

DEVELOPMENT OF MANDARIN SPEECH PERCEPTION TEST FOR MANDARIN-SPEAKING CHINESE CHILDREN IN MALAYSIA

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The purpose of this study was to develop a closed-set Mandarin speech perception test using sentences as speech materials for Malaysian mandarin-speaking Chinese children aged 4 years (4;00) to 6 years and 11 months (6;11). A pool of 76 word items were collected from undergraduate studies and reference books for preschool children and pre-tested on 30 children aged 4;0 to 6;11 years old to determine the familiar words among children within these age groups. Word items that were correctly recognized at least 85% of the time were chosen to form 10 coloured picture matrices which is divided to Level A (Matrices 1 to 4), Level B (Matrices 5 and 6), Level C (Matrices 7 and 8) and Level D (Matrices 9 and 10). The level of difficulties was determined by type of matrix and differs such that Level A (matrix 2x3) is the easiest and Level D (matrix 4x4) is the most challenging. There are 2 sentence lists for matrix, which is interchangeable. Nine children were involved in the pilot study to determine the test suitability for field study. In the field study, a total of 94 children from the kindergarten and nursery in Penang, Kuala Lumpur and Johor participated and tested with the 10 picture matrices. Subjects were asked to point to the relevant pictures that make up the sentences, read by the tester. The internal consistencies of the sentence lists were analysed using Cronbach Alpha in which Level A had moderate reliability of 0.69 coefficient of alpha and high reliability which are 0.84 for Level B, 0.91 for level C, and 0.92 for level D. The effects of age and gender were analysed using two-way ANOVA. Results showed that there was no significant difference between gender and there was no interaction between age and gender ($p>0.05$). However, there was a significant age effect for Matrix 3 ($p<0.001$) for levels b to D. however, for Matrix 3, the scores for 4 year-old children were only significantly lower than the 6 year olds ($p<0.05$). As a conclusion, a closed set sentence test for assessing Mandarin- speaking children speech perception ability has been successfully developed but further investigation on the test-retest reliability and validity should be done to determine its suitability for clinical usage.

Ang, A. L. 2010. Development of Mandarin Speech Perception Test for Mandarin-Speaking Chinese Children in Malaysia. Bachelor of Audiology Thesis. Universiti Kebangsaan Malaysia.