Understanding the impact of time in care on educational attainment in England

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This Data Insight examines the impact of time spent in care on educational attainment, measured by the number of GCSE and advanced level qualifications achieved by children aged 15 and 17 in England. The findings are based on analyses of the Growing Up in England (GUiE) dataset.

Summary

Interest in the education of care experienced children has grown significantly over the past decades. The negative relationship between being in care and educational attainment is well-documented in existing literature[1]. However, due to the complexity of the issue and data limitations, establishing a causal link remains challenging. This study contributes to the literature by examining the link, using data from the Growing Up in England (GUiE) dataset[2].

After accounting for various factors—including children's individual characteristics, family and household backgrounds, pre-care experiences, and school absences and exclusions—we found that having ever been in care is associated with a reduction in the number of full GCSE qualifications attained at age 15 and A-level qualifications attained at age 17.

For children with care experience, a longer duration in care was linked to an increase in the number of full GCSE qualifications attained at age 15. Educational outcomes also varied based on the reason for entering care: compared to children who entered care due to abuse or neglect, those placed in care due to parental illness or disability had better educational attainment, while those in care due to absent parenting or socially unacceptable behaviour had poorer outcomes.

Background

The number of children looked after by their local authority in England has increased every year since 2008. While it is well-documented that these care experienced children tend to have poorer educational performance and lower attainment, this relationship is partly explained by factors such as individual characteristics, family background, pre-care experiences, and school absences or exclusions. Being in care itself is not necessarily detrimental to educational outcomes.

Due to data limitations, existing research provides limited and inconsistent insight. This makes it difficult to draw a comprehensive picture of the factors influencing the educational attainment of care experienced children, or to determine the causal impact of being in care.

Using the Growing Up in England (GUiE) dataset, we examine not only the causal effect of time in care on educational attainment, but also the influence of other contributing factors.

Regarding A-level attainment at age 17, factors such as length of time in care, changes in care placement, and the child's needs at the start of care showed no significant effects.

Additionally, we found that 84% of the gap in GCSE attainment and 65% of the gap in A-level attainment between care experienced children and their peers not in care can be explained by observed characteristics. This suggests that if children in care had similar characteristics to those not in care, the attainment gap could be significantly reduced. All results presented in this document are based on unweighted estimates.

What we did

We used linked administrative data from Waves 1[3] and 2[4] of the Growing Up in England (GUiE) dataset to examine the impact of time in care on two types of educational attainment: (1) the total number of full[a] GCSE A-C qualifications, and (2) the total number of advanced level qualifications, including A-levels, AS-levels, and International Baccalaureate qualifications.

GUiE Wave 1 links 2011 Census data with the feasibility All Education Dataset for England, covering academic years from 2001/02 to 2014/15. GUiE Wave 2 adds vulnerability data, covering academic years from 2010/11 to 2014/15. Due to data availability, our analysis focuses on the academic years 2010/11 to 2014/15.

To ensure fair comparisons, we restricted our analysis to:

1. Children who attained their GCSE qualifications at age 15
2. Children who attained their advanced level qualifications at age 17.

To assess the impact of time in care, we primarily considered children's care status during the academic year in which they attained these qualifications.

Our final samples are:

- children aged 15 when attained their GCSE qualifications, with sample size of n=2,747,510[b], and 1%[c] having been in care during the academic year they attained their GCSE qualifications
- children aged 17 when attained their advanced level qualifications, with sample size of n=1,206,950, k%[d] having been in care during the academic year they attained their advanced level qualifications.

[a] Students have the option to attain short GCSE qualifications; however, this study considers only full GCSE qualifications.
[b] All observation numbers in this report are rounded to the nearest 10.
[c] All percentages related to the proportion of care experienced children are rounded to the nearest whole number.
[d] The symbol "k" is used when a non-zero result would appear as zero due to rounding.

We conducted two main types of analysis on these samples:

1. Descriptive statistics to explore the correlation between care status and educational attainment.
2. Regression analysis to estimate the causal impact of time in care on educational outcomes.

To investigate how different care-related factors influence the educational attainment of care experienced children, we restricted our analysis to children in care only. Using data from GUiE Wave 1 and 2, we have information on more than 25,000 care experienced children who attained their GCSE qualifications at the age of 15 between the 2010/11 and 2014/15 academic years. On average, a 15-year-old care experienced child gained 1.8 GCSE A to C qualifications.

The care-related factors collected in the GUiE data include whether the care experienced child had a care episode longer than six months, the maximum length of stay in care, and the child's category of need at the start of the care period. These categories include abuse and neglect, disability, parental illness or disability, family in acute stress, family dysfunction, socially unacceptable behaviour, low income, and absent parenting.

We ran two regression models:

- Model 1 controls for individual child characteristics such as in-need status, gender, academic year, special educational needs, eligibility for free school lunch, exclusion, and absence
- Model 2 controls for the same individual child characteristics as Model 1, plus additional factors from the 2011 Census data.

In addition, to examine the differences in educational attainment between care experienced children and those not in care, we conducted a decomposition analysis - a method which breaks down a complex phenomenon into components to understand the underlying causes of changes in an indicator - to assess the extent to which observed child characteristics and family background factors explain the attainment gap between children in care and those not in care.

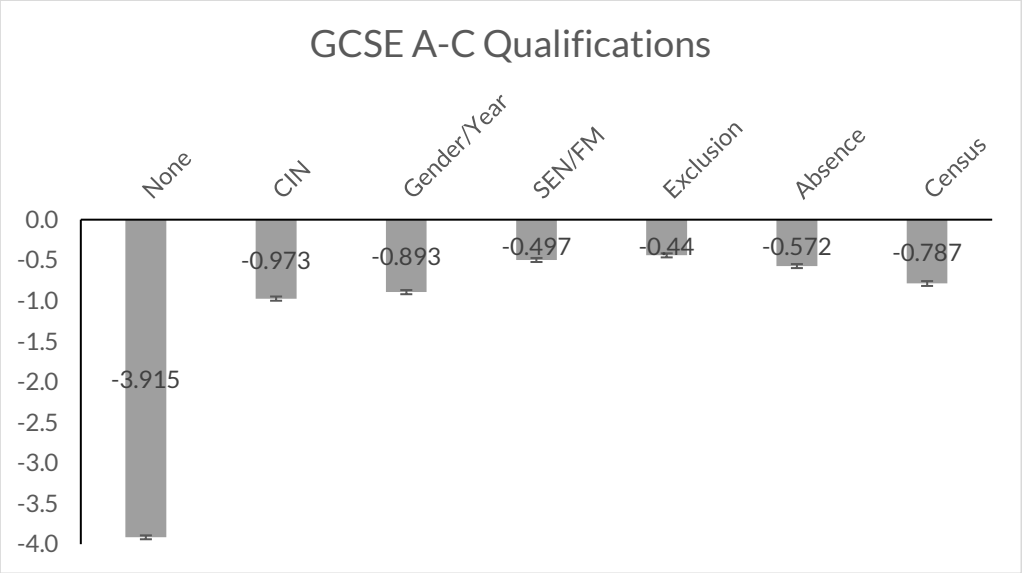
What we found

Children with care experience attained significantly fewer GCSE A–C qualifications and advanced level qualifications compared to their peers without care experience

On average, 15-year-old children in England between the 2010/11 and 2014/15 academic years attained *5 to 6 GCSE A–C qualifications*. However, children who were in care during the academic year in which they completed their GCSEs attained only 1 to 2 qualifications on average.

Consistent with previous studies, we found that this attainment gap can be partly explained by factors such as individual characteristics, household background, pre-care experiences, school absences, and exclusions. Figure 1 illustrates the estimated differences in the number of GCSE A–C qualifications attained by children in care and number of qualifications attained by those not in care, after adjusting for these factors. While the gap narrows as more factors are considered, it remains significantly different from zero.

Figure 1. Differences in number of GCSE A - C qualifications attained by children in care and number of qualifications attained by those not in care.



Note: This figure shows the estimated differences in the number of GCSE A–C qualifications attained between two groups of children: those ever in care and those not in care during the academic year they attained their GCSEs. The estimates are adjusted for various personal characteristics and family background factors.
sFrom left to right, the bars represent models with progressively more control variables:
First bar: The estimated difference is 3.915, adjusted no other factors (*n* = 2,747,470).
Second bar: The estimated difference is 0.973, adjusted only for the status of being a child in need (CIN) (*n* = 2,747,470).
Third bar: The estimated difference is 0.893, adjusted for being in need, gender, and academic year (*n* = 2,645,130).
Fourth to sixth bars: The difference is further adjusted for (a) special educational needs (SEN) and eligibility for free school meals (FM); (b) exclusion sessions; (c) absence sessions (*n* = 2,525,690).
Last bar: The estimated difference accounts for all previous factors and additional variables from census data, including ethnicity, English proficiency, household education deprivation, employment deprivation, health and disability deprivation, housing deprivation, tenure deprivation, disability status, household members with long-term health issues, self-reported health status, and religion (*n* = 1,888,110).

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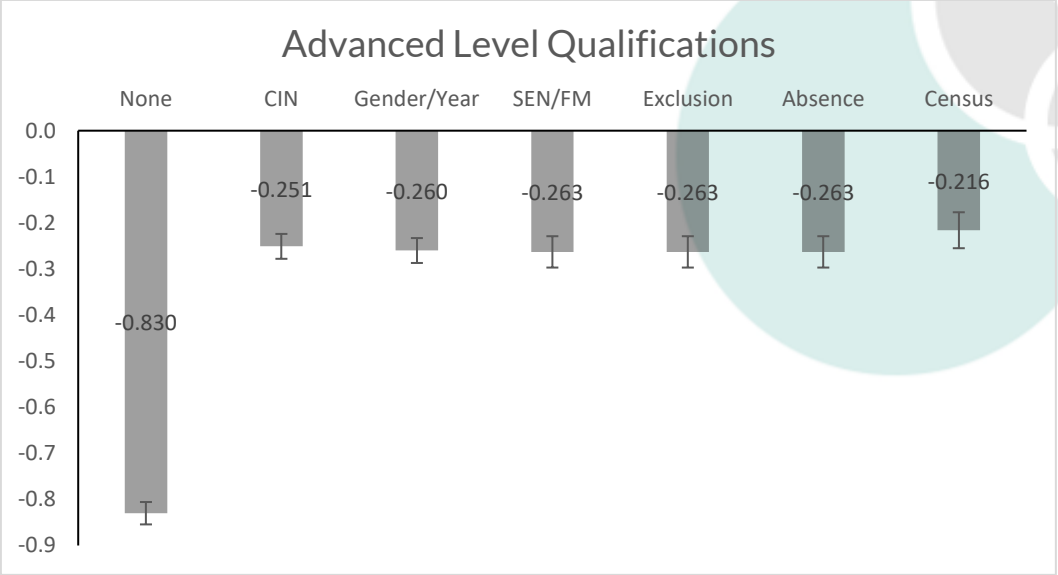
For example, as indicated by the first bar in Figure 1, assuming the status of being in need is the same, children who have ever been in care may attain about 1 (rather than about 4, indicated by the first bar) fewer GCSE A - C qualifications than those not in care. Furthermore, when additionally accounting for gender, special educational needs status, eligibility for free school meals, and being from the same academic year, the gap narrows to approximately 0.5 fewer GCSE qualifications (as shown by the third bar from left in Figure 1). Finally, if all observed factors (see note of Figure 1) from this study are the same, on average, children in care may attain about 0.8 fewer GCSE qualifications than those not in care.

On average, 17-year-old children in England between the 2010/11 and 2014/15 academic years attained 3 to 4 advanced level qualifications. However, children who were in care during the academic year when they attained their advanced qualifications typically obtained only 2 to 3 qualifications. Similar to Figure 1, Figure 2 illustrates the estimated differences in advanced level qualifications attained between children in care and those not in care, after adjusting for various individual characteristics and household background.

Figure 2. Differences in the number of advanced level qualifications attained by children in care and the number of qualifications attained by those not in care.



Note: This figure shows the estimated differences in advanced level qualifications attained between two groups of children: those ever in care and those not in care during the academic year they attained their advanced qualifications, after controlling for personal characteristics and family background. The labels on the horizontal axis of this figure are the same as those in Figure 1. The number of observations for first and second bars is 1,206,890, for third bar is 1,160,610, for fourth to sixth bars is 704,940, and for the last bar is 553,020, due to data availability for different control variables.

Staying in care longer may lead to better educational attainment for care experienced children

Table 1 presents the estimated impacts of the care-related factors on the number of GCSE A-C qualifications attained by care-experienced children. As shown in Table 1, if all other factors in Model 1 are held constant, care experienced children who stayed more than six months in care are estimated to attain 0.14 more GCSE A - C qualifications than those who stayed less than six months. This difference increases to 0.21 when controlling for the extra census factors in Model 2. An additional month spent in care correlates with an average increase of 0.004 (Model 1) or 0.003 (Model 2) in the number of GCSE A - C qualifications attained by a care experienced child.

Children who entered care due to parental illness or disability are likely to attain 0.8 more GCSE A to C qualifications than those who entered care due to abuse or neglect. On the other hand, children in care due to socially unacceptable behaviour may attain 0.4 fewer qualifications. In Model 1, children in care due to family dysfunction are estimated to attain 0.16 fewer GCSE qualifications than those in care due to abuse or neglect. However, once adjusting for the census factors in Model 2, the difference in GCSE qualifications between these two groups of care experienced children disappears.

Table 1 Estimated impacts of care-related factors on number of GCSE A-C qualifications attained by care experienced children

	(1)	(2)
VARIABLES	Model 1	Model 2
>6 months in care	0.140***	0.212***
	(0.052)	(0.069)
length in care	0.004***	0.003***
	(0.000)	(0.001)
Child's Disability	-0.117	0.203
	(0.132)	(0.174)
Parental illness or disability	0.799***	0.796***
	(0.092)	(0.118)
Family in acute stress	-0.029	-0.049
	(0.057)	(0.073)
Family dysfunction	-0.155***	-0.099
	(0.050)	(0.065)
Socially Unacceptable Behaviour	-0.370***	-0.377***
	(0.106)	(0.142)
Low income	0.275	0.454
	(0.411)	(0.533)
Absent Parenting	-0.584***	-0.302**
	(0.073)	(0.121)
Number of Observations	21,690	13,240
R-squared	0.145	0.171

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: The table presents the estimated coefficients for care-related factors from regression models using data on care experienced children only. The dependent variable is the number of GCSE A to C qualifications. In Model 1, the independent variables include care-related factors such as whether the child stayed in care for longer than 6 months, the maximum length of stay, and the reason for needing care. Additionally, it includes individual child characteristics, such as the status of being in need, gender, academic year, SEN (special educational needs), eligibility for free school lunch, and the number of exclusion and absence sessions during the academic year. Model 2 builds on Model 1 by controlling for additional variables from the census data, including ethnicity, proficiency in English, household education deprivation, employment deprivation, health and disability deprivation, housing deprivation, tenure deprivation, disability status, the situation of household members with long-term health problems or disabilities, self-reported health status, and religion.

There were fewer than 2,000 care experienced children who gained their advanced qualifications at the age of 17 during the 2010/11 to 2014/15 academic years, making the sample size relatively small. Compared to general population, a much smaller proportion of care experienced children attain advanced level qualifications. Base on this small sample, when we adjusted for all observed factors from both educational and census data, we did not find any significant differences in the number of advanced qualifications attained by different groups of care experienced children categorised by care-related factors.

About 84% of the gap in GCSE qualifications and 65% of the gap in advanced level qualifications between children in care and those not in care can be explained by the observed factors

To examine the differences in educational attainment between care experienced children and those not in care, we applied Blinder-Oaxaca decomposition[5]. This method allows us to break down the difference in average number of GCSE (or advanced level) qualifications attained by the two groups of children into two components: the explained component, which accounts for differences in the mean values of the observed factors, and the unexplained component, which reflects differences in the effects of these factors between the two groups.

As shown in Table 2, the observed average difference in the number of GCSE A - C qualifications attained by children not in care compared to the number of qualifications attained by those in care during the academic year when they attained the GCSE qualifications is approximately 3.6 qualifications. Of this gap, about 3 qualifications can be explained by observed factors. In other words, if care experienced children had the same characteristics as children not in care, the GCSE qualification attainment gap could be reduced by 3 qualifications—about 84% of the gap can be attributed to these observed factors. The remaining gap of 0.6 qualifications cannot be closed by improving the observed characteristics of care experienced children, such as reducing their absence and exclusion sessions.

Table 2. Decomposition of observed differences between the number of qualifications attained by care experienced children and the number of qualifications attained by children not in care

	GCSE	Advanced
Raw gap	3.578***	0.764***
	(0.019)	(0.040)
Explained by observed factors	3.007***	0.499***
	(0.018)	(0.019)
Explained by coefficients	0.571***	0.265***
	(0.022)	(0.043)
Number of observations	2,525,840	705,270

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Similar findings were observed for advanced level qualifications. Specifically, the observed difference in the number of advanced level qualifications attained by children in care and the number of qualification attained by those not in care is about 0.8 qualifications. About 65% of this gap, or 0.5 qualifications, can be explained by the observed factors.

Overall, the educational attainment gap between care experienced children and children not in care can be significantly reduced by addressing the risk factors that impact care experienced children.

Why it matters

Our analysis using the GUiE Wave 1 and 2 data fills a gap in the existing literature and provides new evidence on how time in care and care-related experiences impact educational attainment.

Our findings reveal significant gaps in educational attainment, particularly in GCSE and advanced level qualifications, between children in care and those not in care. For children in care, spending more time in care appears to contribute to better educational outcomes, especially in terms of GCSE A to C qualifications. A large portion of the gap in both GCSE and advanced level qualifications between children in care and those not in care can be explained by their observed characteristics.

These findings offer valuable insights for policymakers and practitioners to design care systems with proactive strategies that support care experienced children in achieving academic success.

What next?

This project used only GUiE Wave 1 and 2 data. The recently released GUiE Wave 3 data, which should include vulnerability data from the academic years 2001/02 to 2009/10, fills the gap between the educational data from Wave 1 and the vulnerability data from Wave 2. This new data could significantly enhance this project by enabling an investigation into the impact of long-term care experience and the trajectory of multiple care episodes, including their start and cessation, on educational attainment.

References

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