Acoustic Features of Infant Directed Speech in Female and Male Speakers

Rong Huang
University at Albany, State University of New York, Albany, New York, United States

Tianlin Wang
University at Albany, State University of New York, Albany, New York, United States

Elie ChingYen Yu
University at Albany, State University of New York, Albany, New York, United States

Jill Lany
University of Liverpool, Liverpool, United Kingdom

Abstract

Infant directed speech (IDS) is characterized by exaggerated pitch and vowel lengthening. The current study recorded everyday interactions with fifty 12-month-old infants and their families to examine whether there are significant differences in the acoustic features of IDS (such as frequency, pause duration, and vowel length) between male and female speakers, and whether any differences are related to childrens vocabulary development at 12 months and 15 months. Female speakers, compared with male speakers, exhibited significantly longer pauses in phrase final positions, thereby potentially signaling syntactic structures more clearly. Controlling for family income and maternal education, female speakers frequency variation at non-final vowel positions accounted for an additional unique variance for infants productive vocabulary at 12 months and receptive vocabulary at 15 months while none of the acoustic features of male speakers related to vocabulary size. These results suggest that female speakers IDS may be more influential in language development.

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