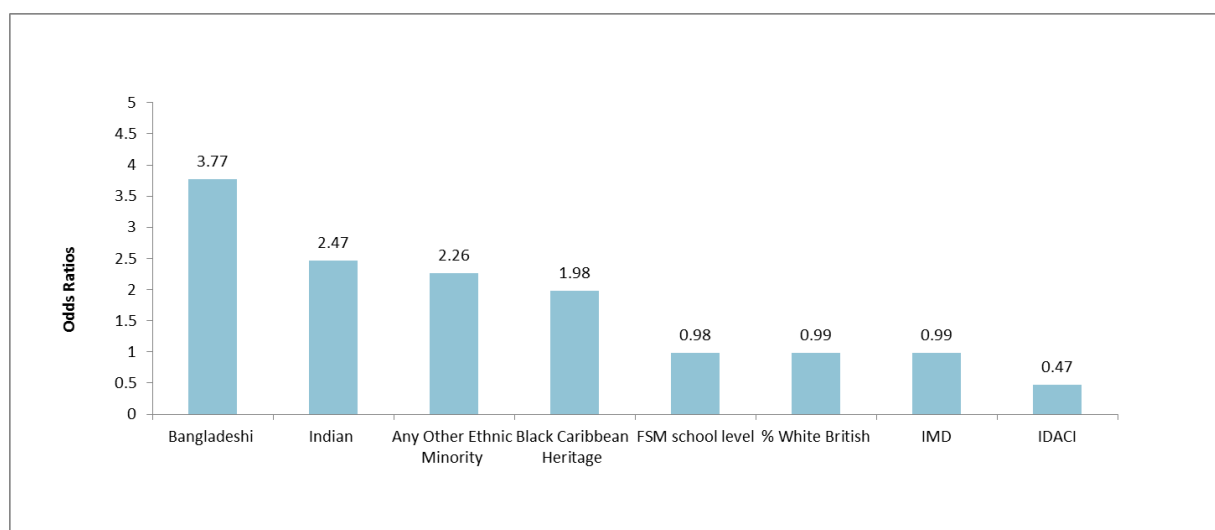
Taking three or more A-levels

Significant gender and ethnic effects were found in the logistic models predicting A-level exam entries. Thus, girls were significantly more likely to enter three or more A-level exams than boys (OR=1.48). Bangladeshi, Indian, Black Caribbean and mixed raced students were also much more likely to take three or more A-levels (with the highest OR of 6.70) than white UK students (see Table A.23).

Significant and negative probabilities were obtained for the percentage of FSM students in the secondary school and the percentage of white British citizens in the neighbourhood. A similar effect was obtained for the multiple deprivation score; students who lived in neighbourhoods with higher IMD scores were less likely to enter three or more A-level exams than those who lived in neighbourhoods that had lower IMD scores.

Child poverty measured through IDACI had a strong negative effect on the likelihood of A-level entries, students whose neighbourhoods scored highly on this indicator being half as likely to enter three or more A-level exams as students who lived in more advantaged neighbourhoods with lower scores.

An additional place poverty indicator proved statistically significant in predicting A-level entries. Students who grew up in neighbourhoods with higher unemployment rates were significantly less likely to go on to enter three or more A-level exams than students whose neighbourhood had lower unemployment rates (OR=0.19).

Total KS5 points score, KS5 AS-levels Points and KS5 A-levels Points

As well as using logistic regression models for predicting the different probabilities of continuing on certain academic routes, we also predicted students' overall KS5 attainment represented by

different point scores. Multilevel regression models predicted differences in three outcomes: the total KS5 score, total AS-level points and total A-level points. The strength of associations is expressed in effect sizes.[xiii]

Girls obtained significantly better overall academic outcomes (total KS5 points scores) than boys, but their attainment was not significantly different for AS-level or A-level point scores (see Table A.24).

Students of Indian heritage obtained significantly higher AS-levels points and A-level points than white UK students, while Bangladeshi students obtained significantly higher A-levels points.

Students who had attended secondary schools with higher percentage of FSM student intake obtained significantly lower total KS5 score, AS and A-level point scores (see Tables A.24, A.25 and A.26).

[xiii] Effect size (ES) is a statistical concept that shows the strength of the relationship between outcomes while controlling for other factors. An effect size of 0.1 is relatively weak, one of 0.5 moderate in size, one of 0.7 fairly strong.

This report provides new evidence on the achievement of different groups of students at key stage 5 in England. It shows how different background characteristics shape the educational futures of students and the size of the equity gap. The chances of entering advanced level study are shaped not just by coming from a disadvantaged background in terms of low income or low family socioeconomic status. In addition, other characteristics, particularly gender and ethnicity, play a role. It is especially notable that disadvantaged boys have poorer outcomes than similarly disadvantaged girls. Moreover, disadvantaged boys have poorer outcomes than more advantaged boys. At this level of education there are also significant differences related to ethnic background. White UK students have significantly poorer outcomes than those of black African or Indian background. Although based on relatively small numbers for some ethnic minority groups, the pattern of results found for the EPPSE sample at AS and A-level is very much in line with the national patterns.[10] Moreover, recent Department for Education figures for 2013-2014 confirm that white UK students are less likely than those of other ethnic backgrounds to continue in education post 16, particularly at sixth form (school or college).[15]

As well as individual and family factors, neighbourhood influences are evident. Having attended a secondary school with a more disadvantaged student intake reduces the likelihood of later success at KS5. Other influential factors predicting poorer outcomes at advanced level include: living in a more disadvantaged neighbourhood (measured by the IDACI) where a higher percentage of children lives in poverty; living in a neighbourhood with an above average white British population; or living in an area of high unemployment.

The combined results point to the continuing and powerful influence of student background in shaping educational outcomes, particularly at advanced level post 16. The findings show that a range of factors are important. They confirm that there is no level playing field and that differences that emerged early in children's lives continue to affect outcomes into adolescence and post 16. Some young people are much less likely to progress onto advanced level studies than others. This matters because advanced level studies are important in determining the likelihood of entering higher education and future earning potential.

Of particular importance is the way such factors can combine to reduce the chance of entering AS or A-levels. Being a boy and disadvantaged, especially being a boy of white UK background, much reduced the likelihood of going on to advanced level studies. Equally, living in a poor neighbourhood when young (especially one with a higher concentration of children living in poverty) has a negative impact. So, being a disadvantaged white UK boy and living in the poorer neighbourhood greatly reduces the chance of advanced level study. Policymakers need to take into account the way different factors (individual, family, school and neighbourhood) combine in developing appropriate policies to combat educational inequality. These results make very clear that social, ethnic and educational patterns of segregation can all combine to reduce the chances of long term educational success up to age 18. It is recognised that there has been an historic trend to fund schools serving more disadvantaged pupils more favourable, and this has been sustained and further emphasised by the introduction of the pupil premium.[3] However, it is of concern that historic patterns of more favourable funding for local authorities serving more disadvantaged communities were reversed through austerity policies and cuts after 2010 that

particularly affected such local authorities, as the recent analyses by the Joseph Rowntree Foundation illustrates the break of the historic link between disadvantage and LA funding. This noted that 'In 2010/11, the most deprived councils had an extra 45% of expenditure per head to cope with additional needs.[4] By 2014/15, this had been reduced to 17%.

In the light of these research results we argue that the government should be careful as it moves to try to promote 'fair funding' – with a national funding formula - to assume that all pupil premium pupils have the same needs regardless of where they live, and to recognise the case for extra funding of those facing 'double disadvantage' both through school and wider community budgets. More attention needs to be paid to the combined impact of place and family poverty and its implications for ensuring that the benefits of more favourable funding for disadvantaged pupils are not offset by reductions in funding that are targeted at disadvantaged communities in which many live. More explicit alignment of area based and school based policies should be undertaken to address the consequences of such 'double disadvantage.'

REFERENCES

1) Sammons, P., Toth, K., & Sylva, K. (2015). Subject to Background: What Promotes Better Achievement for Bright but Disadvantaged Students? London: Sutton Trust.

2) Sutton Trust (2015). Levels of Success: The potential of UK apprenticeships. London: Sutton Trust. http://www.suttontrust.com/wp-content/uploads/2015/10/Levels-of-Success.pdf

3) Sibieta, L. (2015). Schools Spending. IFS Briefing note BN168; London: IFS Nuffield Foundation.

4) Hastings, A., Bailey, N., Bramley, G., Gannon, M., & Watkins, D. (2015). The cost of the cuts: the impact on local government and poorer communities. York: Joseph Rowntree Foundation. https://www.jrf.org.uk/report/cost-cuts-impact-local-government-and-poorer-communities

5) Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B. and Hunt, S. (2008). Effective Pre-school and Primary Education 3-11 Project (EPPE 3-11): Influences on Children's Attainment and Progress in Key Stage 2: Cognitive Outcomes in Year 6. Research Report No. DCSF-RR048. Nottingham: DCSF Publications.

6) Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Toth, and Smees, R. (2014). Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14) - Influences on students' GCSE attainment and progress at age 16. DfE Research Report 352, London: Institute of Education, University of London / Department for Education.

7) Strand, S. (2014). Ethnicity, gender, social class and achievement gaps at age 16: Intersectionality and 'Getting it' for the white working class. *Research Papers in Education, 29, (2), 131-171.*

8) Smithers, A. (2014). A-Levels 1951-2014, Buckingham: CEER. http://www.alansmithers.com/reports/AL2014.pdf

9) Strand, S. (2010). Do some schools narrow the gap? Differential school effectiveness by ethnicity, gender, poverty and prior attainment. *School Effectiveness and School Improvement, 21, (3), 289-314.*

10) DfE (2015). GCSE and equivalent attainment by pupil characteristics, 2013 to 2014 (Revised), Statistical First Release SFR06/2015, London: Department for Education https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/399005/SFR06_2015_Text.pdf

11) Strand, S. 2011. "The Limits of Social Class in Explaining Ethnic Gaps in Educational Attainment." British Educational Research Journal *37 (2*), 197–229.

12) Sammons, P., Sylva, K., Melhuish, E., Siraj-Blatchford, I., Taggart, B., Toth, K., Draghici, D. and Smees, R. (2012). Effective Pre-School, Primary and Secondary Education Project (EPPSE 3-14) - Influences on students' attainment and progress in Key Stage 3: Academic outcomes in the core subjects in Year 9. London: Institute of Education, University of London / Department for Education.

13) Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (Eds) (2010), *Early Childhood Matters: Evidence from the Effective Pre-school and Primary Education project.* London: Routledge.

14) Sylva, K. Melhuish, E., Sammons, P., Siraj-Blatchford, I. and Taggart, B. (2014) Students' educational and developmental outcomes at age 16 EPPSE Final Report on Key Stage 4, DfE Research Report 354, London: DfE.

15) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/469390/SFR40-2015_Destination_Measures_2013-14_Final_20151019.pdf

16) JCQ (2015). Provisional GCE A Level Results - June 2015, London: Joint Council For Qualifications http://www.jcq.org.uk/examination-results/a-levels/2015

17) DCLG (2015). The English Indices of Deprivation 2015, Statistical Release, London: Department for Communities and Local Government https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/465791/English_Indices_of_Deprivation_2015_-_Statistical_Release.pdf

Gender differences

Table A.1: Gender differences in AS-level entries, full sample

Take 4 or more AS-levels									
Gender	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
Boy	211	14.4	221	15.1	368	25.1	666	**45.4**	1466	100
Girl	236	17.5	241	17.9	413	30.7	456	**33.9**	1346	100
Total	447	15.9	462	16.4	781	27.8	1122	39.9	2812	100
									Pearson chi2(3) = 39.11, p=0.000	

Table A.2: Gender differences in AS-level entries, KS5 sample

Take 4 or more AS-levels								
Gender	No AS		Less than 4 AS		Four or more AS		Total	
	N	%	N	%	N	%	N	%
Boy	211	26.4	221	27.6	368	46	800	100
Girl	236	26.5	241	27.1	413	46.4	890	100
Total	447	26.4	462	27.3	781	46.2	1690	100
							Pearson chi2(2) = 0.06, p = 0.968	

Table A.3: Gender differences in A-level entries, full sample

Take 3 or more A-levels									
Gender	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
Boy	321	21.9	118	8	361	24.6	666	45.4	1466	100
Girl	324	24.1	123	9.1	443	32.9	456	33.9	1346	100
Total	645	22.9	241	8.6	804	28.6	1122	39.9	2812	100
									Pearson chi2(3) = 39.11, p = 0.000	

Table A.4: Gender differences in A-level entries, KS5 sample

Take 3 or more A-levels								
Gender	No A		Less than 3 A		Three or more A		Total	
	N	%	N	%	N	%	N	%
Boy	321	40.1	118	14.8	361	45.1	800	100
Girl	324	36.4	123	13.8	443	49.8	890	100
Total	645	38.2	241	14.3	804	47.6	1690	100
							Pearson chi2(2) = 3.69, p = 0.157	

FSM differences

Table A.5: FSM differences in AS-level entries, KS5 sample

Take 4 or more AS-levels									
Year 11 FSM	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	343	15.7	385	17.7	706	32.4	745	34.2	2179	100
Yes	88	17.8	63	12.7	59	11.9	285	57.6	495	100
Total	431	16.1	448	16.8	765	28.6	1030	38.5	2674	100

Pearson chi2(3) = 123.32, p = 0.000

Table A.6: FSM differences in A-level entries, KS5 sample

Take 3 or more A-levels									
Year 11 FSM	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	502	23	204	9.4	728	33.4	745	34.2	2179	100
Yes	123	24.8	30	6.1	57	11.5	285	57.6	495	100
Total	625	23.4	234	8.8	785	29.4	1030	38.5	2674	100

Pearson chi2(3) = 128.72, p = 0.000

Geographical areas

Table A.7: Geographical differences in AS-level entries, KS5 sample

Take 4 or more AS-levels									
Geographical areas	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
East Anglia	98	16.9	90	15.5	142	24.5	249	43	579	100
Shire County	61	11.3	92	17.1	190	35.3	196	36.4	539	100
Inner London	88	15.4	99	17.3	188	32.9	196	34.3	571	100
North East	94	17.3	84	15.4	138	25.4	228	41.9	544	100
West Midlands	106	18.3	97	16.8	123	21.2	253	43.7	579	100
Total	447	15.9	462	16.4	781	27.8	1122	39.9	2812	100

Pearson chi2(12) = 50.11, p = 0.000

Table A.8: Geographical differences in A-level entries, KS5 sample

Geographical areas	Take 3 or more A-levels									
	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
East Anglia	143	24.7	45	7.8	142	24.5	249	43	579	100
Shire County	98	18.2	42	7.8	203	37.7	196	36.4	539	100
Inner London	118	20.7	51	8.9	206	36.1	196	34.3	571	100
North East	130	23.9	51	9.4	135	24.8	228	41.9	544	100
West Midlands	156	26.9	52	9	118	20.4	253	43.7	579	100
Total	645	22.9	241	8.6	804	28.6	1122	39.9	2812	100

Pearson chi2(12) = 69.66, p = 0.000

Gender and social disadvantage

Table A.9: Disadvantaged boys and AS-level entries

Disadvantaged boy	Take 4 or more AS-levels									
	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	96	12.7	141	18.7	275	36.5	241	32	753	100
Yes	115	16.1	80	11.2	93	13	425	59.6	713	100
Total	211	14.4	221	15.1	368	25.1	666	45.4	1466	100

Pearson chi2(3) = 158.42, p = 0.000

Table A.10: Disadvantaged boys and A-level entries

Disadvantaged boy	Take 3 or more A-levels									
	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	152	20.2	82	10.9	278	36.9	241	32	753	100
Yes	169	23.7	36	5	83	11.6	425	59.6	713	100
Total	321	21.9	118	8	361	24.6	666	45.4	1466	100

Pearson chi2(3) = 174.04, p = 0.000

Table A.11: Disadvantaged students and AS-level entries

Disadvantaged students	Take 4 or more AS-levels									
	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
Disadvantaged boy	115	16.1	80	11.2	93	13	425	59.6	713	100
Disadvantaged girl	133	20	112	16.8	119	17.9	302	45.3	666	100
Total	248	18	192	13.9	212	15.4	727	52.7	1379	100

Pearson chi2(3) = 29.07, p = 0.000

Table A.12: Disadvantaged students and A-level entries

Disadvantaged students	Take 3 or more A-levels, valid sample									
	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
Disadvantaged boy	169	23.7	36	5	83	11.6	425	59.6	713	100
Disadvantaged girl	176	26.4	60	9	128	19.2	302	45.3	666	100
Total	345	25	96	7	211	15.3	727	52.7	1379	100

Pearson chi2(3) = 34.98, p = 0.000

Table A.13: Disadvantaged girls and AS-level entries

Disadvantaged girls	Take 4 or more AS-levels									
	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	103	15.1	129	19	294	43.2	154	22.6	680	100
Yes	133	20	112	16.8	119	17.9	302	45.3	666	100
Total	236	17.5	241	17.9	413	30.7	456	33.9	1346	100

Pearson chi2(3) = 127.06, p = 0.000

Table A.14: Disadvantaged girls and A-level entries

Disadvantaged girls	Take 3 or more A-levels									
	No A		Less than 3 A		Three or more A		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
No	148	21.8	63	9.3	315	46.3	154	22.6	680	100
Yes	176	26.4	60	9	128	11.6	302	45.3	666	100
Total	324	24.1	123	9.1	443	32.9	456	33.9	1346	100

Pearson chi2(3) = 34.98, p = 0.000

Ethnicity

Table A.15: Ethnicity and AS-level entries

Ethnicity	Take 4 or more AS-levels									
	No AS		Less than 4 AS		Four or more AS		KS5 Data unavailable		Total	
	N	%	N	%	N	%	N	%	N	%
White European Heritage	19	20	11	11.6	26	27.4	39	41.1	95	100
Black Caribbean Heritage	21	20	18	17.1	28	26.7	38	36.2	105	100
Black African Heritage	16	27.1	13	22	16	27.1	14	23.7	59	100
Any Other Ethnic Minority	12	19	12	19	21	33.3	18	28.6	63	100
Indian	10	16.7	12	20	27	45	11	18.3	60	100
Pakistani	41	26.6	27	17.5	29	18.8	57	37	154	100
Bangladeshi	5	15.6	5	15.6	10	31.3	12	37.5	32	100
Mixed Race	26	16.5	23	14.6	45	28.5	64	40.5	158	100
White UK Heritage	295	14.2	341	16.4	579	27.8	869	41.7	2084	100
Total	445	15.8	462	16.4	781	27.8	1122	39.9	2810	100
									Pearson chi2(24) = 53.26, p = 0.001	

Gender, ethnicity and social disadvantage

Table A.16: White UK disadvantaged boys and AS-level entries

White UK disadvantaged boys	Take 4 or more AS-levels							
	No AS		Less than 4 AS		Four or more AS		Total	
	N	%	N	%	N	%	N	%
No	70	16.5	122	28.8	231	54.6	423	100
Yes	68	39.5	50	29.1	54	31.4	172	100
Total	138	23.2	172	28.9	285	47.9	595	100
							Pearson chi2(2) = 41.61, p = 0.000	

Table A.17: White UK disadvantaged boys and A-level entries

White UK disadvantaged boys	Take 3 or more A-levels							
	No A		Less than 3 A		Three or more A		Total	
	N	%	N	%	N	%	N	%
No	117	27.7	70	16.5	236	55.8	423	100
Yes	106	61.6	19	11	47	27.3	172	100
Total	223	37.5	89	15	283	47.6	595	100
							Pearson chi2(2) = 60.95, p = 0.000	

Table A.18: White UK disadvantaged boys from poor neighbourhoods and missing KS5 record

White UK disadvantaged boys from poor neighbourhoods	Missing KS5 data?					
	No		Yes		Total	
	N	%	N	%	N	%
No	37	45.1	45	54.9	82	100
Yes	40	29.4	96	70.6	136	100
Total	77	35.3	141	64.7	218	100
					Pearson chi2(1) = 5.5267 Pr = 0.019	

Table A.19: White UK disadvantaged girls from poor neighbourhoods and missing KS5 record

White UK disadvantaged girls from poor neighbourhoods	Missing KS5 data?					
	No		Yes		Total	
	N	%	N	%	N	%
No	35	57.4	26	42.6	61	100
Yes	51	41.5	72	58.5	123	100
Total	86	46.7	98	53.3	184	100
					Pearson chi2(1) = 4.1483 Pr = 0.042	

Entering any AS-level examinations

Table A.20: Taking any AS-levels

	Coef.	Std. Error	Odds Ratios	
Age	0.01	0.01	1.01	
Gender	0.3	0.1	1.35	**
Ethnic group (compared to white UK)				
White European Heritage	0.29	0.3	1.34	
Black Caribbean Heritage	0.94	0.24	2.55	***
Black African Heritage	0.52	0.33	1.67	
Any Other Ethnic Minority	0.93	0.31	2.54	**
Indian	1.47	0.33	4.33	***
Pakistani	0.94	0.24	2.56	***
Bangladeshi	1.55	0.44	4.69	***
Mixed Race	0.28	0.22	1.33	
Early health problem (compared to none)				
1+ Health problem	-0.31	0.11	0.73	**
KS1 family salary (compared to no salary)				
£2500-15000	0.05	0.16	1.05	
£17500-27500	0.46	0.17	1.58	**
£30000-35000	0.58	0.2	1.79	**
£37500-66000	0.54	0.19	1.72	**
£67500-132000	1.3	0.39	3.67	***
Missing	0.46	0.17	1.58	**
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-0.27	0.28	0.77	
Skilled non-manual	-0.43	0.29	0.65	
Skilled manual	-0.73	0.31	0.48	*
Semi-skilled	-0.72	0.32	0.49	*
Unskilled	-0.72	0.44	0.49	
Never worked	-0.25	0.41	0.78	
Missing	-0.02	0.67	0.98	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.13	0.18	1.13	
Academic age 16	0.33	0.15	1.39	*
Academic age 18	0.78	0.22	2.18	***
Degree or higher degree	1.21	0.24	3.36	***
Other professional	1.22	0.45	3.37	**
Missing	-0.63	0.43	0.53	

Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.56	0.19	1.75	**
Academic age 16	0.27	0.16	1.31	
Academic age 18	0.69	0.22	2	**
Degree or higher degree	0.78	0.24	2.17	**
Other professional	0.52	0.48	1.69	
Absent father	0.22	0.16	1.25	
Missing	-0.55	0.7	0.58	
Early years HLE (compared to 0-13)				
14-19	0.18	0.18	1.19	
20-24	0.11	0.18	1.12	
25-32	0.3	0.18	1.35	
>33	0.77	0.23	2.17	***
KS1 HLE outing (compared to low)				
KS1 HLE outing medium	0.36	0.13	1.43	**
KS1 HLE outing high	0.44	0.21	1.55	*
KS2 HLE educational computing (compared to low)				
KS2 HLE educational computing medium	0.25	0.11	1.29	*
KS2 HLE educational computing high	0.17	0.18	1.18	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	0.78	0.11	2.18	***
KS3 HLE enrichment high	1.22	0.16	3.37	***
FSM school level (continuous)	-0.01	0	0.99	*
Intercept	-2.05	0.37		***
Number of students	2500			
Deviance (-2 x Log Restricted-Likelihood)	2671			
* p<0.05, ** p<0.01, *** p<0.001				

Entering any A-level examinations

Table A.21: Taking any A-levels

	Coef.	Std. Error	Odds Ratios	
Age	0.01	0.01	1.01	
Gender	0.33	0.1	1.40	**
Ethnic group (compared to white UK)				
White European Heritage	0.41	0.31	1.51	
Black Caribbean Heritage	0.82	0.27	2.27	**
Black African Heritage	0.65	0.35	1.92	
Any Other Ethnic Minority	0.59	0.33	1.81	
Indian	1.3	0.35	3.67	***
Pakistani	0.53	0.29	1.70	
Bangladeshi	1.48	0.46	4.40	**
Mixed Race	0.53	0.22	1.69	*
Early behavioural problems (compared to none)				
1+ Behavioural problem	-0.44	0.17	0.64	**
Early health problem (compared to none)				
1+ Health problem	-0.43	0.12	0.65	***
KS1 family salary (compared to no salary)				
£2500-15000	0.23	0.18	1.26	
£17500-27500	0.57	0.18	1.76	**
£30000-35000	0.63	0.2	1.88	**
£37500-66000	0.62	0.19	1.85	**
£67500-132000	1.15	0.34	3.14	***
Missing	0.48	0.19	1.62	**
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-0.14	0.25	0.87	
Skilled non-manual	-0.32	0.27	0.73	
Skilled manual	-0.64	0.29	0.53	*
Semi-skilled	-0.65	0.31	0.52	*
Unskilled	-0.94	0.49	0.39	
Never worked	0.04	0.41	1.04	
Missing	-0.76	0.74	0.47	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.14	0.19	1.16	
Academic age 16	0.36	0.16	1.44	*
Academic age 18	0.86	0.22	2.36	***
Degree or higher degree	1.21	0.23	3.36	***
Other professional	1.04	0.42	2.83	*

Missing	-0.76	0.51	0.47	
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.43	0.2	1.53	*
Academic age 16	0.27	0.17	1.30	
Academic age 18	0.44	0.23	1.55	
Degree or higher degree	0.66	0.24	1.93	**
Other professional	-0.09	0.49	0.91	
Absent father	0.14	0.18	1.15	
Missing	0.48	0.74	1.61	
Early years HLE (compared to 0-13)				
14-19	0.23	0.2	1.26	
20-24	0.26	0.2	1.29	
25-32	0.25	0.2	1.28	
>33	0.88	0.24	2.41	***
KS1 HLE outing (compared to low)				
KS1 HLE outing medium	0.3	0.13	1.35	*
KS1 HLE outing high	0.32	0.22	1.37	
KS2 HLE individual activities (compared to low)				
KS2 HLE individual activities medium	0.22	0.11	1.25	
KS2 HLE individual activities high	0.17	0.18	1.19	
KS3 HLE support (compared to low)				
KS3 HLE support medium	0.29	0.12	1.33	*
KS3 HLE support high	0.07	0.17	1.07	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	0.66	0.12	1.94	***
KS3 HLE enrichment high	1.13	0.16	3.10	***
FSM school level (continuous)	-0.01	0	0.99	**
% white British (continuous)	-0.01	0	0.99	*
Intercept	-2.59	0.38		***
Number of students	2496			
Deviance (-2 x Log Restricted-Likelihood)	2511			
			* $p<0.05$, ** $p<0.01$, *** $p<0.001$	

Taking four or more AS-levels

Table A.22: Entering four or more AS-level exams

	Coef.	Std. Error	Odds Ratios	
Age	0.05	0.02	1.05	**
Gender	0.18	0.11	1.19	
Ethnic group (compared to white UK)				
White European Heritage	0.38	0.32	1.47	
Black Caribbean Heritage	0.68	0.29	1.98	*
Black African Heritage	0.38	0.37	1.46	
Any Other Ethnic Minority	0.82	0.35	2.26	*
Indian	0.9	0.36	2.47	*
Pakistani	0.34	0.32	1.40	
Bangladeshi	1.33	0.49	3.77	**
Mixed Race	0.35	0.24	1.42	
Early behavioural problems (compared to none)				
1+ Behavioural problem	-0.43	0.18	0.65	*
Early health problem (compared to none)				
1+ Health problem	-0.4	0.13	0.67	**
KS1 family salary (compared to no salary)				
£2500-15000	0.26	0.2	1.30	
£17500-27500	0.41	0.2	1.51	*
£30000-35000	0.67	0.22	1.96	**
£37500-66000	0.67	0.21	1.95	**
£67500-132000	1.32	0.33	3.73	***
Missing	0.33	0.2	1.39	
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-0.26	0.24	0.77	
Skilled non-manual	-0.67	0.25	0.51	**
Skilled manual	-1.05	0.29	0.35	***
Semi-skilled	-1.01	0.31	0.36	**
Unskilled	-1.95	0.67	0.14	**
Never worked	-0.78	0.45	0.46	
Missing	-1.65	0.82	0.19	*
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.26	0.21	1.3	
Academic age 16	0.37	0.18	1.45	*
Academic age 18	0.83	0.24	2.28	***
Degree or higher degree	0.92	0.24	2.51	***

Other professional	0.75	0.43	2.11	
Missing	-0.08	0.52	0.92	
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.38	0.22	1.46	
Academic age 16	0.14	0.19	1.15	
Academic age 18	0.32	0.25	1.38	
Degree or higher degree	0.52	0.24	1.68	*
Other professional	-0.22	0.52	0.80	
Absent father	-0.04	0.2	0.96	
Missing	0.69	0.79	2	
Early years HLE (compared to 0-13)				
14-19	0.08	0.21	1.09	
20-24	0	0.22	1	
25-32	0.08	0.21	1.09	
>33	0.5	0.25	1.64	*
KS2 HLE individual activities (compared to low)				
KS2 HLE individual activities medium	0.44	0.12	1.56	***
KS2 HLE individual activities high	0.34	0.19	1.40	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	0.76	0.12	2.13	***
KS3 HLE enrichment high	1.23	0.16	3.43	***
FSM school level (continuous)	-0.02	0	0.98	***
% white British (continuous)	-0.01	0	0.99	***
Intercept	-2.24	0.38		***
Number of students	2496			
Deviance (-2 x Log Restricted-Likelihood)	2261			
				*p<0.05, ** p<0.01, *** p<0.001*

Taking three or more A-levels

Table A.23: Entering three or more A-level exams

	Coef.	Std. Error	Odds Ratios	
Age	0.01	0.02	1.01	
Gender	0.4	0.11	1.48	***
Ethnic group (compared to white UK)				
White European Heritage	0.36	0.33	1.43	
Black Caribbean Heritage	0.79	0.29	2.20	**
Black African Heritage	0.59	0.37	1.80	
Any Other Ethnic Minority	0.17	0.39	1.19	
Indian	1.29	0.36	3.65	***
Pakistani	0.3	0.33	1.35	
Bangladeshi	1.9	0.48	6.70	***
Mixed Race	0.61	0.24	1.83	*
Early behavioural problems (compared to none)				
1+ Behavioural problem	-0.58	0.19	0.56	**
Early health problem (compared to none)				
1+ Health problem	-0.38	0.13	0.68	**
KS1 family salary (compared to no salary)				
£2500-15000	0.46	0.21	1.58	*
£17500-27500	0.71	0.21	2.03	***
£30000-35000	0.97	0.23	2.63	***
£37500-66000	0.84	0.22	2.31	***
£67500-132000	1.68	0.34	5.35	***
Missing	0.64	0.22	1.90	**
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	0.02	0.24	1.02	
Skilled non-manual	-0.3	0.26	0.74	
Skilled manual	-0.64	0.3	0.53	*
Semi-skilled	-0.57	0.32	0.57	
Unskilled	-1.17	0.61	0.31	
Never worked	0.07	0.44	1.08	
Missing	-0.68	0.85	0.50	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.17	0.22	1.18	
Academic age 16	0.43	0.19	1.54	*
Academic age 18	0.94	0.24	2.56	***
Degree or higher degree	1.06	0.25	2.89	***

Other professional	0.99	0.43	2.70	*
Missing	-0.31	0.56	0.74	
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	0.34	0.23	1.41	
Academic age 16	0.27	0.2	1.31	
Academic age 18	0.42	0.26	1.52	
Degree or higher degree	0.86	0.25	2.37	***
Other professional	-0.5	0.56	0.61	
Absent father	0.21	0.21	1.23	
Missing	0.21	0.87	1.23	
Early years HLE (compared to 0-13)				
14-19	0.16	0.22	1.18	
20-24	0.08	0.23	1.08	
25-32	0.11	0.22	1.12	
>33	0.68	0.26	1.97	**
KS1 HLE outing (compared to low)				
KS1 HLE outing medium	0.42	0.15	1.52	**
KS1 HLE outing high	0.54	0.23	1.71	*
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	0.75	0.12	2.11	***
KS3 HLE enrichment high	1.34	0.16	3.82	***
FSM school level (continuous)	-0.02	0	0.98	**
% white British (continuous)	-0.01	0	0.99	**
Intercept	-3.27	0.41		***
Number of students	2496			
Deviance (-2 x Log Restricted-Likelihood)	2170			
	* p<0.05, ** p<0.01, *** p<0.001			

Total KS5 points score

Table A.24: Predicting Total KS5 Score

	Coef.	Std. Error	Effect Size	
Age	2.34	1.82	0.07	
Gender	47.32	12.98	0.22	***
Ethnic group (compared to white UK)				
White European Heritage	-37.76	36.23	-0.17	
Black Caribbean Heritage	22.84	32.17	0.10	
Black African Heritage	6.69	43.09	0.03	
Any Other Ethnic Minority	-58.53	41.63	-0.27	
Indian	38.54	36.83	0.18	
Pakistani	28.90	32.64	0.13	
Bangladeshi	50.62	56.22	0.23	
Mixed Race	11.38	27.88	0.05	
Early behavioural problems (compared to none)				
1+ Behavioural problem	-45.42	21.13	-0.21	*
KS1 family salary (compared to no salary)				
£2500-15000	1.08	23.21	0.00	
£17500-27500	58.43	23.81	0.27	*
£30000-35000	60.29	26.70	0.28	*
£37500-66000	49.74	25.01	0.23	*
£67500-132000	80.80	35.52	0.37	*
Missing	17.84	23.12	0.08	
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-11.95	25.75	-0.05	
Skilled non-manual	-26.05	28.56	-0.12	
Skilled manual	-34.82	33.54	-0.16	
Semi-skilled	-34.18	35.87	-0.16	
Unskilled	-87.50	55.07	-0.40	
Never worked	-15.54	52.45	-0.07	
Missing	33.50	126.35	0.15	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	4.31	25.69	0.02	
Academic age 16	34.61	22.33	0.16	
Academic age 18	60.33	29.09	0.28	*
Degree or higher degree	109.52	29.04	0.50	***
Other professional	75.86	50.89	0.35	
Missing	-42.43	57.02	-0.19	
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	-8.44	26.52	-0.04	
Academic age 16	-24.87	23.52	-0.11	
Academic age 18	-11.66	30.40	-0.05	
Degree or higher degree	58.60	28.71	0.27	*

Other professional	61.42	59.84	0.28	
Absent father	-39.82	23.93	-0.18	
Missing	-95.66	119.84	-0.44	
Early years HLE (compared to 0-13)				
14-19	7.27	25.33	0.03	
20-24	-6.82	25.75	-0.03	
25-32	6.85	25.21	0.03	
>33	15.76	28.95	0.07	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	48.35	14.13	0.22	***
KS3 HLE enrichment high	105.31	17.95	0.48	***
FSM school level (continuous)	-1.25	0.57	-0.18	*
Intercept	584.41	44.14		***
Variance-school level	3458.38	1240.31		***
Variance-student level	47996.30	2077.17		***
Total variance	51454.68			
Number of students	1350			
Number of schools	422			
Deviance (-2 x Log Restricted-Likelihood)	18056.84			
Intra-school correlation (ICC)	0.0672			
% Reduction student variance	11.7			
% Reduction school variance	69.2			
% Reduction total variance	21.5			
				*p<0.05, ** p<0.01, *** p<0.001*

KS5 AS-levels points

Table A.25: Predicting AS-level score

	Coef.	Std. Error	Effect Size	
Age	2.08	1.44	0.08	
Gender	8.66	10.45	0.05	
Ethnic group (compared to white UK)				
White European Heritage	10.85	29.15	0.06	
Black Caribbean Heritage	42.06	25.82	0.23	
Black African Heritage	-33.86	35.32	-0.19	
Any Other Ethnic Minority	26.47	32.53	0.15	
Indian	78.95	29.47	0.44	**
Pakistani	11.22	25.95	0.06	
Bangladeshi	71.66	45.89	0.4	
Mixed Race	32.1	22.62	0.18	
Early behavioural problems (compared to none)				
1+ Behavioural problem	-56.09	16.43	-0.31	***
Early health problem (compared to none)				
1+ Health problem	-32.88	11.76	-0.18	**
KS1 family salary (compared to no salary)				
£2500-15000	3.97	18.21	0.02	
£17500-27500	32.84	18.66	0.18	
£30000-35000	37	20.86	0.20	
£37500-66000	51.81	19.65	0.29	**
£67500-132000	80.16	28.09	0.44	**
Missing	35.95	18.1	0.2	*
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-33.31	20.8	-0.18	
Skilled non-manual	-50.45	22.96	-0.28	*
Skilled manual	-73.39	26.62	-0.41	**
Semi-skilled	-47.36	28.45	-0.26	
Unskilled	-124.65	42.1	-0.69	**
Never worked	17.94	42.28	0.1	
Missing	-37	78.18	-0.2	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	14.46	20.16	0.08	
Academic age 16	22.09	17.26	0.12	
Academic age 18	53.09	23.05	0.29	*
Degree or higher degree	64.42	22.66	0.36	**

Other professional	61.66	40.45	0.34	
Missing	-72.11	43.52	-0.40	
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	40.84	20.9	0.23	
Academic age 16	8.06	18.46	0.04	
Academic age 18	45.43	23.85	0.25	
Degree or higher degree	85.65	22.87	0.47	***
Other professional	10.27	48.12	0.06	
Absent father	1.01	18.73	0.01	
Missing	4.43	80.18	0.02	
Early years HLE (compared to 0-13)				
14-19	13.41	19.95	0.07	
20-24	-3.95	20.37	-0.02	
25-32	-4.32	19.85	-0.02	
>33	40.01	22.89	0.22	
KS2 HLE individual activities (compared to low)				
KS2 HLE individual activities medium	38.65	11.56	0.21	***
KS2 HLE individual activities high	27.11	17.88	0.15	
KS3 HLE parental interest (compared to low)				
KS3 HLE parental interest medium	-48.52	16.25	-0.27	**
KS3 HLE parental interest high	-0.35	12.07	0	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	56.16	11.72	0.31	***
KS3 HLE enrichment high	109.29	15.01	0.60	***
FSM school level (continuous)	-1.09	0.44	-0.18	*
Intercept	149.3	35.44		***
Variance-school level	1747.86	680.99		***
Variance-student level	32832.73	1318.49		***
Total variance	34580.59			
Number of students	1462			
Number of schools	442			
Deviance (-2 x Log Restricted-Likelihood)	19418.14			
Intra-school correlation (ICC)	0.0505			
% Reduction student variance	15			
% Reduction school variance	81.6			
% Reduction total variance	28.2			
				*p<0.05, ** p<0.01, *** p<0.001*

KS5 A-levels points

	Coef.	Std. Error	Effect Size	
Age	1.65	2.39	0.04	
Gender	23.36	16.94	0.08	
Ethnic group (compared to white UK)				
White European Heritage	38.62	48.32	0.13	
Black Caribbean Heritage	82.7	42.7	0.27	
Black African Heritage	5.43	58.55	0.02	
Any Other Ethnic Minority	-9.47	53.86	-0.03	
Indian	139.03	48.83	0.46	**
Pakistani	49.81	42.89	0.17	
Bangladeshi	228.58	76.09	0.76	**
Mixed Race	119.11	37.52	0.40	**
Early behavioural problems (compared to none)				
1+ Behavioural problem	-80.72	27.25	-0.27	**
Early health problem (compared to none)				
1+ Health problem	-49.71	19.52	-0.17	*
KS1 family salary (compared to no salary)				
£2500-15000	32.3	30.23	0.11	
£17500-27500	80.49	30.93	0.27	**
£30000-35000	97.1	34.59	0.32	**
£37500-66000	104.54	32.58	0.35	**
£67500-132000	180.35	46.6	0.60	***
Missing	45.88	29.84	0.15	
Parents' highest SES at age 3/5 (compared to professional, non-manual)				
Other professional non-manual	-39.49	34.49	-0.13	
Skilled non-manual	-58.79	38.05	-0.20	
Skilled manual	-96.51	44.16	-0.32	*
Semi-skilled	-80.44	47.23	-0.27	
Unskilled	-177.08	69.87	-0.59	*
Never worked	66.67	70.15	0.22	
Missing	-42.39	129.6	-0.14	
Mother's highest qualifications level at age 3/5 (compared to none)				
Vocational	-1.26	33.45	0	
Academic age 16	26.7	28.66	0.09	
Academic age 18	87.75	38.19	0.29	*
Degree or higher degree	129.49	37.53	0.43	***

Other professional	120.54	67.12	0.40	
Missing	-143.11	72.25	-0.48	*
Father's highest qualifications level at age 3/5 (compared to none)				
Vocational	38.5	34.69	0.13	
Academic age 16	3.26	30.63	0.01	
Academic age 18	45.47	39.57	0.15	
Degree or higher degree	115.32	37.96	0.38	**
Other professional	25.67	79.81	0.09	
Absent father	-0.46	31.07	0	
Missing	4.02	133.02	0.01	
Early years HLE (compared to 0-13)				
14-19	23.52	33.1	0.08	
20-24	17.8	33.8	0.06	
25-32	5.48	32.93	0.02	
>33	90.32	37.93	0.30	*
KS3 HLE parental interest (compared to low)				
KS3 HLE parental interest medium	-65.42	26.88	-0.22	*
KS3 HLE parental interest high	10.27	19.95	0.03	
KS3 HLE enrichment (compared to low)				
KS3 HLE enrichment medium	73.19	19.44	0.24	***
KS3 HLE enrichment high	174.8	24.88	0.58	***
FSM school level (continuous)	-1.91	0.73	-0.19	**
Intercept	192.27	58.44		**
Variance-school level	4406.34	1982.8		***
Variance-student level	90735.28	3686.1		***
Total variance	95141.63			
Number of students	1462			
Number of schools	442			
Deviance (-2 x Log Restricted-Likelihood)	20899.27			
Intra-school correlation (ICC)	0.0463			
% Reduction student variance	13.7			
% Reduction school variance	86			
% Reduction total variance	30.4			
				*p<0.05, ** p<0.01, *** p<0.001*