

REFRAMING BIRTH KNOWLEDGE THROUGH THE LENS OF THE MICROBIOME

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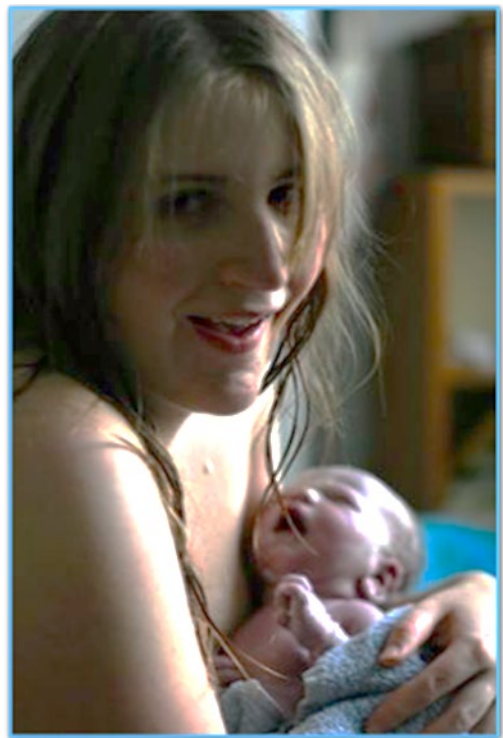


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LITERATURE REVIEW FINDINGS

ABSTRACT

- This poster represents an ongoing PhD study exploring midwives and obstetricians knowledge of the microbiome in relation to childbirth.
- The first step of the research, an extensive review of the literature has revealed a paucity of evidence on actual knowledge around childbirth
- How this knowledge links to their birth practices facilitating physiological birth is not known.
- The overall aim of the research is to identify the state of knowledge in a snapshot of the midwifery and obstetric population.



AIMS

- Ascertain knowledge of the microbiome among a selection of midwives and obstetricians.
- Explore the meaning ascribed to the physiological aspects of birth by the different birth professionals
- Explore the influencing factors to how birth professionals facilitate the transfer of microbiome from mother to infant around the time of birth.

UNDERSTANDING THE MICROBIOME

- Micro-organisms live on and in every part of us.
- They protect us, help us absorb nutrients and play a role in immune function.
- Diversity of species is key and low diversity or over representation of certain species has been associated with disease.

THE MICROBIOME AND THE PERINATAL PERIOD

- Maternal gut microbes pass from mother to infant in the perinatal period, most significantly during birth and in the immediate postnatal period.
- Vaginal birth and exposure to maternal faecal material provides the main "seeding" event (4)
- Skin to skin and breastfeeding are a significant time for microbial transfer between mother and infant (1, 2)
- Many birth practices which are undertaken as routine care are not described in the literature in relation to the microbiome.
- Birth interventions such as caesarean section and antibiotics in labour impact on the diversity and types of microbes present in the infant and are associated with increased risk of asthma, diabetes and obesity



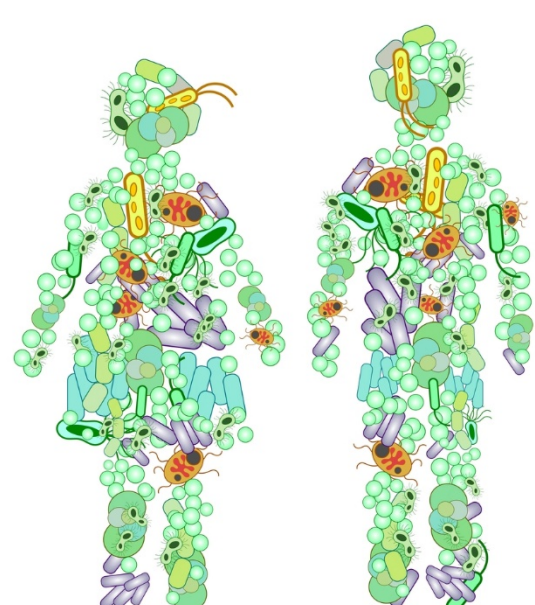
MIDWIVES AND OBSTETRICIANS KNOWLEDGE OF THE MICROBIOME

- Much of the evidence on midwives knowledge was anecdotal and found within discussions within informal spheres such as discussion groups and online chats as well as implied within the birth practices of midwives.
- There was only brief mention of midwives efforts to maintain the microbial environment of the mother at the time of birth.
- The endometrial, vaginal and placental microbiome are found in the literature. There is evidence of the effect of the vaginal microbiome on fertility and alterations of the microbiome implicated in pre-term birth, pre-eclampsia and gestational diabetes (3).



REFERENCES

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3. Dunn, A.B., Jordan, S., Baker, B.J., Carlson, N.S. 2017 The Maternal Infant Microbiome: Considerations for Labor and Birth. *MCN Am J Matern Child Nurs.*;42(6):318-325.
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METHODOLOGY

Literature review- extensive review of the literature is partly presented here. This will be ongoing throughout the research.

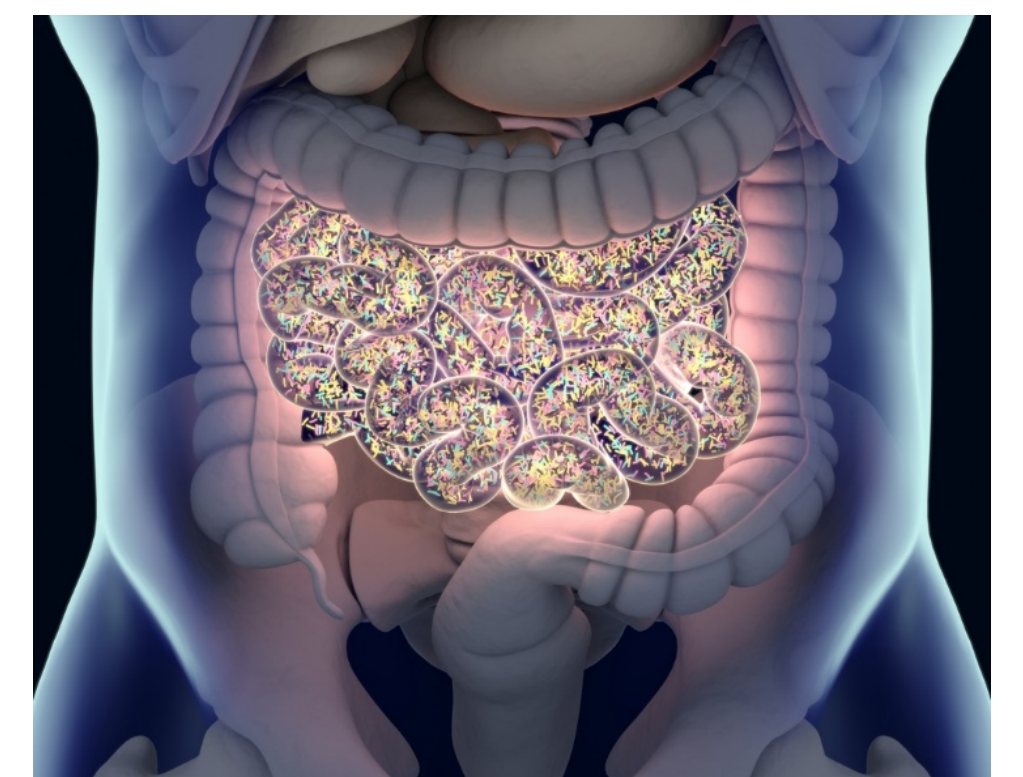
Social media and online analysis – analysis of online sources of midwifery knowledge is being conducted.

In depth interviews- interviews will be undertaken with midwives and obstetricians working in different clinical areas to impart their knowledge and how it affects their practice. Interpretive analysis will look for meaning and themes in the narrative.



CONCLUSIONS

- Gaps exist around what midwives and obstetricians know about the microbiome in relation to childbirth.
- There is also a lack of evidence on birth workers attitudes to birth fluids in relation to physiological birth.
- Microbiome science needs to be included in the curriculum for student midwives and doctors.
- This research will add to the paucity of literature in this important new area.



Further information/references available on request, contact Kate Cook kate.cook@anglia.ac.uk
Thanks to Rosy Jordan and baby for her beautiful birth photo.