The Triple B Study: Bumps, Babies and Beyond

OCTOBER 2013

A message from our lead investigator, Dr Delyse Hutchinson…

In 2013 we finalised recruitment on the Triple B Study in both New South Wales (NSW) and Western Australia (WA), achieving a final sample of over 1,600 families. This was a major achievement for the study. We are truly grateful to have so many generous families giving their time and energy through their involvement in the project.

Together our NSW and WA teams have followed up over 900 families when their children reached one year of age. It has been a privilege for us to see your children develop. We look forward to visiting many more of your children at home over the coming months. Details of the 12 month assessment, particularly the developmental assessment tool used, are provided on page four of this newsletter.

Through support from Rotary Health Australia we also recently completed the first 'pilot' phase of our preschool age three follow up with around 80 families and children. This work has been very successful – we thank the families who have been involved in the preschool assessment. It was lovely to see them all again. We are presently awaiting news from the National Health and Medical Research Council as to whether we will be able to extend this assessment to other families involved in the Triple B Study.

In the future we also intend to apply for research funding to continue to follow up families after the children commence primary school. We shall keep families informed about whether we achieve research support to develop this new assessment component which would enable us to examine child development as the children transition from preschool into primary school. Better understanding of child development and resilience through these early years will have important implications for health prevention and intervention.

Over the last year our team has been involved in presenting research findings at the National Drug and Alcohol Research Centre (NDARC) Symposium at the University of New South Wales and at the The Australasian Professional Society on Alcohol and other Drugs (APSAD) Conference. A summary of some of these findings is provided on pages two and three of this newsletter. We look forward to presenting more findings from the Triple B Study as we gather information from participating families.

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

Child Developmental Clinical Psychologist and Senior Research Fellow

Progress to date…

Pregnancy and the early postnatal period represent a critical developmental window for the health and well-being of the growing fetus and infant. This year we conducted a number of presentations which looked at this important window including trimesters one through three, and at eight weeks postnatally. Our preliminary results are presented below. They describe mothers' alcohol and other substance use, mental health, and 'attachment' or bond to their developing fetus or infant.

Substance Use

Caffeine: During pregnancy women drank the most caffeine in the third trimester. On average they consumed 94.6mg which is about 1 cup of instant coffee or two cups of tea. Caffeine use increased marginally after giving birth to 111.9mg.

Alcohol: Although 31% of women drank alcohol in the third trimester, most of these women drank alcohol infrequently (monthly or less). Alcohol use also increased after giving birth.

Tobacco and illicit substance use: Both tobacco and illicit substance use were low in the sample. Eight percent of women smoked tobacco in the 3rd trimester. Illicit substance use was infrequent.

Mental Health

Stress and depression levels: Levels of stress and depression among women were relatively stable during pregnancy and after giving birth.

Anxiety levels: Anxiety levels increased in the 3rd trimester prior to the birth. This may be due to the preparation for birth and a new child. Eight weeks after birth anxiety levels overall were the lowest reported in pregnancy and postnatally.

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Maternal 'attachment' or bond to the developing fetus or infant

Women in the study predominantly reported strong, healthy feelings of attachment with their unborn infant as it developed inside them and to their infant following birth.

Attachment to the fetus or infant: Gradually increased through pregnancy and remained high after giving birth. Attachment can be thought of in two ways: *intensity of attachment* which refers to the frequency and strength of thoughts a mother has about her baby; and *quality of attachment* which refers to the nature of the thoughts, for example, whether or not thoughts about the baby are positive and happy. Interestingly, it was found that attachment intensity was marginally lower among women who drank in pregnancy; however alcohol use was not linked to attachment quality. We hope to examine these patterns in a larger sample including more women who report regular and heavy drinking.

We note that these findings were based on a sub-sample of our participating families. We plan to extend these analyses to the full sample of over 1,600 families now that recruitment has ended. These findings will help to identify critical times at which maternal well-being and early infant development might be supported.

Heavy drinking and child mental development

While the process of data collection is ongoing, we have undertaken a comprehensive review of the scientific literature regarding prenatal alcohol exposure and its impact on child mental development. A thorough search of the medical literature resulted in over 3,000 potentially relevant articles being identified. Using strict inclusion criteria, only the most rigorous, scientifically sound studies were included in a final analysis. Pooling samples of smaller studies and combining them is the most powerful way of estimating what the true effect is likely to be. Thirteen studies were included in the final analysis. Overall, we found there was a significant difference in child mental development between groups of children who were exposed to high levels of alcohol in utero, and those whose mothers abstained. However, a striking finding from this process was that there is a significant gap in the literature regarding low- and moderate-level alcohol use in pregnancy and outcomes for children. No studies were found that looked at the effect of lower level alcohol use and also used rigorous child development assessments like the Bayley Scales of Infant Development. This highlights the significant contribution that the Triple B study will make to our knowledge in this area.

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The Bayley Scales of Infant Development

When your child reaches 12 months of age one of the assessments we administer in the study is the Bayley Scales of Infant Development (BSID-III is the current version). The Bayley is a standard series of measurements originally developed by psychologist Nancy Bayley primarily to assess the motor (fine and gross), language (receptive and expressive), and cognitive development of infants and toddlers, aged 0 to 3.5 years. This measure consists of a series of developmental play tasks and takes between 45 - 60 minutes to administer.

The first three scales are administered by an independent, trained assessor. Two further scales are based on caregiver self-report about their infant's behaviour which is gathered through a questionnaire.

Our team has lots of experience in conducting these assessments and the tasks are tailored to the child's age. In most cases it is lots of fun for your young one. If you have other children it is great if they can be cared for by a supportive person so that the infant can focus on the tasks, but if not please let the team know in advance and we can talk through ways to help the assessment run as smoothly as possible. Some children prefer their siblings to be there.

There are benefits to the family in doing this assessment as this test helps families to identify how their children are doing on a range of developmental milestones and you will receive a written report. The Bayley Assessment would normally be very costly if done privately so it is a key benefit for families participating in the study.

Families that take part in the age three follow-up will have the chance to see how their child is developing as they grow. We will reassess children using the Bayley and again will provide a written report to parents after assessment.

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

If you have any queries or comments or would like further information on the study please contact us at:
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