

what works
centre for

CHILDREN'S SOCIAL CARE

Exploratory analyses of the rates of children looked after in English local authorities (2012-2017)

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About the What Works Centre for Children's Social Care

The What Works Centre for Children's Social Care seeks better outcomes for children, young people and families by bringing the best available evidence to practitioners and other decision makers across the children's social care sector. Our mission is to foster a culture of evidence-informed practice. We will generate evidence where it is found

to be lacking, improve its accessibility and relevance to the practice community, and support practice leaders (e.g. principal social workers, heads of service, assistant directors and directors) to create the conditions for more evidence-informed practice in their organisations.

About CASCADE

CASCADE is concerned with all aspects of community-based responses to social need in children and families, including family support services, children in need services,

child protection, looked after children and adoption. It is the only centre of its kind in Wales and has strong links with policy and practice.

To find out more visit the Centre at: **whatworks-csc.org.uk**, or
CASCADE at: **sites.cardiff.ac.uk/cascade**

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Executive Summary

A priority for the What Works Centre for Children's Social Care is reducing the need for children to be in care.

The aim of this study was to inform the intervention research and systematic reviews being planned for the What Works Centre between 2018 and 2020, by exploring local authority variation in the rates of children in care. This was done through exploratory analyses of existing local authority level aggregate data.

As well as exploring the factors that are associated with high rates of children in care, this study also explored how and why the number of children in care have been changing over the years. We were particularly interested to explore the rates and the changes in the rate of children in care in the last five financial years, between 2012/13 and 2016/17, on the basis that this timing will be more relevant to current policy regimes in local authorities.

Variables in the analyses included macro-level variables such as the percentage of low income families in a local authority area, and social work system variables such as the expenditure on children in need, social work turnover, innovation funding and OFSTED ratings. Each of these variables were tested for their association with the rate and the change in the rate of children in care. Unfortunately, it was not possible to conduct sophisticated statistical analyses involving several variables considered together, because data availability differed between time periods or data were only available for one point in time.

The analyses of the rate of children looked after per 10,000 children revealed interesting regional patterns. Local authorities in Inner and Outer London regions showed a reduction in rates of children looked after over time, whereas those in the North West and North East showed a marked increase in the rate of children in care over time.

The following factors were associated with lower average rates of children in care in local authorities:

- Lower proportions of low income families in the area
- Higher expenditure on children in need
- Participation in the DfE's Innovation Programme
- Better OFSTED judgements
- Higher proportions of social worker turnover

The following factors were associated with an average decrease in the rate of children in care per 10,000 children in local authorities in England:

- A decrease in the proportions of low income families
- Participation in the DfE's Innovation Programme
- Better OFSTED judgements

The analyses suggest that both economic factors and service quality may be relevant to reducing the rate of children in care and both should be considered in studies taken forward by the What Works Centre between 2018 and 2020.

The service context for reducing the need for care was examined in greater detail through a national survey and in-depth interviews with senior figures in 30 authorities across England. Findings from these are reported separately.

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I. Introduction

There are moral, legal and financial reasons for reducing the need for children entering State care, which is one of the priorities for the first phase of the What Works Centre for Children's Social Care. One of the underpinning principles of The Children Act 1989 is that children should be cared for within birth families where possible. Article Seven of the United Nations Convention for the Rights of the Child states that a child has a right to be cared for by her parents. The cost of care placements is high (National Audit Office, 2014) and many people working in the sector would ideally like to shift this spending to earlier help for families who are struggling. Care rates have been rising for the last twenty years (Thomas, 2018) and there are also serious socio-economic inequalities. Family needs and risks of harm to children are not equally distributed across society. Bywaters et al's (2018) study found children in England to be eleven times more likely to be in care in the ten per cent most deprived communities than in the ten per cent least deprived.

The aim of this study was to inform the intervention research being planned for the What Works Centre between 2018 and 2020, by exploring local authority variation in the rates of children coming into care and establishing factors that may contribute to reducing the need for children to be looked after by local authorities. This was done through exploratory analyses of existing national level aggregate data.

The specific objectives were to:

- Amalgamate existing data sources on children in care to create a local authority-level database
- Establish the local authorities with highest/lowest increases in the number of children looked after
- Explore whether the patterns of change differ between regions/local authorities
- Explore (within the limitations of the data available) the factors associated with the rates and changes in the rates of children in care

2. Method

2.1 Data

The aim and the objectives of the study were met through secondary analyses of existing, aggregate, national and local authority level data on children in care. The data were extracted from several sources and were amalgamated into one database for analyses. The data sources are given in Appendix A.

2.2 Outcome Indicator

Number of children in care per 10,000 children in the population

We have chosen to use the number of children in care per 10,000 children as the outcome indicator, as absolute numbers of children in care do not give an indication of the prevalence of the use of state care as an intervention in family life. For example, if there are 500 children looked after in a local authority with a child population of 50,000, the prevalence would be 1%. The same number of 500 looked after children in a local authority with a child population of 500,000, would make the prevalence just 0.1%. Conversely, some (for example Jay et al, 2017) have argued that rate per 10,000 children is impacted by the child population size, where authorities with large populations will be more robust to small changes in the children looked after population, whilst in smaller local authorities, the same small changes in the looked after population can lead to bigger changes in the rate of children looked after per 10,000 children in the population. Although this is true, on balance, we took the decision to use the rate of children in care as our primary indicator, as the raw numbers of children in care do not allow fair comparison between regions/local authorities.

Two outcome variables were calculated to enable analyses of factors associated with the rate and the change in the rate of children in care:

- *Average rate* of children in care in the time period under consideration
- *Average change in the rate* of children in care during the time period under consideration

Different averages needed to be calculated depending on the availability of associated variable data considered within each analysis (see Section 2.4 and Table 1).

2.3 Associated factors /variables

A holistic analysis of macro level, micro level, and individual predictors associated with the rate and the change in the rate of children in care was not attempted, as the variables that could be included in the analyses were limited to those where aggregate data at local authority were available. The variables included in the analyses are given in the following sections.

Macro-level variables

Macro-level variables are those that are not directly linked to social work practice but have been shown to be linked/associated with social work outcomes. For example, Bywaters et al., (2018) have shown that areas with greater deprivation are more likely to have higher rates of social work intervention on families and children.

The proportion of low income families

As noted above, the rate of children in care is higher in more deprived areas. However, the index of multiple deprivation (Noble et al., 2000, Noble et al., 2004, Noble et al., 2008, McLennan et al., 2011, Smith et al., 2015) is not calculated every year. Therefore, the proportion of low income families in a local authority, which is calculated yearly by the HMRC was used as a proxy measure for area-level poverty.

Social work system variables

We defined social work system variables as those aspects of social services policy and practice that it is possible to change.

Weekly unit cost of social work

This variable captures the weekly unit cost of social work activities per child in need in the local authority. This cost variable includes the cost of direct social work linked to the care of children in need, commissioning services for children, and the costs of partnership/multi-agency working (full definition extracted from the Local Authority Interactive Tool (LAIT) database can be found in Appendix B).

Social work turnover and the proportion of agency staff

High proportions of social workers leaving (staff turnover¹) and high proportions of agency staff in the local authority are indicators of an unstable workforce. Instability in the workforce has been associated with high staff discontent, low commitment from the organisation, low availability of employment, and stress and burnout (see for example, Mor Barak et al., 2006, Hopkins, et al., 2010), all of which may have an impact on the social workers' relationships with families and children.

Innovation fund programmes

The Innovation Fund for children's social care was introduced by the Department for Education in 2014, with an investment of up to £200 million between 2014 and 2020². The aim of this programme has been to fund innovative practices and interventions which can potentially have an impact on the children in contact with the children's social care system in England. By the end of the funding calls in 2018, 98 projects across England were supported through innovation programme funding. The analysis looked at the local

¹ Turnover='Number of leavers during the year / Number of social workers at 30 September' (Local Authority Interactive Tables- LAIT).

² See: <http://innovationcsc.co.uk/innovation-programme/> for more details.

authorities with funding until February 2016^{3,4} to explore whether local authorities with innovation programmes differed significantly when compared with those that had not received any funding. The variable was included in the analysis as a binary variable on funding (Yes/No).

Local authority performance variables (OFSTED judgments)

OFSTED is a regulatory body that inspects services for children and young people, including the children's social care provision. Until 2018⁵, OFSTED utilised a single inspection framework which provided an overall judgement of the children's social care services within the local authority as well as rating of the following separate sub categories of service provision:

- Children who need help and protection
- Children looked after and achieving permanence
 - Adoption performance
 - Experiences and progress of care leavers
- Leadership, management and governance

The 4-point rating scale includes four judgements: Outstanding, good, requires improvement and poor. We used the latest OFSTED judgements available for the local authorities and hypothesised that better performing local authorities would have a better capability to safely reduce the number of children entering care. The analyses explored whether the average rate and the change in the rate of children in care was associated with the most recent⁶ OFSTED overall judgement and the sub-category judgements. The variables were included in the analysis coded on a 4-point scale from 1 to 4 (ranging from poor to outstanding).

2.3 Exclusions

There are 152 local authorities in England. In total, 151 local authorities were considered in the analyses. Isles of Scilly was excluded as no children were looked after by the local authority between 2012-3 and 2016-7.

2.4 Time period

The rate of children in care in England has been rising steadily for over two decades (Thomas, 2018). In 1994 there were 47,950 children in care in England and by 2017 there

³ Local authorities that received funding were identified through the 'Grant Determination Letters' published by the Department for Education. See <https://www.gov.uk/government/publications/grant-determination-childrens-social-care-innovation-programme>.

⁴ The date on rates of children in care were available until 31st March 2017. February 2016 was considered as the cut-off point for innovation programme data as the next funding allocation to local authorities was in December 2016, which would not have had enough time to impact the numbers of children in care.

⁵ See

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/680379/ILACS_framework_and_evaluation_criteria.pdf for the evaluation criteria since 2018.

⁶ In the 151 local authorities, the most recent Inspections were carried out between 2014 and 2018.

were 72,670. On average, there has been an annual growth of 1.87% in the numbers of children looked after over this time. Therefore, as well as exploring the factors that are associated with high rates of children in care, one of the main purposes of this study was to explore *how* and *why* the number of children in care have been changing over the years. We were particularly interested to explore the rates and the changes in the rate of children in care in the last five financial years 2012/13 to 2016/17 (referred to from now on as 2012-17), on the basis that this timing will be more relevant to current policy regimes in local authorities.

It should be noted however, that the period considered under each of the analysis was limited by the extent of the data available (see Table 1).

Table 1. Data availability and timeframes for analyses

Variable	Data availability and timeframe for analyses
The proportion of low income families	<p>Data available for the period between 2007 and 2015. As we were mainly interested in the last five years (2012-2017), the analyses considered the following:</p> <ul style="list-style-type: none"> - Association between the average proportion of low income families 2012-2015 compared with the average rate of children in care 2012-2015. - Association between the average change in the proportion of families 2012-2015 compared with the average change in the rate of children in care 2012-2015. <p>*As we felt that a three-year period was too small to explore impact of change in the proportion of low income families, we conducted the same analyses for the period between 2007 and 2015 as well.</p>
Social work turnover and the proportion of agency staff	<p>These data were available for the period between 2013 and 2017. The analyses considered the following:</p> <ul style="list-style-type: none"> - association between the average proportion of social work turnover/average proportion of agency staff between 2013 and 2017 compared with the average rate of children in care 2013-2017. - association between average change in the proportion of social work turnover/average change in the proportion of agency staff 2013-2017 compared with average change in the rate of children in care 2013-2017.
Weekly unit cost of social work	<p>These data were available for the period between 2009 and 2016.</p> <p>The analysis considered the following:</p> <ul style="list-style-type: none"> - association between the average weekly unit cost of

	<p>social work 2012-2016 compared with the average rate of children in care 2012-2016.</p> <p>-association between the average change in the weekly unit cost of social work 2012-2016 compared with the average change in the rate of children in care 2012-2016.</p>
Innovation fund programmes	<p>Data were available on innovation programme funding made available to the local authorities between 2014 and 2018.</p> <p>The analyses considered whether any innovation programme funding between 2014 and 2016⁷ was associated with:</p> <ul style="list-style-type: none"> - The average rate of children in care 2012-2017. - The average change in the rate of children in care 2012-2017.
OFSTED judgments	<p>The analyses explored whether the average rate and the change in the rate of children in care 2012-2017 was associated with the most recent⁸ OFSTED overall judgement and OFSTED sub-category judgements.</p>

⁷ The date on rates of children in care were available until 31st March 2017. February 2016 was considered as the cut-off point for innovation programme data as the next funding allocation to local authorities was in December 2016, which would not have had enough time to impact the numbers of children in care.

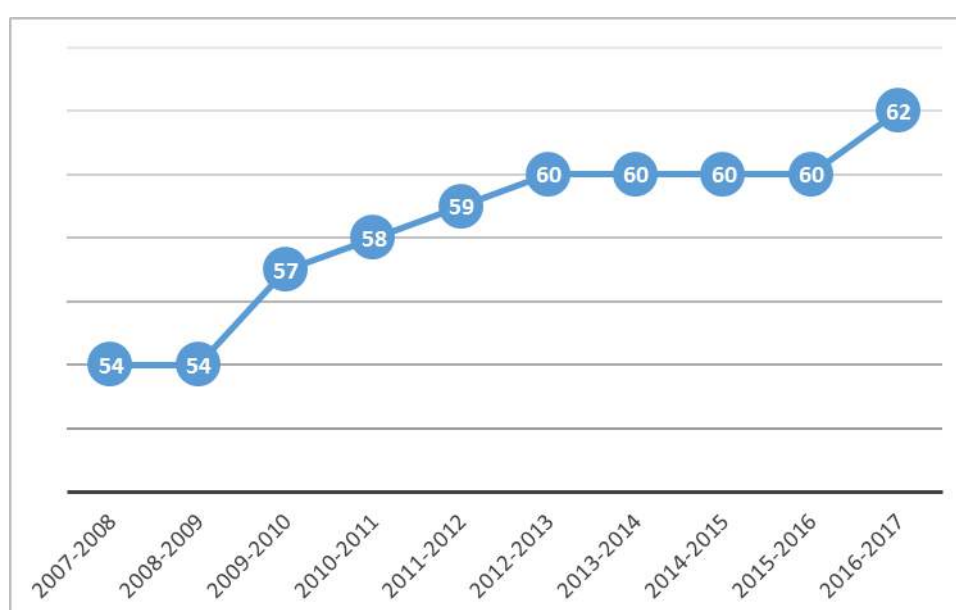
⁸ In the 151 local authorities, the most recent Inspections were carried out between 2014 and 2018.

Results

3.1 Number of children in care per 10,000 children in the population in England

The number of children looked after by local authorities per 10,000 children in England has seen an increase over the last two decades. The national average of the number of children in care per 10,000 children over the last 10 years⁹ (2007-2017) can be seen in Figure 1.

Figure 1: 10-year view of the number of children in care per 10,000 children in England between 2007 and 2017 (N=151)



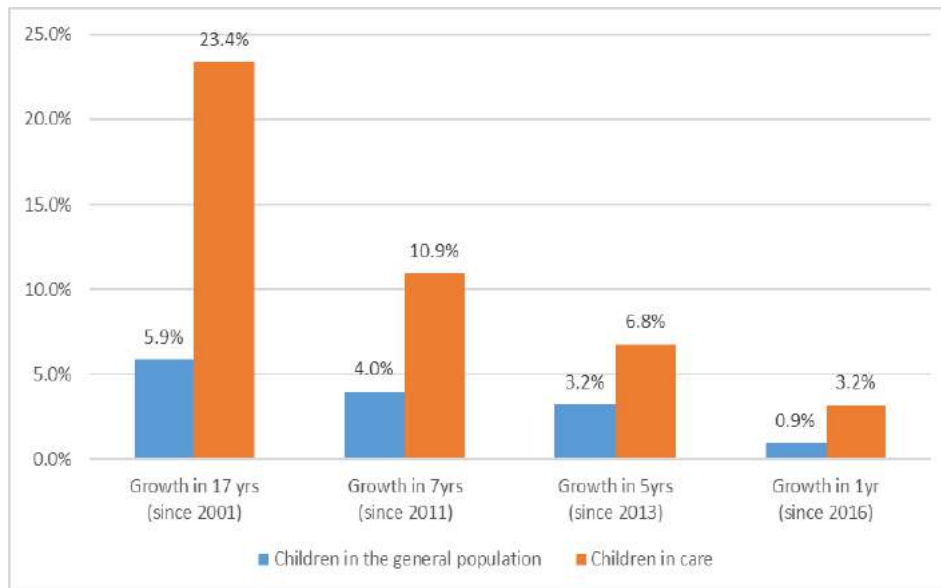
The population growth of the child population in England vs. the growth in the population of children in care

The population of children in care in England has been increasing at a higher growth rate when compared with the growth rate of the general child population in England. The 17-year, 7-year, 5-year and the 1-year¹⁰ growth in these two populations are shown in Figure 2. We have chosen to show the growth over 17 years (not 20 years) and 7 years (not 10 years) because the most accurate estimates of children in the general population are provided through the 2001 and 2011 censuses.

⁹ Over the last 20 years (between 1998-2017), the overall number of children in care in care per 10,000 in England has seen a 41% increase.

¹⁰ 2001 and 2011 general population estimates from the Census, available at <https://www.nomisweb.co.uk/>. 2013 and 2017 general population estimates from <https://www.gov.uk/government/collections/statistics-children-in-need> and numbers of children looked after downloaded from <https://www.gov.uk/government/publications/local-authority-interactive-tool-lait>.

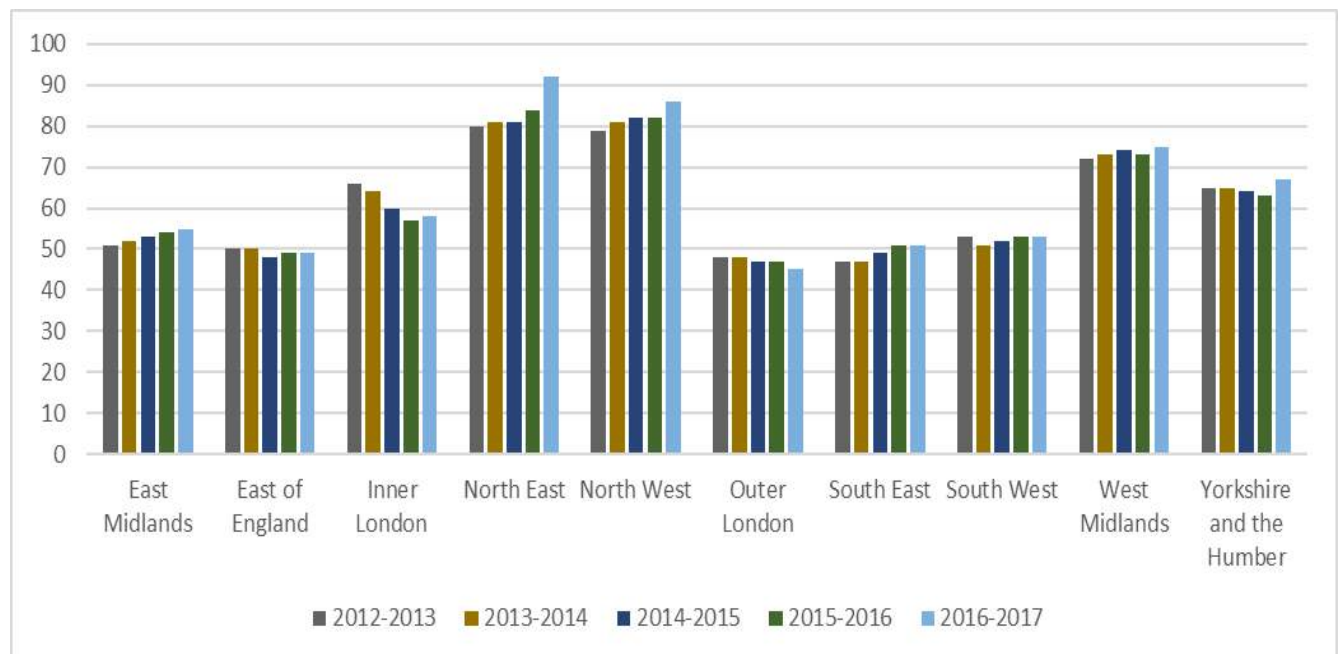
Figure 2: Children in care vs. children in the general population in England: Population growth, over 17 years, 7 years, 5 years and 1 year until 2017



Regional Variation in the number of looked after children

National trends can sometimes hide differences and patterns of change at regional or local authority level. For example, as can be seen in Figure 3, when comparing regions, Inner London has seen the sharpest decrease in the rate of children in care over the last five years (between 2012 and 2017), bucking the national trend. Sharpest increase was seen in the North East.

Figure 3: Average number of looked after children per 10,000 children by region between 2012 and 2017 in England (N=151)



The within and between-region variation in the average rate of looked after children between 2012 and 2017 are shown in Figure 4 and Table 2. As can be seen, between 2012 and 2017, the Outer London region had the lowest average rate of children in care per 10,000 children whilst the North East had the highest average rate of children in care.

Figure 4: Box plots¹¹ of the regional variation in the number of children per 10,000 children between 2012 and 2017 in England (N=151¹²)

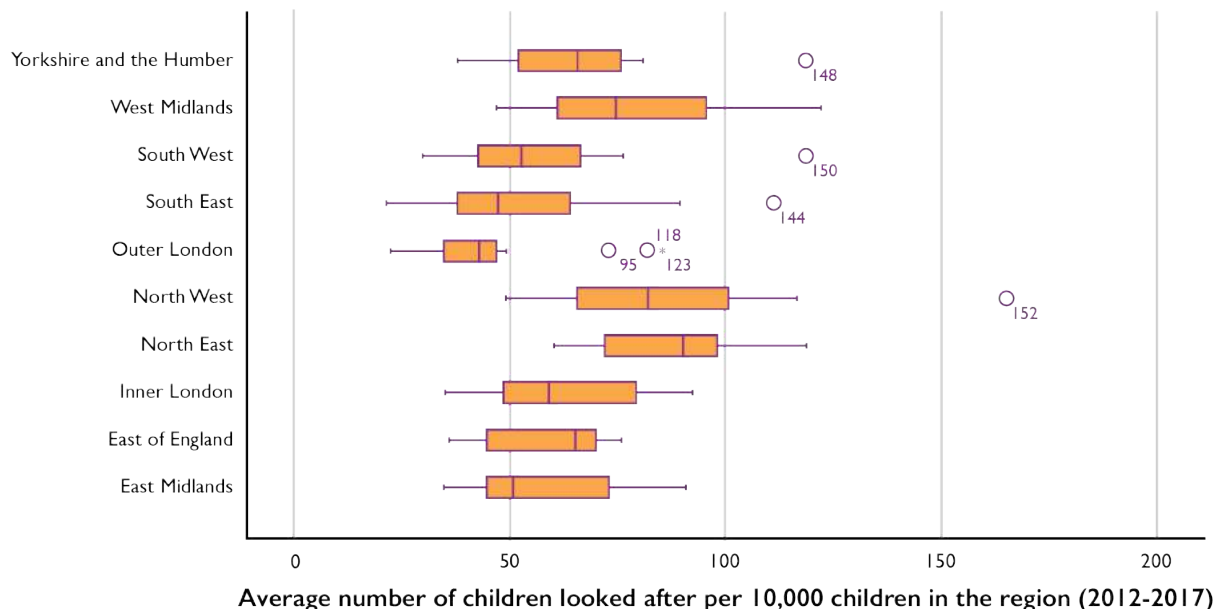


Table 2: The average number of children looked after per 10,000 children in the regions in England between 2012 and 2017 (N=151)

Region	Minimum (Rate)	Maximum (Rate)	Mean (Rate)	Std. Deviation (Rate)
Outer London	22	85	45.6	16.9
South East	21	111	53.6	22.6
East Midlands	35	90	57.1	19.1
South West	30	119	57.2	21.9
East of England	36	76	57.6	15.1
Inner London	35	92	62.2	18.9
Yorkshire and The Humber	38	119	66.0	19.4
West Midlands	47	122	79.0	21.4
North West	49	165	85.6	25.7
North East	60	119	87.7	16.9

¹¹ The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

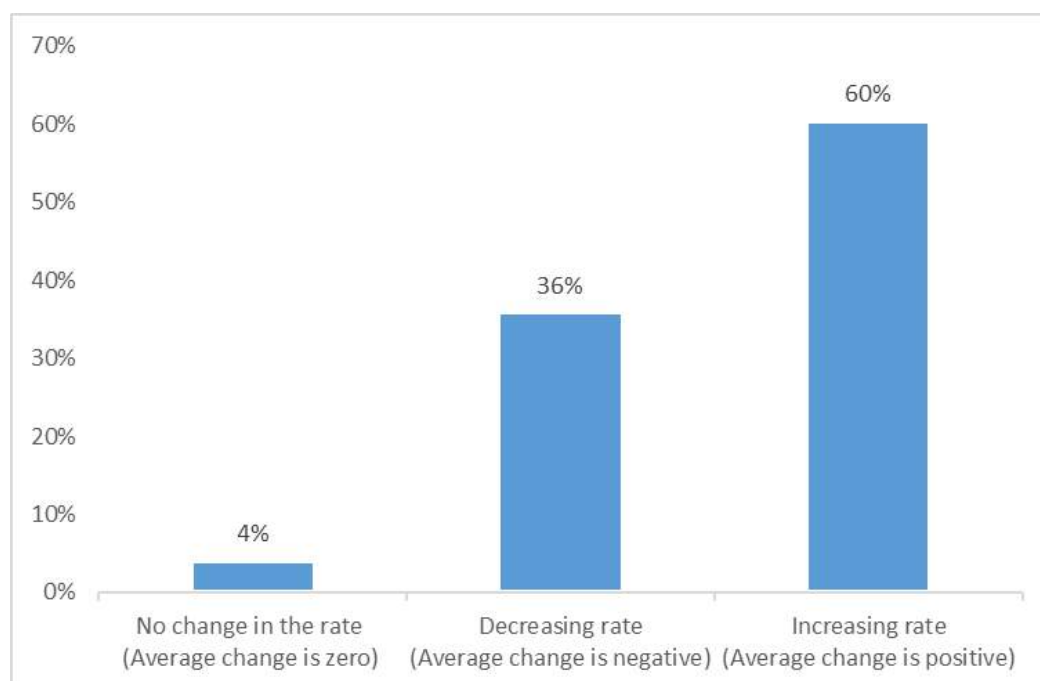
¹² Isles of Scilly excluded from the analyses as there were no children in care between 2012 and 2017.

3.2 Change in the rate of children in care per 10,000 children in England

The preceding description of the rates of children in care shows that the rate at a national level has been increasing over the years. The aim of this paper however was not only to explore possible reasons for these high numbers, but also to explore the average *change* in the rate of children in care¹³. We were interested to explore whether there were local authorities which have seen a reduction in the rate of children in care, irrespective of whether they had relatively higher or lower rates of children in care compared to other areas.

Between 2012 and 2017, local authorities in England had an average increase of 0.82 children in the number of children looked after per 10,000 children in the population¹⁴. However, not all individual local authorities have seen an increasing trend. As can be seen in Figure 5, 60% of local authorities saw an average increase, 4% saw no change in the rate of children in care whilst 36% of the local authorities in England had an average decrease in the rate of children in care. Figure 6 shows the distribution of the average change in the rate of children in care in England.

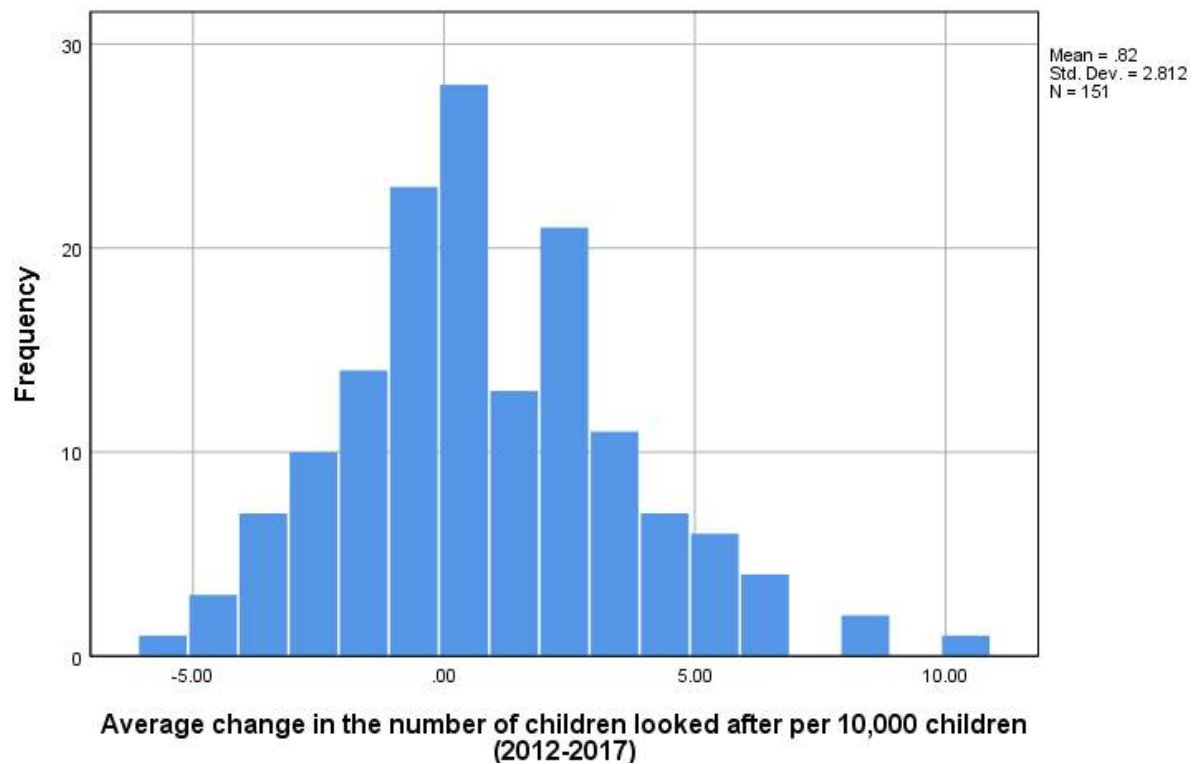
Figure 5 Distribution of the average local authority-level change in the number of children per 10,000 children in England between 2012 and 2017 (N=151)



¹³ The local authorities which have seen a year on year increase would have a positive average change, whilst the local authorities which have seen a more of a decrease rather than an increase would have a negative average change score.

¹⁴ M= 0.82, SD=2.81, Range= -5.6 to 10

Figure 6: Distribution of the average change in the number of children per 10,000 children in England between 2012 and 2017 (N=151)



Regional variation in the average change in the rate of children in care

The regional variation in the average change in the rates of children in care between 2012 and 2017 can be seen in Figure 7 and Table 3. The London regions, on average, saw the highest decrease in the rate of children in care whilst North West and the North East regions saw the highest increase.

Figure 7. Box plots¹⁵ of the regional variation in the average change in the rate of children in care per 10,000 children in England between 2012 and 2017 (N=151)

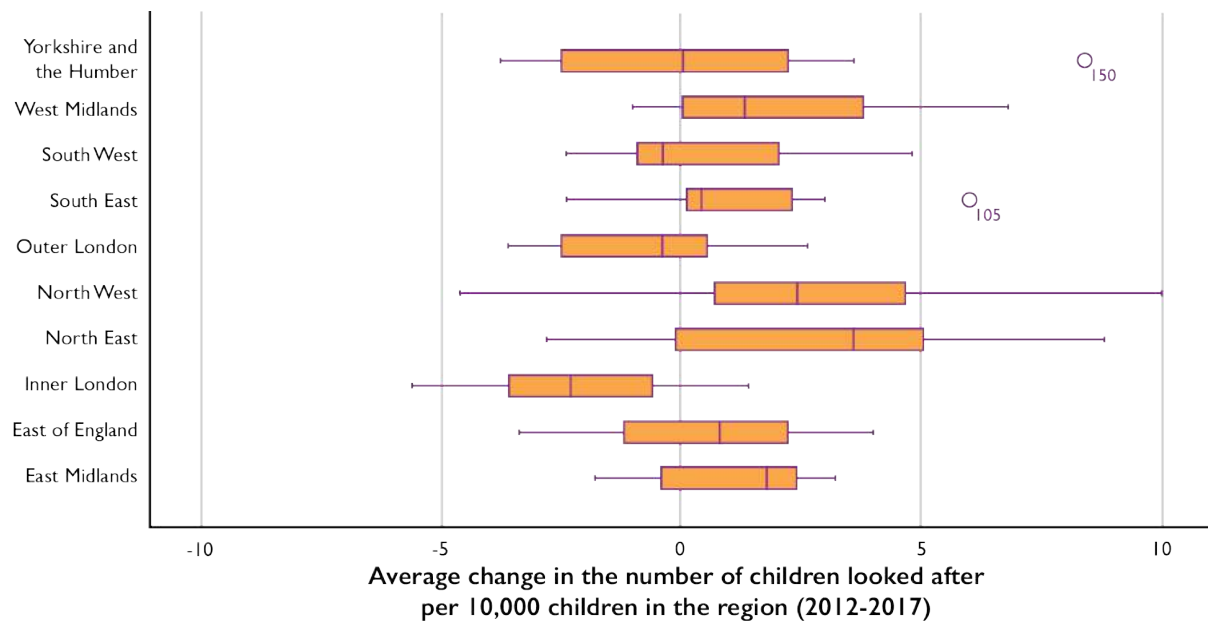


Table 3. The average change in number of children looked after per 10,000 children in the regions in England between 2012 and 2017 (N=151)

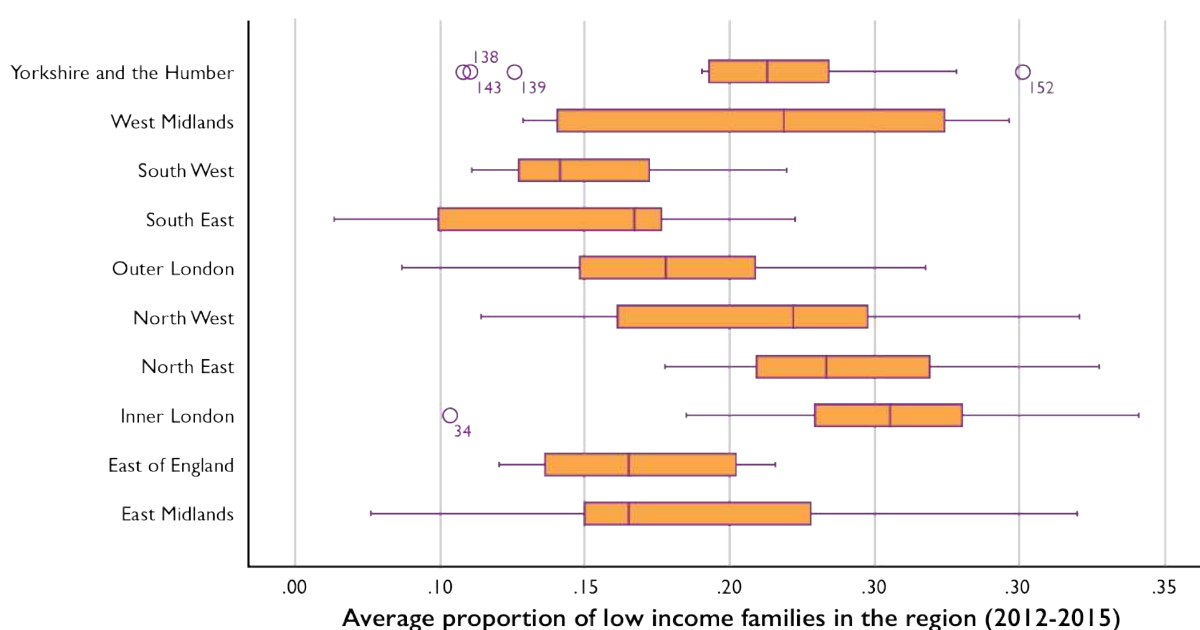
Region	Minimum (Rate)	Maximum (Rate)	Mean (Rate)	Std. Deviation (Rate)
Inner London	-6	1	-2.3	2.1
Outer London	-4	3	-0.7	1.8
South West	-2	5	0.4	1.9
East of England	-3	4	0.6	2.3
Yorkshire and The Humber	-4	8	0.7	3.0
South East	-2	6	0.9	2.0
East Midlands	-2	3	1.2	1.8
West Midlands	-1	7	1.9	2.4
North West	-5	10	2.5	3.2
North East	-3	9	2.8	3.4

¹⁵ The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

3.3 Proportion of low income families in an area and the rate of children in care

As mentioned in the methods section, the time period under consideration varied between analyses due to the limitations in the availability of aggregate data. Data on the proportion of low income families were only available until 2015, therefore the analyses in this section pertain to the time period between 2012 and 2015. Between 2012 and 2015, around one in every five families were categorised as being a 'low income' family¹⁶. This is equivalent to 2000 families in every 10,000 families in England. In the same period, 60 children in every 10,000 children in England were being looked after by the State. Inner London and the North East region had the highest proportion of low income families (Figure 8).

Figure 8: Box plots¹⁷ of the regional variation in the average proportion of low income families between 2012 and 2015 in England (N=151)



There was a statistically significant strong positive association between the proportion of low income families and the rate of children in care¹⁸. Local authorities with higher rates of children in care were more likely to have higher proportions of low income families.

¹⁶HMRC definition from the Local Authority Interactive Tool (LAIT): 'The Children in Low-Income Families Local Measure is the proportion of children living in families either in receipt of out-of-work benefits or in receipt of tax credits with a reported income which is less than 60 per cent of national median income. This measure provides a broad proxy for the relative low-income measure as used in the Child Poverty Act 2010 and enables analysis at a local level'.

¹⁷ The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

¹⁸ $r_s = .682$, $p < .001$

Proportion of low income in families and the change in the rate of children in care

Nationally, between 2012 and 2015, the proportions of low income families have on average decreased by 0.7%. Over the same period, the rate of children in care increased by 0.89 per 10,000 children.

The average changes in the percentage of low income families in each of the regions between 2012 and 2015 are shown in Table 4. When compared with other regions, inner London has seen a sharp decrease in the proportion of low income families living in the region. However, as was seen in the previous section (Figure 8) the average proportion of low income families in inner London was the highest between 2012 and 2015.

Table 4. The average change in the percentage of low income families in the region between 2012 and 2015 in England (N=151)

Region	Minimum (%)	Maximum (%)	Mean (%)	Std. Deviation (%)
Inner London	-3	-0.5	-1.6	0.7
Outer London	-2.6	-0.2	-1.5	0.7
North West	-1.9	-0.4	-1	0.4
East Midlands	-1.5	-0.2	-0.8	0.5
East of England	-1.2	-0.4	-0.8	0.3
West Midlands	-1.4	-0.2	-0.8	0.4
South East	-1.6	-0.2	-0.7	0.4
Yorkshire and The Humber	-1.3	-0.3	-0.6	0.2
North East	-1.1	-0.3	-0.6	0.3
South West	-1.2	-0.13	-0.5	0.3

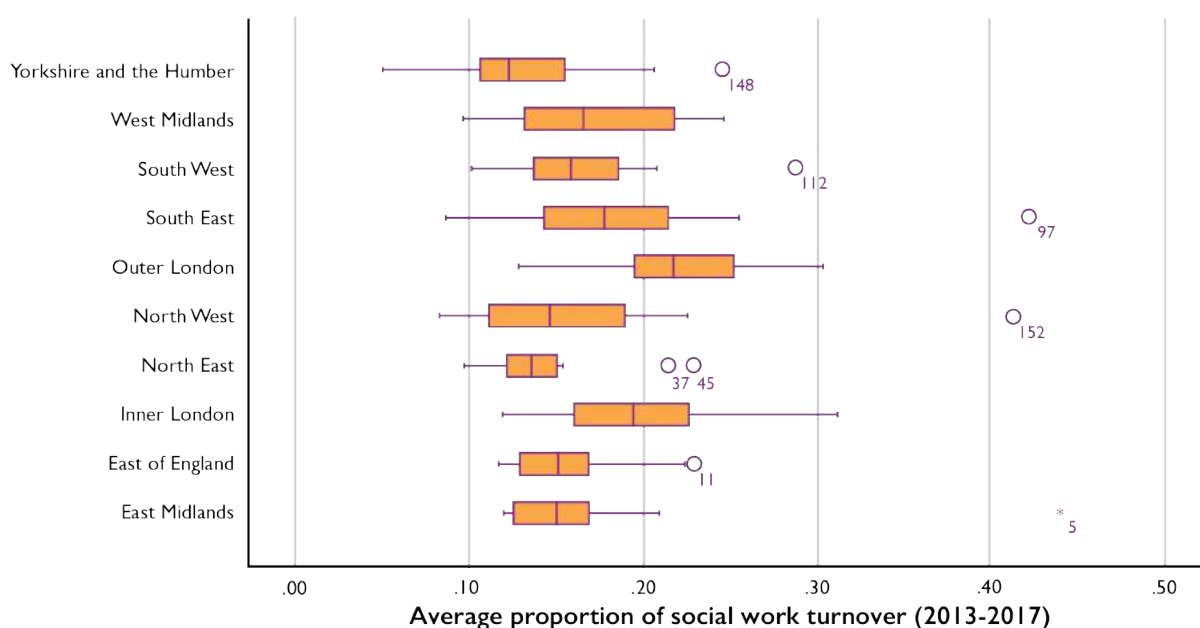
There was no significant association between the change in the proportion of low income families and the change in the rate of children in care between 2012 and 2015; The direction of change in the proportion of low income families in an area was not associated with the average change in the number of children in care 2012-2015. Considering that the recession dates back to 2008, we then explored whether average change in the rate of children in care was associated with the average change in the proportion of low income families over a longer time period. Between 2007-8 and 2014-15, the local authorities which had higher proportions of low income families on average were more likely to see increases in the rate of children in care¹⁹.

¹⁹ $r_s = .454, p < .001$

3.4 Workforce changes and the rate of children in care

These data were only available for the period between 2013 and 2017. Nationally, between the period between 2013 and 2017, the average percentage of social worker turnover was 17%²⁰. In the same period, the average percentage of agency staff in a local authority was 16%²¹. The regional variation between percentage of social work turnover and the percentage of agency social workers is given in Figures 9-10 and Tables 5-6. Inner and outer London regions had the highest percentage of staff turnover.

Figure 9: Box plots²² of the regional variation in the average proportion of social work staff turnover between 2013 and 2017 in England (N=151)



²⁰ Range: 5% to 44%, SD=5.7%

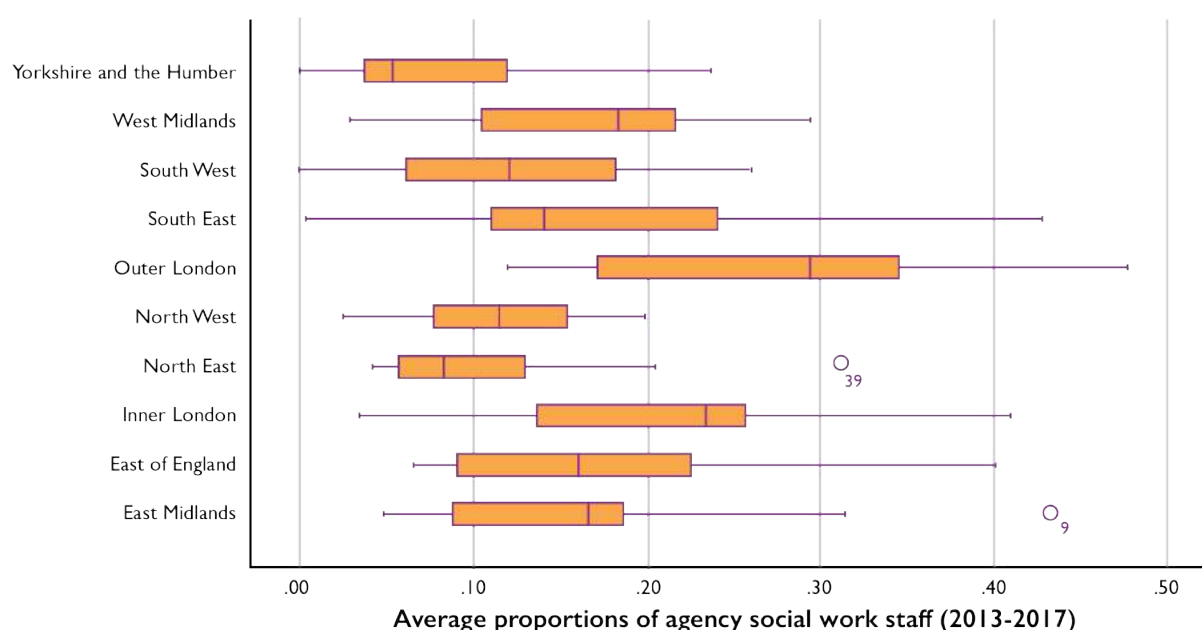
²¹ Range 0%- 48%, SD=10%

²² The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

Table 5: Average percentage of yearly social work staff turnover between 2013 and 2017 in England (N=151)

Region	Minimum (%)	Maximum (%)	Mean (%)	Std. Deviation (%)
Yorkshire and The Humber	5	25	13	5
North East	10	23	15	4
North West	8	23	15	4
East of England	12	23	16	4
West Midlands	10	25	16	4
South West	10	29	16	5
East Midlands	12	44	18	10
South East	9	42	19	7
Inner London	12	31	20	5
Outer London	13	30	22	4

Figure 10: Box plots²³ of the regional variation in the average proportion of agency social work staff in England (2013-2017) (N=151)



²³ The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

Table 6: Average percentage of agency social work between 2013 and 2017 in England (N=151)

Region	Minimum %	Maximum %	Mean %	Std. Deviation %
Yorkshire and The Humber	0	24	8	7
North East	4	31	11	8
North West	3	20	11	5
South West	2	26	13	7
West Midlands	3	29	17	8
East of England	7	40	18	10
South East	0	43	18	11
East Midlands	5	43	18	12
Inner London	3	41	21	9
Outer London	12	48	27	10

There was no statistically significant association between the average proportion of agency staff and the rate of children in care²⁴.

There was however a significant negative association between the average proportion of social worker turnover and the average rate of children in care 2013-2017²⁵. This was a counterintuitive finding as it indicates that a high proportions of social worker turnover is associated with lower average rates of children in care. However, it should also be noted that this association disappeared when local authorities in the London region (which had the highest social work turnover), were excluded from the analyses²⁶.

Workforce changes and the change in the rate of children in care

The average change in the rate of children in care, the average change in the percentage of social worker turnover and the average change in the percentage of agency staff in England between 2013 and 2017 are given in Table 7²⁷. As can be seen, between 2013 and 2017, nationally, on average, the proportion of social work turnover has decreased by around 1%, whilst the use of agency staff has increased marginally by 0.4%.

²⁴ Spearman's correlation not significant at $p < .05$ level.

²⁵ $r_s = -.249$, $p < .01$

²⁶ Spearman's correlation not significant at $p < .05$ level.

²⁷ This analysis was limited to 2013-2017 as the data on social work turnover/agency workers were available from only 2013.

Table 7. Average change in the number of children looked after per 10,000 children and average changes in social work turnover and agency staff between 2013 and 2017 in England (N=147)

	Minimum	Maximum	Mean	SD
Average change in the rate of looked after children per 10,000 children in the population	-9.3	10.7	.94	3.4
Average change in the percentage of social worker turnover (%)	-15	11	-1.1	4.3
Average change in the percentage of agency staff (%)	-11	17	.41	.04

There was no statistically significant association²⁸ between the average change in the rate of children in care and the average change in the proportion of either social worker turnover or agency social work staff.

3.5 The innovation programmes and the rate of children in care

Data from the Department for Education indicate that 63 out of the 152 local authorities were given funds through the innovation programme between March 2015 and February 2016²⁹. Statistical analyses indicate that compared with local authorities without innovation programmes, local authorities with innovation programmes were more likely to have lower rates of children in care between 2012 and 2017³⁰.

The innovation programmes and the change in the rate of children in care

There was a statistically significant association between local authority level implementation of children's social care innovation programmes and the change in the rate of children in care³¹. Local authorities with funding for innovation programmes were more likely to have average decreases in the rate of children in care between 2012 and 2017.

3.6 Social work finance and the rate of children in care

The social work finance variable included in this analysis was the weekly unit cost of direct social work with children in need, commissioning services for children, and of

²⁸ Spearman's correlation not significant at $p < .05$ level.

²⁹ The date on rates of children in care were available until 31st March 2017. February 2016 was considered as the cut-off point for innovation programme data as the next funding allocation to local authorities was in December 2016, which would not have had enough time to impact the numbers of children in care.

³⁰ Mann-Whitney $U = 2275$, $p < .05$

³¹ Mann-Whitney $U = 2198$, $p < .05$

partnership/multiagency working^{32,33} (full definition extracted from the Local Authority Interactive Tool (LAIT) database can be found in Appendix C). These data were available for the period between 2012 and 2016. Nationally, between the local authorities, the weekly cost of social work per child in need varied from £28 to £510³⁴. On average, London local authorities had the highest spend per child in need whilst North East and the North West regions had the lowest spend per child in need (see Table 8 and Figure 11).

Table 8: Average weekly cost of social work per child-in-need (CiN) in the regions in England between 2012 and 2016 (N=147)

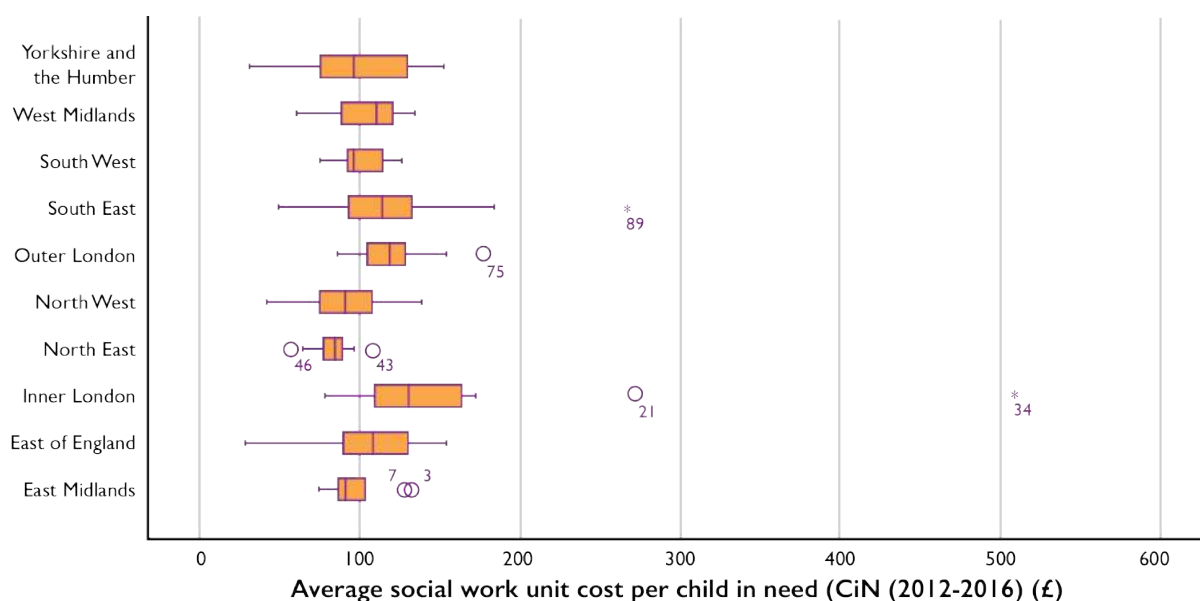
Region	Minimum (£)	Maximum (£)	Mean (£)	Std. Deviation (£)
North East	56	108	82	13.5
North West	42	138	91	23.9
East Midlands	74	133	96	20.7
Yorkshire and The Humber	31	151	99	33.7
West Midlands	60	134	103	23.3
East of England	28	153	103	37.1
South West	75	125	102	14.7
South East	49	266	116	47.9
Outer London	85	176	118	23.1
Inner London	78	510	163	110.8

³² From S251 outturn weekly unit costs. Definition from LAIT: <https://www.gov.uk/government/publications/local-authority-interactive-tool-lait> The weekly unit cost includes three elements:

³³ Calculation: $(x/y)/365 * 7$ where x = Total funding on Social work and Commissioning & Children's Services Strategy recorded on either outturn (OT) or S251 financial statement; y = Total number of Children in need at 31 March. NB - 2015-16 unit costs have been calculated using 31 March 2015 CIN numbers as a proxy.

³⁴ M= £108, SD=£49

Figure 11: Box plots³⁵ of the regional variation in the average unit cost per child in need between 2012 and 2016 in England (N=147)



When we explored the association between the average unit cost of social work over the period in question and the average rate of children in care, local authorities with lower rates of children in care were more likely to have a higher unit cost attached to children in need (CiN)³⁶. This is an interesting finding. The cost variable used in this analysis includes the social work costs of assessing the children in need, field social work costs, occupational therapy and child protection (excluding payments to foster carers and adoptive families), commissioned services and costs of multi-agency working. This result implies an association between spending more on children in need and a lower number of children in care.

Social work finance and the change in the rate of children in care

There was no association between the average change in weekly spend per child for children in need and the average change in the rate of children in care 2012-16³⁷.

³⁵ The box plot shows the minimum rate of children in care in the region, 25th percentile, 50th percentile (median), 75th percentile, and the maximum number of children in care per 10,000 children in the LAs. The outlier numbers are local authority identifiers and not care rates.

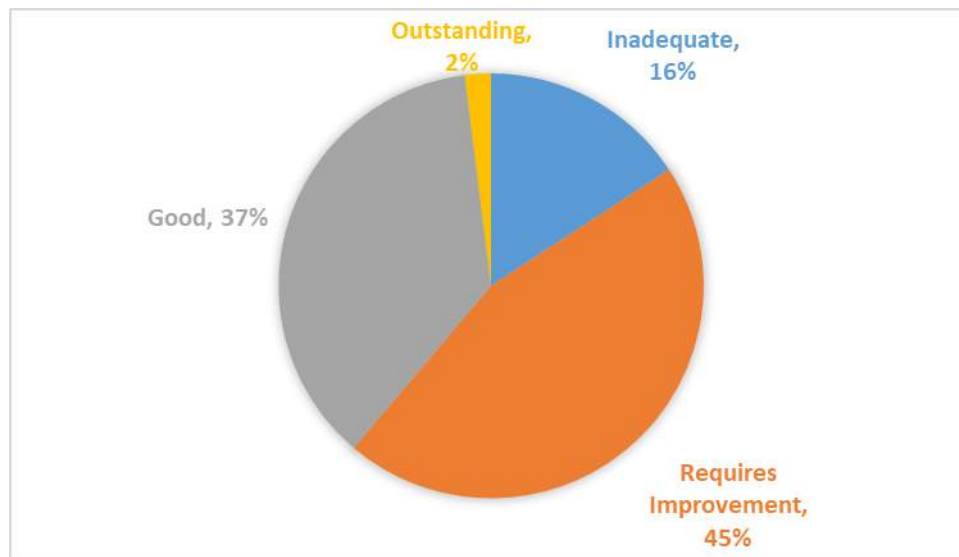
³⁶ $r_s = -.240, p < .01$

³⁷ Spearman's correlation not significant at $p < .05$ level.

3.7 Local authority performance (OFSTED judgements) and the rate of children in care

Children's services are regulated by the OFSTED and local authorities are inspected by the OFSTED every few years. In this section, we looked at the most recent OFSTED judgements available³⁸. The majority have been judged as either requiring improvement (45%) or performing inadequately (16%) (Figure 12).

Figure 12: Local authority performance on the most recent OFSTED inspection between 2014 and 2018 in England, (N=151)



We then explored whether the average rate of children in care (2012-2017) was associated with the most recent overall OFSTED judgement and judgements on sub categories³⁹.

There was a significant statistical association between the overall OFSTED performance and the rate of children in care⁴⁰. Local authorities with lower rates of children in care were more likely to have better OFSTED judgements. Lower rates of children in care were also significantly associated⁴¹ with better judgements in the 'Children looked after and achieving permanence' category.

There were no significant statistical associations between the judgements on the other sub categories and the average rate of children in care 2012-2017.

³⁸ In the 152 local authorities, the most recent Inspections were carried out between 2014 and 2018.

³⁹ See section 3.7 for a list of sub-categories.

⁴⁰ $r_s = -.175, p < .05$

⁴¹ $r_s = -.174, p < .05$

Local authority performance (OFSTED judgements) and the change in the rate of children in care

In this section, we explored whether the average change rate of children in care (between 2012 and 2017) was associated with the most recent overall OFSTED judgement and the judgements on sub categories.

Local authorities which have seen a reduction in the number of children in care were more likely to have a better overall OFSTED judgement⁴² as well as better judgements on the 'Children who need help and protection'⁴³, 'Children looked after and permanence'⁴⁴ and 'Leadership, management and governance'⁴⁵ sub categories.

4 Discussion and Conclusion

The findings suggest that both economic factors and quality of services may be relevant to reducing the need for children to come into care.

Limitations

Although aggregate data analyses allowed us to establish the local authorities which have shown a reduction in the rate of children in care, we cannot deduce that these local authorities would be the ones with best practice aimed at safe reduction of the number of children in care. This is because the reduction in the rate of children in care may be attributable to many factors, some of which could not be included in the aggregate data analyses due to lack of data availability. For example, these could include

- Social work-related factors such as practice changes at specific points during a family's involvement with social services (e.g. early help, child in need, edge of care, in care)
- Changes made to the whole system, such as new leadership, adoption of new ways of thinking or; specific training programmes/interventions aimed at social workers, children and families.
- Other contextual factors not directly related to social work, for example the composition of the population in the local authority over time (e.g. migration, or aspects of poverty and deprivation not included in our analysis)

Nationally, aggregate data are not collected annually at local authority level on all factors that might have an impact on the rate of children in care. Therefore, this analysis is constrained by the limited availability of data and should be considered within this limitation. There may be other factors that are more important in explaining the changes to the rates of children in care. One example of a missing variable was ethnicity. This could be important to children looked after rates and the change in these because Bywaters et al.

⁴² $r_s = -.170, p < .05$

⁴³ $r_s = -.199, p < .05$

⁴⁴ $r_s = -.178, p < .05$

⁴⁵ $r_s = -.217, p < .01$

(2018) have noted that when area-level deprivation is controlled for, the rates of Black and Asian children in care are much lower than those for White children. The ethnic mix of the population might help explain the reducing rates of care in Inner and Outer London.

We also did not include all factors where aggregate data are available as this was neither feasible nor desirable, as conducting multiple statistical tests challenges conventional assumptions about statistical significance. The factors that were included in the analyses were based on theoretical coherence in the light of existing evidence and the hypothesis that any new intervention (such as the Innovation Programme) could potentially have an impact on the number of children entering local authority care.

Furthermore, due to changes in data collection over the years, data were not available for all variables for all years. Therefore, the time period under consideration varied between analysis of different variables.

As the data were being analysed at local authority level, we could also not determine whether changes to the individual characteristics of children who enter care may have contributed to the different care rates in the local authorities.

Although some factors were significantly associated with the average change in the rate of children in care, we cannot assume direct causation. It would have been ideal if we could have tested the relationship between these factors in a multi-variate statistical model, but unfortunately due to limited data availability, this was not possible. Therefore, some of the correlations observed could possibly be spurious. The surprising finding that higher social worker turnover correlated with lower average rates of children in care could perhaps be explained by there being both higher turnover and lower rates in London and the South East.

It is possible that certain factors are more important under-lying influences. For example, it could be argued that local authorities with decreasing deprivation over time will have reducing demand and therefore be able to pay more attention to aspects of practice that Ofsted rate highly as well as taking fewer children into care over time. This argument would be in line with the analysis of Bywaters, Webb and Sparks (2017); Webb and Bywaters (2017) and Hood et al. (2016) who found that more affluent local authorities had higher Ofsted ratings, lower numbers of referrals, they met more of the demand for children's services, and experienced proportionally smaller cuts in spending on prevention than more deprived authorities. It was not possible, however, to conduct the kinds of tests that could have controlled for relationships between these different factors.

Conclusion

This was an exploratory analysis of available aggregate data on children in care. We did not conduct any multivariate analyses or sophisticated longitudinal analyses because data availability differed between time periods and for some variables, data were only available for one point in time.

When rates children looked after and their change over time were considered at a regional level, it could be seen that local authorities in London showed a regional trend of reduction over time, whereas those in the North showed a trend that was increasing over time.

The exploratory data analyses of the rate of children in care revealed that the following variables were associated with lower average rates of children in care per 10,000 children:

- Lower proportions of low income families in the area
- Higher proportions of social worker turnover
- Implementation of the DfE's Innovation Programme for children's social care
- Higher unit cost attached to children in need
- Better overall OFSTED judgements
- Better OFSTED judgements in the 'Children looked after and achieving permanence' category

Following variables were associated with decreases in the rate of children in care per 10,000 children:

- A decrease in the proportions of low income families⁴⁶
- Implementation of the Innovation Programme
- Better Overall OFSTED judgement
- Better OFSTED judgements in the "Children who need help and protection" category
- Better OFSTED judgements in the 'Children looked after and achieving permanence' category
- Better OFSTED judgements in the 'Leadership, management and governance' category

Poverty in the local area was an important factor. The study makes an important additional contribution to the developing evidence base on the relationship between poverty and care entry. Whilst studies to date have established a correlation at one point in time (e.g. Bywaters et al., 2018) this is the first UK study to identify that average changes in poverty over time are associated with average changes in numbers entering care. This highlights that we need to address the public policy context if we wish to reduce the need for children to enter care.

⁴⁶ This association was not statistically significant when a shorter period was considered (2012-2015), but was significant when a longer timeframe was considered (2007-2015)

Equally, our findings indicate that numbers of children in care are not solely a function of wider economic factors. Better Ofsted ratings and participation in the Innovation programme, for example, were both associated with reducing numbers of children in care. Put simply, good services help local authorities reduce the number of children in care. It seems that it is not about either tackling broader social causes or ensuring better children's services - it is about doing both. It should be acknowledged that quality services will have to be more of a focus in the first phase of the What Works Centre. This is because the levers of macro-economic change are not in the control of children's services, whereas practice quality is to an extent. That said, the importance of family poverty to practice is something that deserves a lot more attention (Morris et al. 2018) and can be considered in intervention studies taken forward by the What Works Centre.

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Appendix A: Data Sources

Number of children looked after

Data source	Coverage	Link
LAIT Local authority interactive tool	2008-2017	https://www.gov.uk/government/publications/local-authority-interactive-tool-lait
Department for Education Archive	1976-2017	http://webarchive.nationalarchives.gov.uk/2013032312341/https://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00194934/children-looked-after-in-england-(including-adopti
Statistical first release data on looked after children (Department for Education)	2005-2009 (SFR 2009)	http://webarchive.nationalarchives.gov.uk/20130321221217/https://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00196185/children-looked-after-in-england-(including-adopti
	2008-2012 (SFR 2012)	https://www.gov.uk/government/statistics/children-looked-after-by-local-authorities-in-england-including-adoption

Children looked after per 10000 children

Data source	Coverage	Link
LAIT Local authority interactive tool	2008-2017	https://www.gov.uk/government/publications/local-authority-interactive-tool-lait
Department for Education Archive	2003-2005	http://webarchive.nationalarchives.gov.uk/2013032312341/https://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00194934/children-looked-after-in-england-(including-adopti

Children in the general population

Data source	Coverage	Link
ONS mid-year population estimates	2011-2016	https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/
IMD variables		

Notes on variables

Children looked after per 10000 children (2005-2017)	Rate not available for pre-2005. Due to changes in LA Boundaries, data not available for the following LAs pre 2010: Bedford Borough, Central Bedfordshire, Cheshire East, and Cheshire West and Chester
Number of looked after children (2003-2017)	Due to changes in LA Boundaries, data not available for the following LAs pre 2010: Bedford Borough, Central Bedfordshire, Cheshire East, and Cheshire West and Chester

Appendix B: Definition of the 'Weekly unit cost of social work' variable⁴⁷

Extracted verbatim from the Local Authority Interactive Tool:

<https://www.gov.uk/government/publications/local-authority-interactive-tool-lait>:

1) Social work (including LA functions in relation to child protection) - Social workers directly involved with the care of children and commissioning services for children.

This Includes most of the direct social work costs, processes for assessing need, determining and defining service to be provided and reviewing the quality of and continued relevance of that care for children. This also includes:

- field social work costs (include Hospital Social Workers);
- Occupational Therapy Services to Children;
- relevant support staff costs;
- child protection social work costs.

This excludes Social Work costs in support of foster carers and adoptive families as these are captured elsewhere in the return.

This also includes spending on LA functions in relation to child protection; all expenditure on carrying out the authority's functions in relation to children protection under the Children Act 1989 and under section 175 of the Education Act 2002 and other functions relating to child protection.

2) Commissioning and Children's Services Strategy - this includes spending on overall commissioning within children's and young people's services; e.g. the cost of a central commissioning function. This also includes any additional expenditure on services that are bought in from outside the local authority to support the central commissioning function. Where joint commissioning units have been set up, e.g. between the local authority and the primary care trust, the overall costs of maintaining the joint unit should be given.

This excludes the costs of the actual services commissioned as well as any social worker costs related to commissioning as these will be captured elsewhere in the return. It also excludes costs of commissioning services specifically for Sure Start Children's Centres.

3) Children's services strategy element - this includes partnership costs for multi-agency working i.e. contributions from the authority to partnership manager and other costs excluding pooled budget contributions for specific front line services. This also includes spending on statutory regulatory duties related to children's services that are not included in the line on central administration related to education above (line 82).

⁴⁷ Extracted verbatim from LAIT: <https://www.gov.uk/government/publications/local-authority-interactive-tool-lait>

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