

Title: Linguistic Trajectories in Autism Spectrum Disorder

Objective: To explore the linguistic markers of autism spectrum disorder (ASD) during the period of 3 to 7 years of age in a toy-play setting.

Method: The utterances of 3 male English-speaking children with ASD were analyzed from the ASDBank. The children fell within the age range of 3;4 and 7;5, their transcripts did not overlap, and the tokens amounted to 24,000. The corpora were analyzed for the acquisition of content and function words, complex linguistic phenomena, and speech disfluencies.

Results: The proportion of function words increased over time ($\beta = 0.228$, $SE = 0.036$, $p < 0.001$), and the usage of both function and content words started to converge after the age of 6. During the same age, the frequency of subordinate clauses also increased abruptly. Speech disfluencies, such as fillers and echolalia, do not show any systematic changes, however, unintelligible words are produced significantly less throughout the years ($\beta = -0.380$, $SE = 0.106$, $p < 0.001$).

Conclusion: The findings show that when children with ASD start using function and content words at the same rate, their production of more complex sentences increases, while their production of unintelligible words decreases. This evidence corroborates the 6-year landmark that other researchers have identified as the year after which language ability improves.

Future Directions: Further research could utilize tools developed with artificial intelligence systems and compile corpora from more children, both female and male, within the same age range, and by comparing them with typically developing children.

Keywords: autism, linguistic trajectories, corpora