

Explicating Theory: The Effect of Mobility Experience on Infant Motivation to Move

Students: Hannah Shade and Margaret Crowell

Faculty Sponsor: Carole Dennis

Motivation to move is regarded as a driver for infant motor development, incentivizing infants to explore their environments which, in turn, promotes development. Not yet examined, however, is the effect that mobility experiences have on infant motivation to move.

In order to investigate the relationship between infant mobility experience and motivation to move, we designed an experimental study that included 57 infants from ages 5 to 7 months. Infants attended 12 play sessions where they were assigned to either the locomotor (experimental) condition and used a robotic mobility device to move about a lab area, or the non-locomotor (control) condition who had similar play experiences, but were not mobile during play sessions. Infants who crawled prior to the end of the study were placed in a third crawling condition. Pre and post assessments were given to evaluate and compare the infants' motivation to move using a Researcher Observed Motivation to Move (RoMTM), modified from Atun-Einy, et. al (2013), and a parent measure, the Infant Motivation to Move Questionnaire (IMMQ; Doralp & Bartlett, 2012). No significant differences were found in motivation to move between locomotor, non-locomotor, and crawling infants (all p -values <0.05). However, 11 infants who began crawling before the conclusion of the study were identified as having higher motivation to move than their locomotor counterparts when their initial ROMTM score was used as the covariate. These findings provide evidence that suggests that while robotic mobility may not directly impact an infant's motivation to move, independent mobility experiences, such as those experienced by the crawling group, may have a strong influence. Such discoveries have significant clinical implications, specifically for infants with motor delays, suggesting that the incorporation of mobility experiences into treatment procedures could increase motivation to move and aid in overall motor development.