FACTORS CONTRIBUTING TO TONE PERCEPTION PERFORMANCE: IMPLICATIONS FOR DESIGNING PAEDIATRIC ASSESSMENT INSTRUMENTS

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Objective

To study the factors contributing to children's tone perception performance

Materials and Methods

225 three-year-old Cantonese-speaking children with normal hearing and language development were recruited. The three basic Cantonese tones of high level (T1), high rising (T2) and low falling (T4) tones were used for experimental testing. Participants were required to point to the corresponding pictures after live voice presentations. Possible factors contributing to tone perception including the subject characteristics, the familiarity and frequency of occurrence of test words were explored by logistic regression.

Results

The familiarity and the frequency of occurrence of the various test words used ($p < .01$) were found to be significant contributing factors to tone perception. Three other factors, namely, the age of the subject ($p = .01$), the vocabulary knowledge of the child ($p < .01$) and the use of language other than Cantonese in the home ($p < .01$), were also found to be significant.

Conclusions

The more familiar and frequently used a word is to children, the higher is the tone perception score. It is thus important to select natural and recognizable linguistic items as test stimuli to suit children's capabilities. In this regard, the common use of the syllable /ji/ in six tones in past Cantonese tone studies was unsatisfactory. The age of the children, their language ability and their different language background as they affect tone perception performance should also be taken into consideration. Special attention to these three aspects is important for the future development of evaluation tools for tone perception ability both in the normal-hearing and hearing-impaired populations.