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Han Piao Chen
Iowa Child Welfare Research Station

Orvis C. Irwin
Iowa Child Welfare Research Station

THE RELATION BETWEEN MENTAL TEST SCORES OF INFANTS AND SPEECH DEVELOPMENT

HAN PIAO CHEN* AND ORVIS C. IRWIN

Chen (1) has formulated a number of indices and ratios which are useful in determining the course of development of pre-meaningful speech. He has also formulated a differential speech development index based upon the difference between speech sounds considered as isolated elements at a given infant age level and the status of these elements in adult speech. The adult speech standard used for comparison is that by Voelker (3). There are two forms of this index described elsewhere (2). One is the difference between the number of speech sounds elements in infants and adult speech, the second form is the differential percentage index based on the difference in the percent of frequencies in the use of vowel and consonants of infants and adults. A group of infants under 30 months were used. Intelligence test scores were secured by means of the Kuhlmann Test of Mental Development.

Product-moment correlations were run between mental age and each of the two Chen indices. The tabulation below presents two sets of correlations. The first set gives the correlations between mental age and the differential number indices for each of the first four half year periods of infancy. The second set shows the relationship between mental age and the differential percentage indices.

1-6 months	n = 19	.404 ± .13	.137 ± .15
7-12 months	n = 22	.562 ± .10	.353 ± .13
13-18 months	n = 32	.199 ± .12	.326 ± .11
19-24 months	n = 18	.177 ± .15	.325 ± .14

It appears to be a reasonable generalization that there is a moderate degree of positive correlation between mental age and these speech sound indices. However, most of these correlations are not significant. With one exception, none are four times their probable error. In general, then, it would not be safe to conclude that there is any significant relationship between speech sound development for the first two and a half years of life and intelligence test scores.

IOWA CHILD WELFARE RESEARCH STATION

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