INTRODUCTION

• Children from low-SES families frequently speak a non-standard dialect of English such as African American English (AAE).
• Differences between this non-standard dialect and Standard American English (SAE), the language of instruction in the classroom, may be one reason for the “achievement gap” between middle- and low-SES children.
• AAE differs from SAE in both morphology and phonology (Charity, Scarborough, & Griffin, 2004).
• Phonological differences between AAE and SAE are that final consonant cluster reduction is more common in AAE (e.g., “nest” pronounced as “nus”, Craig et al., 2003).
• Phonological differences between AAE and SAE impact AAE-speakers’ ability to identify ending sounds in words on the Test of Phonological Awareness (Thomas-Tate, Washington, & Edwards, 2004).
• Phonological awareness is the single best predictor of later reading achievement (Shankweiler et al. 1995).

PURPOSE

• To examine the relationship among AAE-speaking children’s production of final consonant clusters, their comprehension of words produced in SAE containing these final consonant clusters, and standardized and non-standardized measures of phonological awareness, linguistic complexity, dialect density, and vocabulary size.

Hypotheses:

• There will be a positive correlation between production and comprehension of final consonant clusters.
• There will be a positive relationship between production of final consonant clusters and performance on both standardized and non-standardized measures of language.
• There will be a negative relationship between dialect density and the production of final consonant clusters.

METHOD

Note: This study is part of a larger study on dialect mismatch.

Participants:

• 100 African American children from 4 to 7 years of age
  • About 25 children at each age range (e.g., 4.0 to 4.11, 5.0 to 5.11)
  • About 50% female and 50% male
  • All typically developing according to parent report
  • Passed hearing screening prior to testing

Stimuli:

• 21 target word pairs. Words in each pair differed only by the presence or absence of the second consonant in a word-final consonant cluster.
  • Monomorphic pairs: 10 word pairs contrasted a singleton consonant vs. a consonant cluster in word-final production (goal vs. Goldman).
  • Bimorphic pairs: 11 word pairs contrasted singular and plural nouns (cat vs. cats).
• All words were produced by an AAE-speaking adult female and an SAE-speaking adult female in the phrases, say ______ please and Show me ______ please respectively.

Procedure:

• A fifty utterance language sample was elicited.
  • The CTOPP (Wagner, Torgesen, & Rashotte, 1999), EVT-2 (Williams, 2007), and PPVT-4 (Dunn & Dunn, 2007) were also administered.
  • There were two phases to the experimental measure of SAE comprehension: a familiarization phase followed by a test phase.
  • Familiarization phase: Associated picture was displayed on a computer screen directly in front of child while the recorded AAE-speaker asked the child to produce each word (say goal please).
  • All utterances were recorded.
  • Test phase: Child was presented three pictures (distracter, filler, and target as shown in Fig. 1) on a touch screen computer and was asked to touch the target picture by the recorded female SAE speaker.
  • Child’s response was recorded by the touch screen computer.

RESULTS

• Relationship of final consonant cluster production to SAE word comprehension:
  • Production of final consonant clusters in the monomorphic word pairs was not significantly correlated with comprehension of singleton monomorphic words. However, it was significantly correlated with comprehension of all monomorphic word pairs: r = .26, p < .01 (see Fig. 2a).
  • Production of final consonant clusters in the bimorphic word pairs was significantly correlated with both comprehension of word in bimorphic word pairs (show me cat) (r = .28, p < .01, see Fig. 2b) and with comprehension of all bimorphic word pairs: r = .30, p < .01.

• Relationship of final consonant cluster production to language measures:
  • Production of final consonant clusters in the monomorphic word pairs was significantly correlated with the following language measures: PPVT-4 standard score (r = .34, p < .001, see Fig. 3a), EVT standard score (r = .25, p < .01).
  • Production of final consonant clusters in the bimorphic word pairs was significantly correlated with the following language measures: PPVT-4 standard score (r = .25, p < .01), EVT-2 standard score (r = .26, p < .01), and phonological awareness (CTOPP) score (r = .33, p < .01, see Fig. 3c).

• Regression Analysis:
  • 26% of the variability in the comprehension of words with singleton consonants in the monomorphic word pairs was explained by dialect density and age (marginally significant, p = .058) (F[1, 83] = 3.21, p < .01). Production of final consonant clusters in monomorphic words was a not a significant predictor.
  • 49% of the variability in the comprehension of words with singleton consonants in the bimorphic word pairs was explained by dialect density, age, and EVT standard score (F[3, 61] = 6.14, p < .001). Production of final consonant clusters in bimorphic words was not a significant predictor.

DISCUSSION AND CONCLUSION

• Even though the stimulused to elicit children’s productions (AAE-speaking female speaker) consistently did not include final consonants in clusters, some children did produce the final consonant clusters.
• Children produced, on average, 43% of final consonants in clusters in the monomorphic word pairs [range 0 – 100%, standard deviation = 27%] and 48% of final consonants in clusters in the bimorphic word pairs [range 0 – 100%, standard deviation = 24%].
• Production was correlated with comprehension, especially for bimorphic pair.
  • Show me cat was potentially ambiguous as the final “s” can be omitted in AAE.
  • Children who were most likely to produce final consonant clusters were also most likely to choose the correct picture for the SAE singleton.
• Production of final consonant clusters was related to language measures.
  • Children who were most likely to produce final consonant clusters were more likely to have higher vocabulary and phonological awareness.
• Conversely, production of final consonant clusters was negatively related to dialect density.
  • Children with higher dialect density produced fewer final clusters.
  • This finding was expected, as deletion of final consonants in clusters is a dialect feature of AAE.
• These results suggest that children who speak dense African American English may be at risk with respect to academic achievement. These children have poorer comprehension of words that are ambiguous in AAE, smaller vocabularies, and poorer phonological awareness.

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Does Production of Final Consonant Clusters by African American English-Speaking Children Predict Their Comprehension of Standard American English?}

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