

Toy Engagement Patterns in Infants with a Familial History of Autism Spectrum Disorder

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Abstract : It is widely known that individuals with autism spectrum disorder (ASD) may exhibit sensitivity to stimuli. Even at a young age, they tend to display stimuli-related discomfort in their behavior during play. Play serves a crucial role in a child's early years as it helps support healthy brain development, socio-emotional skills, and adaptation to their environment. There is research dedicated to studying infant preferences for toys, especially in regard to: gender preferences, the advantages of promoting play, and the caregiver's role in their child's play routines. However, there is a disproportionate amount of literature examining how play patterns may differ in children with sensory sensitivity, such as children diagnosed with ASD. Prior literature has studied and found supporting evidence that individuals with ASD have deficits in social communication and have increased presence of repetitive behaviors and/or restricted interests, which also display in early childhood play patterns. This study aims to examine potential differences in toy preference between infants with (FH+) and without (FH-) a familial history of ASD ages 6, 9, and 12 months old. More specifically, this study will address the question, "do FH+ infants tend to play more with toys that require less social engagement compared to FH- infants?" Infants and their caregivers were recruited and asked to engage in a free-play session in their homes that lasted approximately 5 minutes. The sessions were recorded and later coded offline for engagement behaviors categorized by toy; each toy that the infants interacted with was coded as belonging to one of 6 categories: sensory (designed to stimulate one or more senses such as light-up toys or musical toys), construction (e.g., building blocks, rubber suction cups), vehicles (e.g., toy cars), instructional (require steps to accomplish a goal such as flip phones or books), imaginative (e.g., dolls, stuffed animals), and miscellaneous (toys that do not fit into these categories). Toy engagement was defined as the infant looking and touching the toy (ILT) or looking at the toy while their caregiver was holding it (IL-CT). Results reported include/will include the proportion of time the infant was actively engaged with the toy out of the total usable video time per subject — distractions observed during the session were excluded from analysis. Data collection is still ongoing; however, the prediction is that FH+ infants will have higher engagement with sensory and construction toys as they require the least amount of social effort. Furthermore, FH+ infants will have the least engagement with the imaginative toys as prior literature has supported the claim that individuals with ASD have a decreased likelihood to engage in play that requires pretend play and other social skills. Looking at what toys are more or less engaging to FH+ infants is important as it provides significant contributions to their healthy cognitive, social, and emotional development. As play is one of the first ways for a child to understand the complexities of the larger world, the findings of this study may help guide further research into encouraging play with toys that are more engaging and sensory-sensitive for children with ASD.

Keywords : autism engagement, children's play, early development, free-play, infants, toy

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