

# FACTORS ASSOCIATED WITH FINE AND GROSS MOTORIC DEVELOPMENT IN CHILDREN UNDER TWO YEARS OF AGE IN EAST FLORES, EAST NUSA TENGGARA

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## ABSTRACT

**Background:** Early development leads the infant to master four major types of skills: gross motor, fine motor, language and social skills. Gross motor skills require the use of large muscles to achieve sitting, crawling and walking in the first year of life. Fine motor skills involve the use of small muscles in the hands and fingers, in tasks such as picking up small objects, and later for feeding and dressing. This study aimed to analyze factors associated with fine and gross motoric development in children under two years of age in East Flores, East Nusa Tenggara.

**Subjects and Method:** This was a cross sectional study conducted in East Flores, East Nusa Tenggara. A sample of 87 children under two years of age were selected for this study. The dependent variable was fine and gross motoric development. The independent variables were maternal prenatal nutritional status, type of delivery, premature delivery, maternal past experience of illness, and congenital defect. Child development data were collected by Denver Development Screening Test (DDST). Maternal prenatal nutritional status was measured by Middle Upper Arm Circumference (MUAC). The other data were collected by questionnaire. The data were analyzed by a multiple logistic regression.

**Results:** Normal fine motoric development was positively associated with good maternal prenatal nutritional status (OR=1.80; p=0.008) and normal delivery (OR=1.99; p=0.048), but was negatively associated with maternal past experience of illness (OR=2.10; p=0.023). Normal gross motoric development was positively associated with good maternal prenatal nutritional status (OR=2.44; p=0.041), but was negatively associated with premature delivery (OR =1.98; p=0.029) and congenital defect (OR=5.42; p=0.008).

**Conclusion:** Normal fine motoric development of children under two years of age is positively associated with good maternal prenatal nutritional status and normal delivery, but is negatively associated with maternal past experience of illness. Normal gross motoric development is positively associated with good maternal prenatal nutritional status, but is negatively associated with premature delivery and congenital defect.

**Keywords:** fine, gross, motoric development, nutritional status, normal delivery, premature delivery, past experience of illness, congenital defect

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