

Maternal depression and bilingual households can impact infant language development

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While babies are born ready to learn any of the world's languages, the crucial developmental period when they attune to their native languages can change due to environmental influences such as maternal depression or a bilingual upbringing, according to new University of British Columbia research.

The findings, presented today at the [American Association for the Advancement of Science](#) (AAAS) Annual Meeting in Vancouver, B.C., is among the first to explore the impacts of maternal [mental health](#) and antidepressant exposure on the mechanics of early [language](#) acquisition. The preliminary findings provide important new insights into early childhood development and mother's mental health and will inform new approaches to infant [language acquisition](#), the researchers say.

Previous research by UBC Psychology Prof. Janet Werker has found that during the first months of life, babies rapidly attune to the language sounds they hear and the sights they see (movements in the face that accompany talking) of their native languages. After this foundational period of language recognition, babies begin focusing on acquiring their native tongues and effectively ignore other languages.

However, in findings from two studies, Werker reports that this key developmental period – which typically ends between the ages of eight and nine months – can change. In one study, Werker finds the period

lasts longer for babies in bilingual households than in monolingual babies, particularly for the face recognition aspects of speech.

In another study, Werker and collaborators at the Child & Family Research Institute (CFRI) at BC Children's Hospital and Harvard University find that [maternal depression](#) and its treatment with common antidepressant medication – serotonin reuptake inhibitors, or SRIs – can also affect the timing of speech perception development in babies. The team's preliminary findings suggest that SRI treatment may accelerate babies' ability to attune to the sounds and sights of the native language, while maternal depression untreated by SRIs may prolong the period of tuning.

"At this point, we do not know if accelerating or delaying the achievement of these milestones of early infancy has any consequences on later language acquisition," says Werker, noting that she aims to address such questions in future studies. "However, these preliminary findings highlight the importance of environmental factors on infant development and put us in a better position to support not only optimal [language development](#) in children but also maternal well-being."

This study followed three groups of mothers – one being treated for depression with SRIs, one with depression not taking antidepressants and one with no symptoms of depression. By measuring changes in heart rate and eye movement to sounds and video images of native and non-native languages, the researchers calculated the language development of babies at three intervals, including six and 10 months of age. Researchers also studied how the heart rates of unborn [babies](#) responded to languages at the age of 36 weeks in the uterus.

"Poor mental health during pregnancy is a major public health issue for mothers and their families" says co-author Dr. Tim Oberlander, a professor of developmental pediatrics at UBC and CFRI. "Non-

treatment is never an option. While some infants might be at risk, others may benefit from mother's treatment with an SRI during their pregnancy. We are just not sure at this stage why some but not all infants are affected in the same way. It is really important that pregnant women discuss all treatment options with their physicians or midwives."

Provided by University of British Columbia

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