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Primary school attainment outcomes in children with neurodisability: A population-based cohort study using linked education and health data from England.

Ayana Cant¹, Ania Zylbersztejn^{1,2}, Laura Gimeno^{1,3}, Vincent Nguyen¹, Joachim Tan^{1,2}, Ruth Gilbert¹, and Katie Harron¹

¹UCL Great Ormond Street Institute of Child Health, London, United Kingdom

²NIHR GOS Biomedical Research Centre, London, United Kingdom

³UCL Social Research Institute, London, United Kingdom

Objective

We aimed to provide population-level prognostic data on educational outcomes for children with neurodisabilities in England. By quantifying attainment gaps, we identified critical periods where children begin to struggle. We sought to promote collaboration between health and education providers to ensure children with neurodisabilities are effectively supported in schools.

Methods

We used the ECHILD database of linked hospital and education records to follow all singleton children born in NHS-funded hospitals between 2003 and 2008 from birth to the end of primary school. Hospital admission and mortality data identified children with neurodisabilities. We assessed attainment at reception (age 4/5), Key Stage 1 (age 6/7), and Key Stage 2 (age 10/11) using National Curriculum assessments. We analysed participation rates, achievement of expected levels in English and Maths, and relative risks of underachievement by neurodisability and five subgroups (e.g. neurodevelopmental disorders, Down syndrome, epilepsy), accounting for key socioeconomic and demographic factors.

Results

Of 2,351,589 pupils, 51,289 (2.2%) had a hospital-recorded neurodisability before starting reception. These children consistently underperformed in national assessments, with fewer than half meeting expected levels in Maths and English at every time point. Achievement rates ranged from 29% meeting the Good Level of Development in reception (vs. 57% of peers) to 49.9% achieving expected levels in reception Maths (vs. 79% of peers). While attainment remained stable across KS1 and KS2, non-participation increased, reaching 31% at KS2 (vs. 6.4% of peers). Children with neurodisabilities were over twice as likely to not achieve expected levels in Maths and 1.7 times more likely to underperform in English. Compared to their peers, females with neurodisabilities showed greater dis-

parities than males, likely reflecting a more severely affected diagnosed population.

Conclusion

Significant attainment gaps exist between children with and without neurodisabilities. By the end of primary school, many are not assessed under the National Curriculum, highlighting the need for more detailed, functional outcome measures to track progress beyond national assessments and ensure a meaningful evaluation of their educational development.

