

LANGUAGE FUNCTIONS IN PRETERM CHILDREN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Preterm children have more language problems than term children. However, it is unknown whether the language problems in these children worsen, are stable, or improve over time. We aimed to determine the developmental course of language function in preterm children in comparison to term children during childhood.

Methods: We performed a systematic review, random-effects meta-analysis, and meta-regression of studies enrolling preterm children and assessed language function. The computerized databases EMBASE, Pub Med, Web of Knowledge, and PsycInfo were used to search for studies published between January 1995 and March 2011.

Results: We included language data from 17 studies, encompassing 1501 preterm children and 940 term children. Preterm children scored significantly lower compared to term children on simple language function measured with the Peabody Picture Vocabulary Test-Revised (PPVT-R; $d = -0.45$, 95% CI, -0.59 to -0.30 ; $P < .001$), as well as on complex, higher-order language function measured with the Clinical Evaluation of Language Fundamentals (CELF; $d = -0.69$, 95% CI, -0.82 to -0.55 ; $P < .001$). Meta-regression by age at assessment reveals an increasing gap between preterm and term children regarding complex language functions during childhood (slope = -0.06 , $P = .01$). This is, however, not the case for simple language function (slope = 0.03 , $P = .25$).

Conclusion: Preterm children have increasing difficulties with complex, higher-order language functions during childhood.