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**Do children and adults find the same voices intelligible?**

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This study investigated the effect of indexical information on speech intelligibility for adults and children. Research questions were: (a) whether relative speaker intelligibility was similar across adults and children, (b) whether children showed greater benefit from supplementary speaker information provided in a precursor sentence, and (c) whether speaker intelligibility could be related to specific acoustic characteristics. Word materials from 45 speakers from a homogeneous accent group (18 women, 15 men, 6 boys and 6 girls aged 11-12) were presented to 135 listeners (adults, 11-12 year olds and 7-8 year olds). The test materials were a specially designed word-set consisting of 124 words chosen to maximise consonant confusions. Words were presented in a background of mild noise (+6 dB SNR) in two test conditions: a 'triplet' condition, in which a 'normalising' precursor sentence was followed by three key-words produced by the same speaker, and a 'single-word' condition, in which each successive word was spoken by a different speaker without precursor. Each listener heard words from 15 different speakers in each condition. Overall, error rates for 7-8 year olds were slightly but significantly higher than error rates for the older children and adults in both test conditions. The relative intelligibility of the 45 speakers, which ranged from 4 to 19%, was strikingly consistent across listener groups, as shown by a Pearson's correlation of between 0.90 and 0.95 for individual-speaker scores by the three listener groups. This suggests that similar speaker characteristics affect intelligibility in children aged 7 to 12 and adults. Word triplets preceded by a precursor sentence were not significantly better recognized than the same words in isolation for any of the listener groups. Short-term indexical information therefore did not have a 'normalising' effect, either for adults or for children. There was an effect of speaker type on intelligibility, as adult female speakers were significantly more intelligible than adult males and than children. However, the difference was of low magnitude and some female adults also featured in the group of speakers of lowest intelligibility. Results of listener ratings of the speakers' voices on a number of different dimensions reflecting excitation and vocal tract characteristics will be presented. These will be related both to the intelligibility data and to acoustic analyses of the speaker materials, including long-term average spectrum, consonant/vowel intensity ratio and duration, and fundamental frequency measures. [Supported by Wellcome Trust grant 055651/Z/98/JRS/JP/JAT.]