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Early Childhood Development in Chinese Immigrant Families: The Effect of Multiple Languages and Developmental Stimulation

*Julia Chang-Lin, MD, C.D. Courtlandt, B.P., Droyer, A. Flerman, R. Lin and W. Jiu,
Department of Pediatrics, New York University, School of Medicine, New York, NY*

Abstract

Objective

To determine the effects of multiple languages and developmental stimulation on early childhood development in Chinese immigrant families.

Research Design

Survey and comparison to standardization sample.

Setting

Primary care clinics in two municipal hospitals.

Participants

15 to 30 months old children from Chinese immigrant families with no known developmental delay and gestational age > 36 months.

Selection Procedure

Consecutive sample.

Measurements/Results

Two multilingual examiners administered the revised Gesell Developmental Examination (Gesell) in the child's primary language (Cantonese, Mandarin, Shanghainese, Fukinese, Toisonese, or English). Medical /social hx and number of languages spoken (range, 1 to 3) were ascertained. A questionnaire was given concerning educational materials in the home, number of hours per week, and types of parent teaching activities. A Developmental Stimulation Index (DSI) was assigned based on the questionnaire. The DSI ranged from 1 (low) to 4 (high). Mean (SF) developmental quotients (DQ) on the Gesell were adaptive, 98.1 (2.S); language, 93.9 (2.0); fine motor 107.6 (2.S); gross motor, 104.8 (2.2); personal-social, 109.1 (2.6). Mean DQs for the study children were compared with the 15 to 30-months subset of the 1980 Gesell standardization sample. Chinese children scored significantly higher on the fine motor ($p<0.05$) and personal-social ($p<0.001$) sections. No

other significant differences were found. In a multiple regression model testing for the effect of developmental stimulation on the study sample and controlling for sex, bw, gestational age, child/maternal age, birth order, income, Hollings-head SFS, family origin coded as urban or rural, amount of English spoken, and number of languages spoken, adjusted mean DQs were (DS=1, DSI=4); adaptive, 87.2, 113.7 ($p<0.01$); language, 86.3, 100.7 ($p<0.05$); fine motor, 93.6, 127.5 ($p<0.01$); Gross motor, 98.5, 113.9 (NS); personal-social, 96.9, 126.5 ($p<0.05$). Number of languages spoken had no significant effect.

Conclusion

Chinese toddlers achieve normal developmental scores on the Gesell. Although multiple languages are spoken in their home, no negative effect can be documented. The level of developmental stimulation offered, however, has significant impact on developmental outcome. Providers should be aware of differences in parent teaching in this population and provide appropriate guidance.