

## **The Study of Child Developmental Norms of Chiang Mai Children from Birth to 5 Years**

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### **Abstract**

Background: Child development is the foundation of population's health and indicates quality of public health systems and services.

Objectives: 1) to identify child development norm from birth to 5 to 5 years who live in Chiang Mai; 2) to identify order of assessment items of child development tool.

Methods: 420 study subjects aged from birth to 5 years were included using multi-staged stratified random sampling. Child development assessment tool aged from birth to 5 years Mental Health Department, Ministry of Public Health version was used to assess child development level. Child development was assessed in 5 development domains with 654 assessment items: 1) gross motor; 2) fine motor; 3) receptive language; 4) expressive language; and 5) personal and social care. Data were analyzed using multiple logistic regressions to identify the assessment item that most children could pass at 25, 50, 75 and 90 percentile.

Results: The results showed that 649 from 654 assessment items (99.24%) were able to identify child development norm in children aged from birth to 5 years. 608 assessment items were statistically sorted to fit the development in each age group. There were 55 highly discriminated items in 5 domains appropriated to use at 10 periods scheduled to receive vaccination (i.e., 2, 4, 6, 9, 12 months, 2, 3, 4, and 5 years). Comparing with the Mother and Child Health Journal with 77 assessment items, the Pre-school Child Development Assessment Inventory (Anamai 49) Department of Health with 48 items, and the DSI Department of Mental Health previous version with 50 items, had the percentages of corresponding items for the assessment at the vaccination periods of 4.6, 16.4, and 20, respectively.

Suggestions: The level of development of children in Chiang Mai should be compared with national child development norm as it might not be able to represent the development of the whole country. Future study should consider child and family demographics on child development.

**Keywords:** norm, child development, Chiang Mai