



Bumps, Babies and Beyond

NOVEMBER 2015



A message from our lead investigator, Dr Delyse Hutchinson...

How Triple B is tracking: Over the past year we have been examining some of our main research questions. This has included questions like: *How common is substance use in pregnancy? What are the outcomes for infants in the cohort? How does sleep influence mothers' levels of stress and anxiety? What factors promote a healthy bond between infants and their parents?*

We have presented our findings at conferences in Australia and overseas, including work from our doctoral students and staff. We include details in this newsletter on some of our recent conference presentations (see pages 2-3).

Preschool follow-up: Thank you to the families that were part of our age three preschool follow-up. This was a small sub-study of approximately 120 toddlers. The study aimed to look at how children are tracking 2-years after their last assessment, and ultimately see how consistent (or reliable) the developmental assessment results were from 12-months to 3-years of age. Sound measurement reliability means that the Bayley developmental assessment is an appropriate tool to measure early outcomes and that it is suitable for future planning and intervention. We will let you know more about the outcomes of this sub-study in due course.

Primary school follow-up plans: The next major developmental phase the study children will go through is transitioning into the early years of primary school. This can be both an exciting and challenging time for children and their parents. We are continuing to apply for further research funding for a primary school follow-up to assess this important stage of development. We hope to start this new phase of the study around the middle primary school years. We shall be in contact with more information if we receive funding to continue this important work.

On behalf of our entire research team we wish you and your family all the very best for the upcoming holiday season.

Warm regards,

Dr Delyse Hutchinson

Developmental Clinical Psychologist and Senior Research Fellow

Have you moved recently?

Or changed phone numbers, email addresses or any other contact details?

If so, you can update your details on our confidential

website: <http://ndarc.med.unsw.edu.au/content/project-participant>

Alternatively, please send us an email: antenatalstudy@unsw.edu.au

Would you like to see our full list of presentations and publications?

Please visit: <https://ndarc.med.unsw.edu.au/project/triple-b-bumps-babies-and-beyond>





Prenatal Alcohol Exposure and Infant Cognition

Clare McCormack has been working with the Triple B study as a PhD student since 2012. She submitted her PhD thesis earlier this year, entitled *Prenatal alcohol exposure and infant cognitive development*. She presented findings at the College on Problems of Drug Dependence Annual Meeting in Phoenix, Arizona, USA; and the Research Society on Alcoholism Annual Meeting in San Antonio, Texas. Her research was also presented at the National Drug and Alcohol Research Centre Annual Symposium, and the UNSW Medicine Postgraduate Research Symposium.

Findings from the Triple B Study cohort showed that alcohol exposure early in pregnancy is highly prevalent, especially before women know they are pregnant. Unlike patterns of alcohol use seen in later stages of pregnancy, heavy or binge drinking during this early period were in fact more common than low-level drinking. It was encouraging to report, however, that most women ceased or significantly reduced alcohol consumption after becoming aware of their pregnancy. This is the first study of its kind to provide detailed information about patterns of alcohol use specifically in this early period, before women are aware they are pregnant (the first five weeks of pregnancy on average for this cohort). These findings suggest public education around alcohol use reduction should target women planning a pregnancy, and that health promotion around family planning strategies, and early detection of pregnancy, would be beneficial.

Mother-Infant Bonding

Larissa Rossen is also a PhD student on the Triple B study. One of Larissa's recent papers examines mother-infant bonding from infant age 8-weeks to 12-months, and various factors that might influence this bond. Her results suggest a mother's felt bond to her infant is relatively stable across the first year of life. Notably, early bonding was a more important indicator of bonding at 12-months than other factors, including a mother's substance use and levels of stress, depression and anxiety. These findings point to the importance of building a positive bond between mothers and infants early in the postpartum period.

Some of you might also remember that you and your infant were recorded playing together. This year Larissa spent many hours coding those play sessions (around 600!).

We found that parental tobacco use, depression and younger parent age at 8-weeks postnatal predicted poorer parent-child emotional availability – a measure of the parent-infant relationship or bond.

These findings suggest that it is important to support younger parents, those struggling with symptoms of depression, and those who smoke during the postnatal period. Thank you to all the parents involved in this component of the study.



Investigator team

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Early Infant and Maternal Sleep Patterns

Hannah Fiedler completed her thesis for the Doctorate of Clinical Psychology Program earlier this year. Hannah's research examined the sleep patterns of infants in the first year of life and their relationship with maternal mental health and infant development. Results found that infant sleep decreased in both duration and frequency over the first year of life, settling into a routine gradually for most infants. Better sleep quality in the first 8-weeks of life also predicted small improvements in infant cognitive and language development at 12-months of age. The findings provide support for the importance of sleep quality in infancy.

Hannah's work also found that infant sleep and maternal mental health were strongly related to one another. Specifically, poor maternal mental health during pregnancy predicted poor infant sleep between birth to 8-weeks, and 2-6 months of age. In turn, poor infant sleep in the first 8-weeks was found to predict poor maternal mental health at 8-weeks. These results highlight the importance of pregnancy assessments and postnatal check-ups, including assessment of both infant sleep quality and maternal mental health during these times of transition.

New Research Perspectives: Age Three Follow- up

Ingrid Honan has been working with the study since 2011 and is completing her PhD in neuropsychology. Earlier this year, Ingrid completed a number of development assessments with children from the study who turned 3-years of age and she is now looking at examining this data as part of her PhD. We would like to take this opportunity to thank everyone who participated in this small follow-up, as well as thank all those who contacted us to participate but who were not eligible for their understanding and continued support for the study; we can't express how pleasing it was to hear from you!

Ingrid had the opportunity to present some of her exciting results at the International Neuropsychological Society conference in Sydney this year. This research focused on the differences between Australian and US infant performance at 12-months of age on the Bayley Scales of Infant and Toddler Development-III. Results from this work suggest Australian children at 12-months of age performed better than US children in the areas of fine motor and cognition, but poorer than US children on gross motor tasks. Interestingly, no difference was found between Australian and US infants on language development tasks. Ingrid is currently running analyses to replicate this research for children at 3-years of age. These results will enable more accurate diagnosis of developmental difficulties in Australian infants in the future.



Primary School Follow-Up



As mentioned above, we are continuing to apply for funding to complete another developmental assessment with your child after they start school. This is an exciting transition period for families and their children, where children are exposed to new social and learning environments and begin their path in formal education.

The Wechsler Intelligence Scale for Children- Fifth Edition (WISC-V) is an internationally recognised, standard measurement tool which can be used to assess the cognitive capacities of children from 6 to around 17-years of age. Administered by an independent trained assessor, the WISC-V assesses five domains of development including your child's ability to: understand and produce language (verbal comprehension), construct and solve visual puzzles (visuospatial skills), hold and manipulate information in mind (working memory), rapidly process new information (processing speed), and problem solve/draw connections between abstract concepts (fluid reasoning). A number of engaging tasks, such as paper and pencil and block assembly tasks are administered over approximately 60 minutes. Scores obtained on the assessment can then be combined to provide an overall intelligence quotient for your child.

Our team consists of clinical and neuropsychologists with a high degree of training and expertise in the field of developmental psychology. The assessment is tailored to your child's age and abilities and, in most cases, is a lot of fun.

Completing this assessment can be beneficial for families. If the study is funded, you will receive a copy of a written report outlining how your child is performing on the cognitive domains outlined above compared to his/her same age peers. The WISC-V is very costly if completed privately and is expected to be the primary benefit for families taking part in the study. It can help identify your child's strengths and weaknesses; information that can help you tailor your child's education approach. We will let you know if we are funded for this follow-up in the future – it would be lovely to see all our participating families again.



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- *NDARC, UNSW*
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- *The Department of Psychology, Macquarie University*