## Does when you are born matter? The impact of month of birth on children's cognitive and non-cognitive skills in England

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AVAILABILITY
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## Excerpts from executive summary:

It is well known that children born at the start of the academic year tend to achieve better exam results, on average, than children born at the end of the academic year. This matters because educational attainment is known to have long-term consequences for a range of adult outcomes. But it is not only educational attainment that has long-lasting effects: there is a body of evidence that emphasises the significant effects that a whole range of skills and behaviours developed and exhibited during childhood may have on later outcomes. There is, however, relatively little evidence available on the extent to which month of birth is associated with many of these skills and behaviours, particularly in the UK.

The aim of this report is to build on this relatively limited existing evidence base by identifying the effect of month of birth on a range of key skills and behaviours amongst young people growing up in England today, from birth through to early adulthood. This work will extend far beyond the scope of previous research in this area - in terms of both the range of skills and behaviours considered, and the ability to consider recent cohorts of children - enabling us to build up a more complete picture of the impact of month of birth on children's lives than has previously been possible. In particular, we consider month of birth differences in the following outcomes:

- national achievement test scores and post-compulsory education participation decisions;
- other measures of cognitive skills, including British Ability Scale test scores;
- parent, teacher and child perceptions of academic ability;
- children's perceptions of their own well-being, including whether or not they have been bullied;
- parent and teacher perceptions of children's socio-emotional development;
- children's engagement in a range of risky behaviours.

We also consider whether parents respond differently to children born in different months of the year, particularly in terms of the investments they make in their child's home learning environment.

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In line with previous literature, we find evidence of large and significant differences between August- and September-born children in terms of their cognitive skills, whether measured using national achievement tests or alternative indicators such as the British Ability Scales. These gaps are particularly pronounced when considering teacher reports of their performance; moreover, they are also present when considering differences in socio-emotional development and engagement in a range of risky behaviours. The absolute magnitude of these differences decreases as children get older, suggesting that August borns are 'catching up' with their September-born peers in a variety of ways as the difference in relative age becomes smaller over time.

Interestingly, these differences in academic performance are reflected in young people's beliefs about their own ability and the extent to which they are able to control their own lives, but do not appear to translate into differences in self-worth, enjoyment or perceived value of school, or expectations of and aspirations for further and higher education. Children born in August are, however, slightly more likely to report being unhappy or subject to bullying in primary school than children born in September (although these differences do not persist at older ages). They are also significantly more likely to take vocational qualifications during college (ages 16-18) and slightly less likely to attend a Russell Group university at age 19. Given the well-documented differences in returns to academic and vocational qualifications, and by degree institution, these choices may well mean that August-born children end up with poorer labour market outcomes than September-born children, as other papers have suggested. This is something we plan to investigate in future research.

We also identify differences in some forms of parental investment by month of birth, with parents of August-born children providing a richer home learning environment, on average, than parents of September-born children, by the age of 5. This provides some evidence to support the notion that parents appear to be 'compensating' for the disadvantages that their August-born children face in school by

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spending more time at home helping them learn.

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