

CHARACTERISTICS OF CONSONANT PRODUCTION/DEVELOPMENT
FOR PRE-ADOLESCENT CHILDREN

W.S. Brown, Jr., IASCP and Department of Speech, University of Florida, Gainesville, Florida 32611

A considerable amount of supraglottal air pressure (P_{10}) data has been generated to describe and quantify consonant production of adult speakers. On the contrary, only a meager amount of P_{10} data has been reported for children's speech. The present study collected P_{10} data for 120 normal school age children ranging in age from 5-10 years of age (10 males and 10 females were recorded for each age group). P_{10} was recorded via a polyethelene sensing tube placed through the corner of the mouth extending into the posterior portion of the oral cavity (behind the point of consonant articulatory constriction). The pressure sensing tube was in turn connected to a differential pressure transducer, the signal amplified and graphically displayed on one channel of an oscillographic recorder. Peak P_{10} values were obtained from the children repeating syllables (embedded in a carrier phrase) containing the stop-plosive pairs /p, b/ and /t, d/, and the continuant pair /s, z/ in a variety of syllabic positions. The P_{10} data from the children speakers were compared to an adult "model" of consonant production including: (1) overall air pressure values; (2) voice/voiceless consonant distinction; consonant class distinction; (3) effect of syllabic position; and (4) constancy of production. The results indicated that the pre-adolescent children have developed consonant productions that are nearly identical to mature adult speakers even as early as five years of age. These results will be discussed in terms of language acquisition and development in children.