

## Leslie Rescorla (Bryn Mawr College ): How the Language Development Survey Identifies Late Talkers: International Examples

The Language Development Survey (LDS) is a vocabulary checklist that parents complete in about 10 minutes. After a brief introduction regarding the importance of early language delay as a public health problem, this presentation provides an overview of the LDS: its psychometric properties, its use as a screening tool to identify late talkers, and its predictive validity. Research conducted in the U.S. indicates that the LDS is an effective screening tool for identifying late talkers (LTs) in the general population, with prevalence estimates of 10-20% across many different samples using the criterion of < 50 words or no word combinations by 24 months. Correlations with concurrently administered language tests are high, and decision statistics such as sensitivity and specificity indicate that the LDS differentiates well between young children with expressive language delays and those with typical language development. In a 15-year longitudinal study, late talkers identified with the LDS at 24 to 31 months of age had significantly lower language scores than children with typical language histories through age 17, although few LTs had diagnosable speech-language impairment after age 6. The LDS from age 2 had moderate correlations with vocabulary measures through age 17, suggesting it is a good measure of the dimension of language endowment.

In the next part of the presentation, studies using the LDS to identify late talkers in Greece and Korea are described. This research suggests that Greek and Korean late talkers look very similar to U.S. LTs in terms of their vocabulary development. That is, they were acquiring the same words as typically developing peers in their societies, but at a much slower rate. Next, findings from use of the LDS with a large and diverse Dutch general population sample are presented. Because the children were 30 months old when the LDS was obtained, the 24-month criterion for being a late talker was no longer appropriate. Thus, expressive language delay was defined as a score  $\leq 10^{\text{th}}$  percentile on the LDS (with cutpoints of 135 for boys and 167 for girls). Only about one-third of the late talkers had also been delayed in language at 18 months, when assessed with the MacArthur-Bates Communicative Development Inventory (CDI). Late talkers were more likely to come from non-Western families, to have parents with less education and lower incomes, to have weaker nonverbal cognitive abilities, and to have more behavioral/emotional problems on the Child Behavior Checklist, with which the LDS is co-normed.

Conclusions of the research are: 1) late talkers can be reliably and validly identified using the LDS at 24 to 35 months of age; 2) language delay status at 18 months is not a good predictor of language delay status at 30 months; 3) late-talking toddlers do not generally go on to manifest persistent language delay, but they do have weaker language skills through adolescence compared with typically developing peers, consistent with a dimensional rather than a categorical account of early language delay; and 4) the older the age of identification, the more likely it is that environmental factors play a contributing role in early language delay. Implications of our findings are that late talkers identified at about 24 months only need immediate intervention if receptive language and/or nonverbal skills are delayed, autistic features are present, behavioral problems are severe, or demographic risk is present. However, children identified at 30-36 months are more in need of intervention because they have not turned out to be "late bloomers" if they were delayed earlier and because they are more likely to have environmental risk factors than late talkers identified at 24 months.