

Children born prematurely have greater risk of cognitive difficulties later in life

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Credit: Queen Mary, University of London

Babies born preterm have a greater risk of developing cognitive, motor and behavioural difficulties and these problems persist throughout school years, finds a new study led by Queen Mary University of London (QMUL).

The research found that preterm [children](#) had lower scores on IQ tests, [motor skills](#), reading and spelling at primary school age, and that this remained through to [secondary school](#). Children born preterm were also twice as likely to be diagnosed with Attention deficit hyperactivity disorder (ADHD) than term-born children.

Lead author Professor Shakila Thangaratinam, from QMUL's Barts Research Centre for Women's Health (BARC) said: "The safety of both mother and baby will always be of paramount importance when making decisions on timing of delivery. However, we've shown that developmental effects of prematurity persist beyond immediate childhood. So individuals, organisations and services involved in the [long term care](#) of children should take gestational age at delivery into account while making assessments, and in management decisions."

Lagging behind peers in memory and processing speed

In the UK, around 60,000 babies are born prematurely each year. Short term complications of preterm birth for the child include higher risk of respiratory complications, sepsis, and bleeding into the brain. These children are also at risk of cognitive, motor, and [behavioural difficulties](#), but there is little evidence on these effects in later life.

The analysis, published in BJOG: An International Journal of Obstetrics and Gynaecologists, looked at 74 separate studies, of 64,061 children born between 1980 and 2016. The team compared children born preterm and at term, looking at their cognitive, motor, behavioural and academic performance at various stages: 2–4 years (preschool), 4–11 years (primary school), 11–18 years (secondary school) and over 18 years (higher education).

The results show preterm children had lower cognitive scores on a range of IQ tests and in motor skills, behaviour, reading, mathematics and spelling at primary school age, and this remained through to secondary school age, except for mathematics.

Furthermore, [preterm children](#) lagged behind term peers in working memory and processing speed and this persisted after school age, with possible adverse effects on academic achievement.

Crucial need for supporting development

Dr Javier Zamora, senior lecturer in women's health at QMUL, said: "These findings highlight the crucial need for parents, caregivers and teachers to recognise the need for support in social, academic and behavioural aspects at primary and secondary school ages for children born preterm. The overall development of the child is dependent on the support provided to maximise their potential."

Mr Edward Morris, Vice President of the Royal College of Obstetricians and Gynaecologists, said: "These results show children born prematurely have a higher risk of a number of developmental problems. It is important for the effect of a [preterm birth](#) on the neurodevelopment of children to be included in counselling for parents who expect or have had a [preterm delivery](#). Likewise, any decision on the timing of delivery should take into consideration the long term effects of prematurity."

More information: J Allotey et al. Cognitive, motor, behavioural and academic performances of children born preterm: a meta-analysis and systematic review involving 64 061 children, *BJOG: An International Journal of Obstetrics & Gynaecology* (2017). [DOI: 10.1111/1471-0528.14832](#)

Provided by Queen Mary, University of London

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