

## **The influence of a pupil's socio-demographic profile and school factors on GCSE attainment outcomes.**

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Date: February 2021

**Educational attainment influences an individual's later trajectory. Understanding factors that lead to educational underachievement are therefore integral to improving the outcomes of all pupils, regardless of their background. There is a current lack of statistical analysis that examines educational attainment using a wide range of predictor variables in Northern Ireland. To this end, this study examined socio-demographic and school level predictors of GCSE attainment using data that linked the Northern Ireland Census (2011), School Leavers Survey and School Census for the first time.**

### **What we did**

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This study used the first record linkage data for education in Northern Ireland that linked the 2011 Northern Ireland Census, School Leavers Survey and School Census to examine GCSE attainment outcomes. The individual and collective influences of a pupil's gender, religious affiliation, socio-economic status and attended school type were examined using multilevel modelling. Data were provided for three pupil cohorts completing their GCSEs in the academic years of 2010/2011, 2011/2012 and 2012/2013 (n=61,373 pupils and 217 schools).

### **Why it matters**

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Understanding the individual and collective influences of a pupil's socio-demographic profile and school level factors on educational attainment are critical to ensuring targeted interventions are effectively designed and implemented to improve pupil outcomes. In addition, there is a lack of research in Northern Ireland that examines the multidimensional influence of socio-economic status on educational attainment, particularly the disaggregated socio-economic position of mothers and fathers. The timeliness of this research is reflected through the establishment of an Expert Panel on Educational Underachievement, of which the New Decade New Approach (January 2020) emphasised the particular need to examine the persistent links between underachievement and socio-economic background. The following socio-economic predictors that were previously limited for education analysis in Northern Ireland are included in this study: maternal and paternal qualifications, maternal occupation (classified by the NS-SEC), housing tenure, property value and the Northern Ireland Multiple Deprivation Measure (2010) based on income.

### **What we found**

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- School type (grammar/non-grammar) remained a key indicator of attainment. However, this is unlikely to be a causal relationship as pupils attending grammar schools are more likely to have higher prior academic attainment and ability.

- Gender was an important explanatory factor of attainment differentials, with females achieving higher GCSE scores than males.
- Parental qualifications were the greatest socio-economic predictors of attainment. The higher a mother's/father's qualifications, the higher a pupil's GCSE score.
- Free School Meal Entitlement (FSME) was a sufficient measure of socio-economic disadvantage but other measures such as parental qualifications were greater socio-economic predictors of attainment.
- A pupil's religious affiliation was not a key determinant of attainment. More specifically, there was no discernible difference in the GCSE outcomes of Catholic and Protestant pupils.
- Interaction terms examined whether relationships between variables had an additional effect on attainment. This determined whether a combination of factors led to an additional educational disadvantage. For example, interacting gender and FSME statistically examined whether FSME had a greater influence on boys or girls.
- The interaction between gender, religious affiliation and FSME was not statistically significant. This provides an alternative perspective to the previous narrative that suggests Protestant working class boys have the lowest attainment outcomes.
- The interaction between gender and religious affiliation found Catholic and Protestant females achieved higher GCSE scores than Protestant males but the attainment difference between Catholic and Protestant males was negligible.
- Interaction terms with school type consistently highlighted the higher attainment of grammar school pupils, regardless of the interacting factor.

## What next?

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This study provides an in-depth exploration into the individual and collective influences of a pupil's socio-demographic profile and school level factors on GCSE attainment. This study focuses particularly on socio-economic status, which aligns with the New Decade New Approach emphasis on gaining a greater understanding of its links to educational underachievement. Further analysis can begin to examine how factors may mitigate the relationships between attainment and predictors such as school type and housing tenure.

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