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## Further insight needed into potential development delays in preterm children

Executive functioning delays - such as difficulties with attention, concentration and self-control - which frequently occur in preterm children persist beyond early infancy, through to school-entry age, new research has found.

Researchers from the College of Health and Medicine's Division of Psychology studied how preterm children are at a higher risk of developing executive function difficulties than their peers, who were born full-term.

Preterm participants involved in the study had an average gestation of 33 weeks.

The new Tasmanian research showed the difficulties can still be seen at school-entry age, with scientists now keen to understand whether the delays continue into older children, including into high school.

Executive functions are adaptive, goal-directed behaviours that enable people to override more automatic thoughts and responses.

In children, examples of these functions can include completing tasks before moving on to another, waiting their turn and being able to plan and organise themselves, such as packing a lunch box into their school bag.

"We know executive functions undergo rapid changes in children aged from three to five years, and children who are born preterm are at risk of having executive function and behavioural problems," Senior Lecturer (Psychology) Dr Kimberley Norris said.

"Our recent research found that executive functioning deficits which occur in preterm children persist beyond early infancy, through to at least school-entry age (4-5 years).

"Our research compared preterm children, aged four-five years, with their full-term peers at kindergarten, and found preterm children were significantly behind in regards to executive functions.

“This can impact on the child’s capacity to engage with the learning environment and can result in behavioural difficulties, ultimately affecting their development and academic performance.

“What we now want to know is whether these deficits continue in older primary and high school children.”

Researchers are looking to recruit Tasmanian children aged 10-17 years of age, who were born before 37 weeks’ gestation, to assess their executive functioning, to determine whether any deficits persist within the age group.

Researchers are also looking to recruit Tasmanian children aged 10-17 years of age who were born 37 weeks’ gestation or later, to compare executive functioning with the pre-term group.

To be a part of the research project, or for more information, contact the researchers Dr Kimberley Norris 6226 7199/ [Kimberley.Norris@utas.edu.au](mailto:Kimberley.Norris@utas.edu.au) or Associate Professor Nenagh Kemp 6226 7534 / [Nenagh.Kemp@utas.edu.au](mailto:Nenagh.Kemp@utas.edu.au)

**For media enquiries/interviews contact:**

Associate Professor Nenagh Kemp is available today for interviews on 6226 7534 / [Nenagh.Kemp@utas.edu.au](mailto:Nenagh.Kemp@utas.edu.au)

**Information released by:**

Communications Office  
University of Tasmania  
+61 3 6226 2124  
[Communications.Office@utas.edu.au](mailto:Communications.Office@utas.edu.au)  
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