Introduction and background

It is already known that the educational outcomes of pupils from disadvantaged households in England are significantly lower than those of their more affluent peers and the gap gets wider as pupils get older. Improving educational success and progress for disadvantaged pupils at secondary level is important, as secondary attainment is strongly associated with labour market outcomes.

In order to inform policy and practice, promote social mobility and reduce the attainment gap, it is important to understand how secondary school outcomes are related to pupils’ lives during key stages (KS) 3 and 4. Evidence shows that outcomes at KS4 are related to a range of pupil and school level factors. Pupil level factors include: gender and ethnicity; prior attainment at KS2; individual absence rates; socio-economic background; and the aspiration levels of parents. School level factors include: location; teaching quality; and school type.

This research on which this report is based sets out to add to the existing body of knowledge about how disadvantage relates to pupils’ lives during secondary school. It asks the following questions:

- What pupil and cohort background factors appear to have the strongest link with the new attainment and progress measures?
- To what extent are disadvantaged pupils' KS4 outcomes associated with cohort factors (i.e. the influence of the school's intake), after their own individual circumstances are considered?
- Are there any particularly strong associations between certain background factors and attainment?

In the research, disadvantaged pupils are defined as those who were eligible for the Pupil Premium in Year 11. The analysis examined data for the 525,770 mainstream secondary pupils who were in Year 11 in 2015-16. The outcomes of pupils were measured against the Attainment 8 (Att8) and the Progress 8 (P8) measure. Att8 is the total points scored by a pupil across eight subjects at the end of KS4 and P8 is a measure of the progress which a pupil makes between KS2 and KS4.

Key points

Pupil specific background factors: overview

- The analysis revealed that: KS2 attainment, overall absence at KS3 and KS4, moving schools during KS4, exclusion rates, gender, SEND status, English as an Additional Language (EAL) status, home postcode deprivation and ethnic background are all associated with lower KS4 outcomes for disadvantaged pupils.
- The analysis then explored the effect size of the above factors. A large effect size indicates a strong association between a particular factor and the outcomes measures (i.e. P8 and Att8).
- KS2 attainment (effect size 36.4) and being from certain ethnic backgrounds (e.g. Chinese, effect size 43.6) had the strongest positive associations with Attainment Att8 scores. KS4 absence rates (-30.6 effect size) and SEND identification (-48.5 SEN Support, -63.4 Education Health and Care Plan/ Statement) were the factors with the strongest negative associations with Att8 scores.
- Out of all the factors included in the analysis, KS4 absence (effect size -41.3) had the strongest association with P8 scores. Moving schools during GCSEs (effect size -23.8) and fixed-term exclusion rates (effect size -16.9) were also strongly related to P8 scores for disadvantaged pupils. As with Att8 scores, being from certain ethnic backgrounds was strongly associated with higher P8 scores.

Pupil specific background factors in detail

- The analysis found a strong positive association between KS2 results and Att8 scores for disadvantaged pupils. We also found that the association between KS2 and KS4 results varies by gender. Our model predicts that for every 1 point increase in a pupil’s KS2 score we would expect a boy’s KS4 Att8 score to increase by an average of +0.9 points. A girl’s would be predicted to increase by an average of +1.0.
- The median absence rate for disadvantaged pupils was 5.4 weeks in KS3 and 3.7 in KS4. This is considerably higher than the median for more affluent pupils who missed 3.2 weeks in KS3 and 2.2 weeks in KS4.
• Absence during KS4 had one of the strongest negative associations with Att8 and P8 scores, compared to all other factors. The analysis showed that for every week of school missed at KS4 by a disadvantaged pupil, their Att8 score would be predicted to reduce by an average of 0.8 points. This relationship between absence and Att8 score did not differ by gender.

• Moving schools during KS4 is strongly associated with lower KS4 outcomes for disadvantaged pupils. Disadvantaged pupils tend to move school more frequently. On average, 4.3 per cent of disadvantaged pupils in the research cohort moved schools during years 10 and 11, whereas 2.4 per cent of non-Pupil Premium pupils moved during the same period. The analysis predicts that a pupil who moved school will achieve an Att8 score which is 2.8 points lower than the pupil who stayed in the same school. This effect was not significantly affected by gender. A disadvantaged girl’s P8 score was predicted to be lower, on average, by 0.40 if they moved during KS4.

• The analysis found a significant negative association between exclusion rates and KS4 outcomes for disadvantaged pupils. According to the statistical models used, the Att8 score would be predicted to be 1.1 points lower than an equivalent pupil with just one fewer fixed-term exclusions. This is more than an entire grade boundary. The P8 score would be predicted to be 0.09 lower than an equivalent pupil with one fewer fixed-term exclusions. This is the equivalent to the pupil performing nine per cent of a grade lower in all their Att8 subjects.

• Permanent exclusions were shown to have an even stronger effect. The models suggest that for every permanent exclusion, a pupil’s Att8 score would be 4.0 points less than a similar pupil who had not been permanently excluded. The P8 score would be 0.44 less than a similar pupil who had not been permanently excluded.

• Disadvantaged girls, on average, were predicted to progress more (+0.27 P8 score) and attain higher (+1.6 Att8 score) than boys.

• Disadvantaged pupils in more affluent neighbourhoods were predicted, on average, to score significantly higher than similar peers who lived in more deprived areas. For example, a disadvantaged pupil who lived in an area with 14 per cent deprivation was predicted to score 1.0 Att8 points higher and have a higher P8 score (+0.05) compared to a similar pupil who lived in an area with 32 per cent deprivation, the average for disadvantaged pupils.

• Twenty per cent of disadvantaged pupils in the research cohort had some form of SEND identification compared with 10.3 per cent of non-disadvantaged pupils.

• The analysis showed that the relationship for Att8 scores and SEND was particularly strong, compared to other factors. On average, disadvantaged pupils with SEN support were predicted to score 8.3 points lower than a similar pupil with no SEND identification. Pupils with EHCPs were predicted to score, on average, 10.8 Att8 points lower than a similar pupil with no SEND identification.

• P8 scores were also predicted to be significantly lower for disadvantaged pupils identified as requiring SEN support or an EHCP. On average, the P8 scores of pupils with SEN support were predicted to be 0.12 less than their peers who did not have any SEND identification. Pupils with EHCPs were predicted to score lower, by 0.06 on average, than a similar disadvantaged pupil who had no SEND identification.

• Being from a White British background was associated with lower Att8 scores than being from any other cultural heritage, apart from being of Traveller and Gypsy heritage. The results were similar for P8, with one exception: all black and minority ethnicities (including Traveller and Gypsy) were associated with higher P8 scores than pupils from White British backgrounds.

Cohort factors

• Lower rates of cohort absence across KS3 and KS4 were associated with improved outcomes for disadvantaged pupils. If a school reduced their average cohort absence by one week in KS3 the models predict the P8 scores of disadvantaged pupils in that school would increase by an average of 0.04 (the equivalent of an average of 4 per cent of a grade in each Att8 subject). At KS4, if a school reduced their average cohort absence by one week, the model suggests that the P8 scores of disadvantaged pupils in that school would be expected to increase by an average of 0.03.

• The analysis found that lower cohort movement over Year 10 and Year 11 is associated with improved outcomes for disadvantaged pupils attending the school. For example, a pupil attending a school where one per cent of its cohort leave or enter during KS4 compared to one with 5 per cent of its cohort leave or enter during KS4 would score on average 0.5 Att8 points higher and 0.06 P8 points higher.

• In line with previous research, by far the greatest variation in pupils’ results was seen within schools rather than between schools.

Associations between pupil factors and outcomes by pupil premium eligibility

• KS4 absence was significantly more negatively associated with a disadvantaged pupil’s progress than with the progress of their more affluent peers. The analysis predicts that a disadvantaged pupil’s P8 score would be 0.03 lower than a similar but more affluent pupil if they both missed four weeks of school during KS4.

• For disadvantaged pupils, there is a significantly more negative association between moving schools and KS4 outcomes compared to their more affluent peers. The analysis predicts that the association between moving school and progress would be an additional 0.06 worse (P8 score) for a disadvantaged pupil compared to their more affluent peers. The association with attainment was also predicted to be worse, on average, by an additional 1.2 points after controlling for all other factors.

Implications of the research

• Findings from this research demonstrate that secondary schools can make a significant difference to a disadvantaged pupil’s KS4 outcomes, even after controlling for a host of background factors. There is a clear need in particular to prioritise attendance, behaviour and transfer within schools. Small improvements in these areas could lead to relatively big results on outcomes.

• This research also suggests that providing targeted support for those pupils that require it is likely to be more effective in improving pupils’ outcomes than relying solely on universal behaviour or attendance interventions targeted at all pupils. This is because previous research shows us that in order to improve these areas we need to identify and address the underlying root causes behind a pupil’s actions, which are often specific to the individual.

The full document can be downloaded from: https://www.nfer.ac.uk/being-present-the-power-of-attendance-and-stability-for-disadvantaged-pupils/