

Parent-reported Vocabulary and Looking-while-listening in 164 Czech Toddlers: Children Respond More Strongly to Words Reported As Known

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MacArthur-Bates CDI's have been validated against various other measures, including MLU and standardized or experimental tasks. Relations between parent-reported vocabulary and looking-while-listening have also been found, but typically did not examine the looking behaviors contrasting which individual words are reported as known or not by the children. We used looking-while-listening 164 Czech children as a part of our Czech MB-CDI (re)norming studies to obtain objective validation data. Three experiment versions were presented using the Eyelink 1000+ eyetracker to four age groups of children: A: 7-10 months (N=30), 40 items; B: 15-17 months (N=42), 60 items; C: 18-19 months (N=46), 60 items; D: 20-30 months (N=46), 80 items. Children saw pairs of pictures and heard a phrase labeling one picture of each pair. Pairs were shown twice, swapping the role of the target picture. First we examined the relations of CDI scores to looking behavior. Permutation analyses were performed for models estimating the likelihood of fixating a picture as a function vocabulary score, the target status of the picture (target vs. distractor), and their interaction. Significant sequences were found of all but the youngest group (B: 1.1-3.0s after word onset, $p=0.004$; C: 1.3-2.2s, $p=0.05$; D: 0.8-2.5s, $p=0.006$). Subsequent models examined whether children were more likely to fixate the pictures illustrating the words were reported as known in the questionnaires. The models estimated looking at a picture as a function of its target vs. distractor status and whether it was known to a child. Permutation analyses found significant interactions for all but the youngest group. The results demonstrate not only the general validity of parent-reported vocabulary scores, but also show that specific words reported as known elicit more pronounced responses in the online comprehension task.