LIFE COURSE PERSPECTIVE ON THE DETERMINANTS OF STUNTING AND CHILD DEVELOPMENT IN JOMBANG DISTRICT

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ABSTRACT

Background: Stunting is the most prevalent form of child malnutrition worldwide with an estimated 161 million children in 2013. Stunting has been defined as the proportion of children below -2 SD from the WHO length- or height-for-age standards median. Stunting may increase the risk of child mortality and non-communicable diseases. It decreases the cognitive and motor development, reduces performance in schools, and lowers productivity in adulthood. Indonesia ranks fifth highest in the burden of stunted children in the world. However, life course information about the determinants of stunting in Indonesia is lacking. This study aimed to investigate the determinants of stunting and child development in children under five.
Subjects and Method: This was a retrospective cohort study conducted at Mayangan and Jarak Kulon Community Health Centers, Jombang, East Java, in Januari 2018. A total sample of 58 children was selected for this study by fixed exposure sampling. The dependent variables were stunting and child development. The independent variables were birth-length, maternal age, maternal height, maternal education, and family income. The data were collected by questionnaire. Data on birth length was taken from maternal and child record at community health center. The data were analyzed by path analysis model.
Results: The risk of stunting decreased with birth-length (b= -0.90; 95% CI= -1.60 to -0.21; p= 0.011) and maternal height (b=-0.92; 95% CI= -1.69 to -0.16; p= 0.018). The risk of stunting increased with maternal age <20 years old or ≥35 years old at pregnancy (b= 0.73; 95% CI= -0.03 to 1.46; p= 0.051). The risk of stunting indirectly decreased with high maternal education and high family income. The likelihood of normal child development increased with maternal education (b= 1.08; 95% CI= 0.41 to 1.75; p= 0.001) and decreased with stunting (b= -0.78; 95% CI= -1.46 to -0.10; p= 0.025).
Conclusion: The risk of stunting decreases with birth-length and maternal height, and increases with maternal age <20 years old or ≥35 years old at pregnancy. The likelihood of normal child development increases with maternal education and decreases with stunting.

Keywords: child development, stunting, birth-length, maternal age at pregnancy, maternal education, and family income

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