

Research question: How does being a new mum affect sleep in women who have breastfed babies and women who have formula fed babies in the first 6 months postpartum?

The key objectives of the research are to investigate not only how breastfed infant sleep ecologies differ from formula fed babies, but also to explore the experiences of maternal sleep, and explore how the perceptions of new mums on how well they think their baby is sleeping differs from the objective findings of the research.

Biologically breast milk contains maternal melatonin. The melatonin that the babies receive encourages them to develop a circadian rhythm earlier than babies who do not receive maternal melatonin (formula-fed), so mothers may experience more consistent bed and wake times. However previous qualitative research conducted by the Durham Infancy & Sleep Centre team has found that mothers believe giving a baby formula promotes infant sleep and that breastfeeding is disruptive for maternal sleep. Many women in the NE of England therefore begin offering their baby formula in order to encourage 'early settling' (the period when babies begin to consolidate short sleep bouts into longer periods of sleep). These divergent perceptions of how well a baby might sleep whilst breastfeeding compared to formula feeding are important to explore, as in many cultures mothers are encouraged to breastfeed their babies yet find this difficult to achieve.

As one of the main aims of the study is to differentiate the perceptions vs objectivity of infant sleep experiences, both quantitative and qualitative research has to be carried out. Mothers are asked to keep a sleep diary for several days each month in order to record how they feel their sleep is affected and to document their subjective perceptions of their babies' sleep. At the same time mothers and babies will wear actigraphy that will provide the research team with objective data on the mothers' and babies' sleep patterns. About once every month the mothers are asked to come into the sleep lab in Durham with their infants so that quantitative videosomnographic data can be recorded. This is done through using cameras and by monitoring the baby and mother during sleep. Through recording both qualitative and quantitative data we should be able to compare the perceptions of the mother and see if it does in fact correlate with the quantitative data collected via actigraphy and in the sleep lab. Recording data on sleep patterns through quantitative rather than qualitative methods is fairly new. This research not only aims to answer questions and provide guidance, but is also focusing on revolutionizing the way parent-infant sleep ecologies are researched. The project seeks to provide better guidance through using new technologies.

The project aims to provide guidance to new parents. Online information portals are available for parents to access. Since 2012 the DISC has run such a portal for parents to gain information on infant sleep behaviour. Research such as this project is used to update such portals, reaching a wider audience and having an impact on the day to day lives of parents. Moreover the Infancy & Sleep Centre in Durham helps to provide training for NHS staff on how to guide parents on parent-infant sleep around the country. That advice is based on research findings from projects such as this one. The project also has wider, including international, applications and outcomes by seeking to introduce its findings into policy documents.

To summarise, the project looks at how breastfeeding vs formula feeding affect the sleep patterns of new mums in terms of wake times, disruptions and how long baby sleeps during the day and at night. This will help to distinguish from what is assumed and the perceptions around breastfed versus formula fed babies, and the objective evidence of how the different feeding methods do in fact affect sleep patterns. To that end the research will combine sleep diaries to find out mums own perspective