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How the DMM-AAI predicts brain and behavioral responses of mothers and their infants.

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Topic: research

Infancy is a time of rapid neural development, in which repetitive, attuned social experiences—most often involving facial expressions—are transformed into neural connections and pathways that become the foundation for social behavior. Likewise, pregnancy, childbirth, lactation and caregiving experience appear to prime a mother's brain to respond to infant face cues by engaging specific neuroendocrine systems.

How it used the DMM and what it can contribute to the DMM

Our research, using DMM-AAI, has demonstrated that mothers with Type B patterns of attachment show greater brain reward response when viewing their own infants' faces, and increased release of the hormone oxytocin during mother-infant interaction. This is accompanied by more attuned maternal behavior, including verbalization regarding the infant's internal state, and mother-to-infant gaze during infant distress.

These behavioral responses may be mediated by the mother's oxytocin and dopaminergic brain responses and increase the likelihood of Type B attachment in childhood. Of equal importance is the potential effects of maternal psychopathology, including addiction, depression and unresolved trauma, on mothers' neuroendocrine responses and child development.