

Critical Review:

What is the impact of low socioeconomic status on the vocabulary development of typically developing children prior to school entry?

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This critical review examines the impact of low socioeconomic status (SES) on the vocabulary development of typically developing children prior to beginning school. The critically appraised studies vary in their measures of SES and vocabulary outcomes. Study designs include: cohort studies and longitudinal cohort studies. Overall, the results provide suggestive Level III evidence that in the first 3-years of life, children from families of low-SES have significantly smaller vocabularies than their peers from higher socioeconomic backgrounds, and that this association with SES may be evident as early as 18-months of age. Possible factors contributing to the effect of SES on early vocabulary development are discussed. The findings of this review have clinical implications relevant to practicing Speech-Language Pathologists.

Introduction

Socioeconomic status (SES) is typically measured in terms of familial income, occupation and education. It is commonly understood as the social standing or social class of an individual (Hoff, 2006). There has long been concern that children from families of low-SES underachieve academically in comparison to their

productive vocabulary in children under 3-years of age.

Study #3: Fernald, Marchman & Weisleder (2013) conducted a prospective longitudinal cohort study that examined the development of language processing efficiency and vocabulary learning at 18- and 24-months of age in children (n=48) from families of varying SES. Vocabulary was measured using the MacArthur CDI. Familial SES was determined by the Hollingshead four-factor Index of Social Status (Hollingshead, 1975) based on a weighted average of both parents' education and occupation. An appropriate ANOVA revealed a significant main effect of SES on vocabulary development at both 18- and 24-months of age. Further analysis revealed that the pattern of developmental change in vocabulary differed as a function of SES. Significant between group differences in the vocabulary scores of children from varying socioeconomic backgrounds were evident at 18-months, and even larger at 24-months of age.

One possible limitation to this study was previously discussed. As with Fenson et al. (1998), this study used parent report as a sole vocabulary measure with a sample of children from families of low-SES.

This study provides Level III evidence that is suggestive of a negative effect of low-SES on vocabulary development in children that is evident as early as 18-months of age.

Study #4: Rescorla and Achenbach (2002) conducted a cohort study that investigated the effects of age, gender, SES and ethnicity on the Language Development Survey (LDS; Rescorla, 1989) vocabulary checklist score and mean length of utterance in children from 18- to 35-months of age (n=278). Participants were recruited as part of the 1999 National Survey. SES was coded using Hollingshead's four factor Index and families were divided into low-SES (n=50) middle-SES (n=125) and upper-SES (n=86) categories. An appropriate ANCOVA revealed significant main effects of age, gender and SES group (low, middle, upper) on mean vocabulary scores. Correlation analysis revealed a small but significant correlation between vocabulary score and the 9-point SES- score.

Strengths of this study include the use of a reportedly reliable and valid screening tool for language delay in children under 3-years of age. Test re-test reliability and internal consistency of this test as well as high sensitivity and specificity were reported, although these measures have not been replicated by an independent research group.

This study provides Level III evidence that is

suggestive of a significant effect of low-SES on vocabulary development at 18- to 35- months of age.

Study #5: Farkas and Beron (2004) conducted a retrospective longitudinal cohort study which investigated the effect of race and social class on vocabulary development in children from 36- to 156-months of age (n=5107) gathered from the Children of the NLSY79 (CNLSY) data sets. Vocabulary was measured using the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997), a widely accepted measure for this purpose. SES was determined based on the child's maternal grandmother's education level, the child's mother's education level, and the number of years familial income fell below the poverty line. Vocabulary scores were plotted by the child's age in months and multilevel growth curve modeling produced trajectories of vocabulary from 36-months to 13-years of age based on means for

specified groups. Appropriate ANOVA revealed a significant positive effect of SES on vocabulary scores a 36-months of age. SES interactions with age were not statistically significant, indicating that the principal effect of SES on vocabulary occurs prior to 36-months of age.

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Further analysis revealed that over half of the effect of SES on vocabulary development was attributed to high verbal scores of mothers from higher social classes and to high scores on a commonly employed home environment questionnaire combining measures of cognitive stimulation, maternal warmth toward the child, and the provision of a safe and clean

environment.

This novel retrospective analysis of a national data set strategically computed growth curves for vocabulary scores to provide a more detailed account of vocabulary growth than had been previously available in the literature. A possible limitation of this study was the lack of any expressive vocabulary measures.

This study provides Level III evidence that is suggestive of a negative impact of low-SES on receptive vocabulary in children at 36-months of age. It provides compelling evidence that the principal effect of SES on vocabulary development occurs prior school entry.

Discussion

Overall, the critical appraisal of evidence included in this review suggests that low-SES has a significant negative effect on the vocabulary development of typically developing children prior to school entry. All 5 studies discussed, provide suggestive Level III

cognitive stimulation, maternal warmth toward the child, and the provision of a safe and clean environment.

Bornstein, Haynes and Painter (1998) utilized structural equation modeling to determine several unique predictive factors of a child's vocabulary competence as a function of SES. They found that the mother's verbal intelligence, personality, attitudes toward parenting and knowledge of child development all varied as a function of SES and had a significant effect on child vocabulary development. This multivariate model may be useful in future research regarding the factors that contribute to the effect of low-SES on vocabulary development.

Clinical Implications & Recommendations

As Speech-Language Pathologists, it is crucial to be aware of how early in development low-SES may impact a child's vocabulary acquisition. Given that research suggests vocabulary knowledge is fundamental to reading comprehension and literacy success, the importance of early intervention to bridge the vocabulary gap between children of varying socioeconomic backgrounds cannot be overstated.

