NIHR | Policy Research Unit Children and Families

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At a Glance: Impact of HeadStart on Secondary Pupil Absence, Exclusion and Attainment

What we found out

- HeadStart, an area-level mental health intervention, aimed to improve the wellbeing of secondary school students did not impact school absenteeism or attainment.
- However, it prevented about 800 students from experiencing a school exclusion in 2016/17, its first year of implementation.
- This represents a 10% relative reduction in the exclusion rates in areas that received programme funding. This impact is on the boundary of statistical significance.
- The study used a method called the Synthetic Control Method to evaluate the impact of HeadStart. The analysis provides encouraging evidence that it is an appropriate methodology to use to evaluate the impact of other complex area level interventions.

Why we did this study

Mental illness has been ranked first in terms of global burden of disease, accounting for just under a third of the years lived with disability (Vigo, Thornicroft, & Atun, 2016). In the UK, it has been estimated that 1 in 8 children and young people experience mental health problems. This increased to 1 in 6 during the COVID-19 pandemic (NHS Digital, 2020). Mental health disorders experienced in adolescence have a wide range of impacts and implications both within adolescence and adulthood, including educational outcomes.

There is an increase of policy and practice focus in the UK on implementing mental health support for both prevention and early intervention across schools and communities. Many area level interventions which aim to decrease mental health difficulties and increase wellbeing include a range of non-clinical and clinical programmes and build on ecological models of child development and resilience. The result is often complex, multi-layered programmes including multiple interventions delivered via a range of mechanisms in a number of locations in parallel, which can vary in their content and implementation from one local authority (LA) to another.

One example of such complex area level intervention is Headstart. Started in 2016, HeadStart is a six-year, £67.4 million National Lottery funded programme set up by The National Lottery Community Fund. HeadStart aims to explore and test new ways to improve the mental health and wellbeing of young people aged 10 to 16 and prevent serious mental health issues from developing. To do this, six local authority led HeadStart partnerships are working with local young people, schools, families, charities, community and public services to design and try out new interventions aiming to promote young people's mental health, wellbeing, and resilience. The HeadStart partnerships are in the following locations in England: Blackpool; Cornwall; Hull; Kent; Newham; Wolverhampton.

When it comes to investigating the effectiveness of complex interventions such as HeadStart, randomised control trials usually are impractical, and researchers struggle to find comparable control groups. The aims of this study were twofold.

1. We aimed to investigate if HeadStart was effective in ameliorating school outcomes such as absence, exclusion and attainment.
2. We aimed to explore if synthetic control method was an appropriate methodology to investigate the effectiveness of area level interventions

What we did

To investigate the effectiveness of HeadStart on school level outcomes, we used the synthetic control method developed by Abadie, Diamond, and Hainmueller (2010) and analysed routinely collected data from the National Pupil Database (Department for Education).

The outcome variables included:

a. Absenteeism: Authorised and unauthorised absence – measured in terms of proportion of all

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sessions missed for authorised/unauthorised reasons

b. Exclusion: Proportion of students ever excluded (fixed period exclusion or permanent exclusion) and proportion of all sessions missed because of a fixed period exclusion.

c. Attainment: Proportion of students obtaining 5 GCSEs A*-C.

For the absenteeism and exclusion outcomes, the period from 2008/09 to 2015/16 is classified as the pre-treatment phase and 2016/17 to 2018/19 as the intervention period. For the attainment outcome, 2013/14 to 2015/16 is classified as the pre-treatment phase and 2016/17 to 2018/19 as the intervention period. All the outcome variables were aggregated across the year groups (Year 7 to Year 11) in each LA and academic year.

The idea behind employing the synthetic control method is that there may not be a single local authority that can be a good comparator to the HeadStart local authorities. In contrast, a weighted average of all the LAs that did not get the funding may create a good control group. The goal is to find the weights to assign each LAs that did not get the funding so that the weighted average of their outcomes in the pre-intervention period mimics the average of outcomes in the HeadStart LAs as closely as possible.

We sought to achieve this balance in terms of the outcome variable measured in each year of the pre-treatment period, as well as LA pupil composition across the pre-intervention years in terms of gender, ethnicity, eligibility for free school meals, SEN, referrals into children's social care and area deprivation.

If it is possible to weigh the non-HeadStart local authorities in a way that achieves a good comparison to the HeadStart LAs pre-intervention, the outcome of the synthetic control group can be used as `counterfactual' for the HeadStart LAs once the intervention takes place. In other words, any difference that we observe between the outcomes of the HeadStart local authorities, and the outcomes of the synthetic control group can be attributed to the impact of HeadStart.

What are the findings – in detail

In the below figures, the straight black line is the outcome (e.g., authorised/unauthorised absenteeism) across 2009-2019 for HeadStart local authorities. The dotted line shows the outcome across 2009-2019 for the synthetic control unit (in other words Las that are weighted in a way that makes their outcomes pre-intervention similar to those in HeadStart areas).

HeadStart local authorities and synthetic control units are very similar during the pre-treatment years (2009-2016), and they are very similar during the post-treatment period (2017-2019) which suggests that HeadStart did not have a significant impact on authorised or unauthorised absences.

Figure 1: Average proportion of sessions missed for authorised reasons

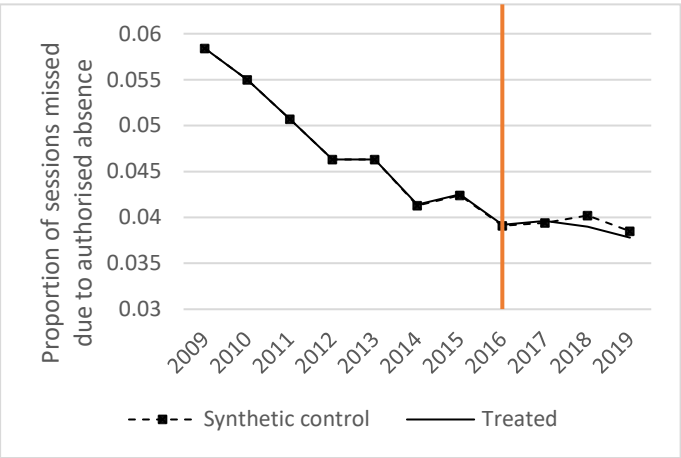
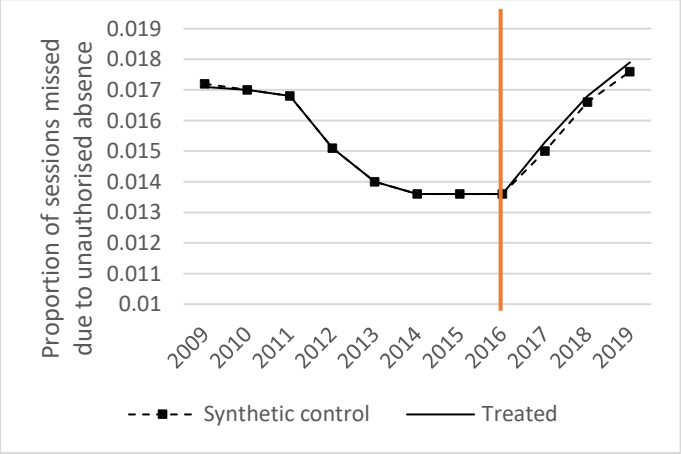


Figure 2: Average proportion of sessions missed for unauthorised reasons



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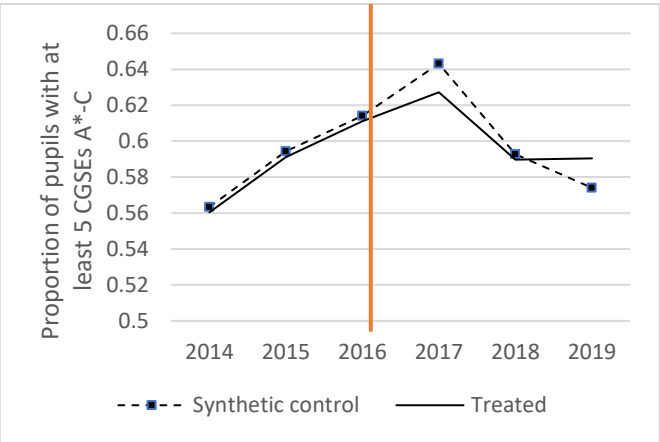
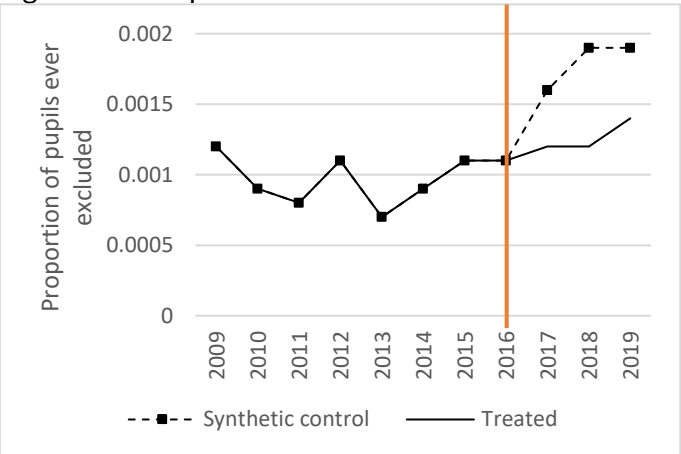
In the below figure, the straight black line is the attainment across 2014-2019 for HeadStart local authorities. The dotted line shows the attainment across 2014-2019 for the synthetic control unit. Results showed that there was no significant improvement for attainment.

Figure 3: Proportion of Year 11 children with at least 5 GCSEs A*-C



On the other hand, the results showed that Headstart played reduced the incidence of exclusions in the Local Authorities where the programme was implemented in the first two years of implement, but this effect is only statistically significant in in the first year of implementation (2017).

Figure 4: Proportion of children ever excluded



Given this method is able to highlight significant differences between intervention and non-intervention areas in specific outcomes, the results also demonstrate that the synthetic control method is a promising methodology for the evaluation of future area level interventions.

Examples of practice employed in HeadStart areas that might have impacted exclusion rates

Blackpool: Back on Track - Up to 2 years of support have been given for children (in care) to remain in mainstream schools. Activities are tailored to the needs of children with special focus on supporting the young person within education to avoid exclusion while building the young person's resilience.

Cornwall: Trauma and Mental Health Informed Schools - Whole school approach that aims to change the school culture and is designed to empower school staff to understand the needs of children and young people who have suffered a trauma or have a mental health issue.

Kent: Resilience Conversations - structured conversations with a young person, where they are asked to discuss and rate their lives in six resilience areas: feeling secure, health, emotions and behaviours, education, friendships, talents, and interests. The practitioner and the young person then develop actions together in relevant resilience areas, including identifying extra support that might be available. This might have changed the way staff are seeing young people and acknowledge their difficulties which in return might have impacted how they relate to young people with behavioural difficulties.

Wolverhampton: Getting Ahead programme - a series of interventions which aim to encourage learners to look within themselves when dealing with challenges - both physical and mental; to demonstrate the benefits of teamwork and shared responsibility; to offer different learning experiences than they can expect in their schools and to develop a positive attitude and conscience when dealing with difficulties

What do the results mean in economic terms?

A total societal cost for each permanently excluded pupil is £370,000 (Gill, Quilter-Pinner, & Swift, 2017) and with adjustment for the effects of inflation to 2019 prices, it is estimated to be £389,949. Using the

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official figure of 7,849 children permanently excluded from school in 2019, this amounts to £3.02 billion. The cost is based on four key outcomes: education in the alternative provision sector, lost taxation from lower future earnings, associated benefits payment (excluding housing), and increased likelihood of entry into the criminal justice.

The total cost of fixed-term exclusion can be estimated as £129,728,000. The cost is based on SLT staff cost (i.e., pupil relocation and supervision, investigation of the cause of exclusion and decision, exclusion log completion, contacting the parent, admin related), teaching staff cost (i.e., classwork preparation for the excluded pupil, referral of pupil to SLT) and cost on parents (costs associated with pupil supervision for externa exclusion, costs associated with attendance of reintegration meeting).

Based on the estimated effects of Headstart on pupils' exclusion rates that are statistically significant, the programme saved around £6m from reducing exclusions in 2016/17.

What are the conclusions

Findings show that areas level interventions of this kind can impact on wider educational outcomes such as exclusion rates, but there are challenges associated to sustaining impacts over time despite continued funding. They also indicate that synthetic control method is a promising methodology to investigate the impact of complex area level programmes.

References

Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program. *Journal of the American Statistical Association*, *105*(490), 493-505. doi:10.1198/jasa.2009.ap08746

Gill, K., Quilter-Pinner, H., & Swift, D. (2017). Making The difference breaking the link between school exclusions and social exclusion. Retrieved from https://www.ippr.org/files/2017-10/making-the-difference-report-october-2017.pdf

NHS Digital. (2020). Mental health of children and young people in England, 2020: Wave 1 follow up to the 2017 survey. Retrieved from https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-of-children-and-young-people-in-england/2020-wave-1-follow-up

Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating the true global burden of mental illness. *The Lancet Psychiatry, 3*(2), 171-178. doi:10.1016/S2215-0366(15)00505-2

See working paper for more information.

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