

Evaluation of language development skills in toddlers can be challenging because of the variable rate of language acquisition across children. Parent report, e.g. the MacArthur-Bates Communicative Development Inventory (CDI, Fenson et al., 1994), often serves as a tool in identification of possible language delay in infants and toddlers. A longitudinal study investigated the extent to which the Switch task of word-object correspondence (Stager & Werker, 1997), might also predict progress in language development from infancy to 4 years and how this predictive value compared with that of the CDI. In the Switch task, length of eye gaze is measured to paired audio-video stimuli: first, nonsense syllables (minimal pairs) are individually paired with nonsense objects; after a child habituates (stops looking), the same pairings and opposite pairings are presented. The difference in eye gaze duration between same and switched pairs is measured. Data are presented for three timepoints: Time 1, ages 16-24 months (n=64); Time 2, 27 months (n=53); Time 3, 36 months (n=58). In the cohort, 25 children had family members with a language learning disorder, potentially increasing the probability of including participants at higher risk for the same. Reported tasks include: for Time 1, tympanometry, the Switch task, CDI and Preschool Language Scale-4 (PLS-4: Zimmerman, Steiner & Pond, 2002); for Time 2, the CDI; and for Time 3, the PLS-4, the Computerized Articulation and Phonology Evaluation System (CAPES: Masterson & Bernhardt, 2001), and a question elicitation probe. Concurrent and predictive links were examined between Time 1 Switch task performance and CDI productive vocabulary and the later tasks, in order to compare the relative predictive values of the CDI and Switch task. Two types of Switch groupings were also examined: (1) children who preferred the Switch (gazed longer than 2.5 seconds to Switch, i.e. novelty preference) vs all others; and (2) children who preferred the Switch pairing vs children who preferred the Same pairing (> 2.5 sec, familiarity preference). Times 1 and 2 CDIs showed significant positive correlations; Time 1 CDI also significantly correlated with other language measures (Times 1 and 3). Time 1

Switch task (grouping based on Switch preference only) showed significant positive correlations with Time 1 CDI and PLS-4 Language Comprehension. Switch task groupings based on strong Switch versus strong Same preferers showed the Switch preferers performing significantly better on all language measures at Time 1, and the CDI at Time 2. At Time 3, overall Switch task results significantly correlated with the question elicitation probe; the stronger the Switch preference, the higher the question task scores. Question formation is one grammatical challenge for language learning in English; the data suggest that the Switch task may tap general language ability early on. Theoretically, the data also suggest implications concerning familiarity and novelty preferences in habituation tasks (Hunter & Ames, 1988). Clinically, further research is suggested investigating the relationship between productive vocabulary and novelty-familiarity preferences in Switch-type tasks, and later language development.

References:

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