**Mothers’ and fathers’ mental health, newborn social behaviour, and parent-infant interaction in West Kiang, The Gambia**

C. Bartram¹, S. Lloyd-Fox², J. Barlow¹, M. Darboe³, A. Prentice⁴, S. Moore⁵, C. Elwell⁶

¹Warwick Medical School Division of Health Sciences, University of Warwick; ²Centre for Brain and Cognitive Development, Birkbeck, University of London; ³MRC International Nutrition Group, Keneba Field Station, The Gambia; ⁴MRC International Nutrition Group, London School of Hygiene and Tropical Medicine; ⁵MRC Human Nutrition Research, Cambridge; ⁶Department of Medical Physics and Bioengineering, University College London

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**Measuring infant development**

An infant wearing an fNIRS cap for brain imaging

A newborn engaging in face to face interaction with C. Bartram

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**Introduction**

The first two years of an infant’s life are a time of rapid cognitive, social, psychological and physical development.

The aim of this study is to assess associations amongst psychosocial aspects of infant development (below), and infant weight and height.

- Parents’ mental health
- Newborn interactive behavior
- Caregiver-infant interactions
- Family socioeconomic status

The data comes from Brain Imaging for Global Health (BRIGHT) study, which follows infants in The Gambia and the UK from the third trimester to 2 years, to develop brain-function-for-age curves. This study includes a sub-sample of mothers, fathers and infants enrolled in the study in West Kiang (WK).

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**Pilot Research Questions**

- Explored the context and adapted measures
  - What is it like to parent a newborn in WK?
  - How do parents in WK perceive their newborns’ social behaviour?
  - Is the Neonatal Behavioral Assessment Scale (NBAS) culturally acceptable?
  - Can mental health questionnaires (MHQ’s), not previously used in WK, be translated into Mandinka and adapted for the context?

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**Main Study Questions**

Understanding relationships amongst physical growth and psycho-social data

Questions include

- Does mothers’ mental health before birth predict infant birth weight?
- Does fathers’ mental health in the first month after birth predict how he interacts with his infant?
- Does newborn social behaviour predict infant weight and height at one month?
- Is caregiver-infant interaction quality predicted by village, or family socio-economic status?

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**Main Study Data Collection**

Recruitment for the BRIGHT study began in June 2016 and will include 200 infants and their parents. Infants are followed up to 2 years of age. For this study, a subset are followed up to 5 months.

<table>
<thead>
<tr>
<th>Visit</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal</td>
<td>Parents’ mental health Family SES</td>
</tr>
<tr>
<td>Birth</td>
<td>Infant weight, height</td>
</tr>
<tr>
<td>7-14 days</td>
<td>Newborn behaviour</td>
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<tr>
<td>1 month</td>
<td>Parents’ mental health Parent-child interaction Infant weight, height</td>
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<tr>
<td>5 months</td>
<td>Parents’ mental health Parent-child interaction Infant weight, height</td>
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</tbody>
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**Preliminary Pilot Data**

Caregiver interviews

Interviews with 30 mothers, fathers, and community members are being analysed. They covered:

- Daily caregiving experiences
- Understanding newborn behavior
- Goals and concerns for children

NBAS acceptability and adaptation

The NBAS was piloted with 15 families in July 2015 (SCC 1413v2) Interviews with the infants’ parents and elders reported the NBAS as acceptable.

Translating MHQ’s

Five questionnaires were translated into Mandinka, November 2015–April 2016:

- Edinburgh Postnatal Depression Scale
- Perceived Stress Scale
- Pregnancy-Related Anxiety Scale
- Pregnancy-Specific Anxiety measure
- Positive and Negative Affect Scale

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**Spotlight on the NBAS**

NBAS manual and two items

Conducting NBAS’s in WK (above) and UK (below)

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