

PRENATAL FACTORS ASSOCIATED WITH THE RISK OF WASTING: A MULTILEVEL ANALYSIS EVIDENCE FROM NGANJUK, EAST JAVA

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ABSTRACT

Background: In 2013, 52 million children under age 5 (10% of the global population) were wasted, meaning that, due to acute malnourishment, they had low weight for their height. Globally, wasting accounts for 4.7% of all deaths of children aged under 5 years. Severely wasted children are, on average, 11 times more likely to die than their healthy counterparts. This study aimed to examine prenatal factors associated with the risk of wasting in Nganjuk, East Java, using a multilevel analysis.

Subjects and Method: This was a case control study carried out in 25 posyandus (integrated health posts) in Nganjuk, East Java, from June 3 to July 7, 2018. A sample of 225 children under five was selected by fixed disease sampling, consisting of 75 wasted children and 150 normal weight children. The dependent variable was wasting. The independent variables were maternal gestational middle upper arm circumference (MUAC), birthweight, and family size. The data were collected by questionnaire and analyzed by a multilevel logistic regression.

Results: Wasting was associated with maternal gestational MUAC <23.5 cm (b= 2.52; 95% CI= -0.25 to 5.29; p= 0.075), low birthweight (b= 2.98; 95%CI=-0.18 to 6.14; p= 0.065), and larger family size (b=3.23; 95%CI=1.11 to 5.35; p= 0.003). Posyandu had a sizeable contextual effect on wasting with ICC= 67.71%.

Conclusion: Wasting is associated with maternal gestational MUAC <23.5 cm, low birthweight, and larger family size. Posyandu has a sizeable contextual effect on wasting.

Keywords: wasting, maternal gestational MUAC, low birthweight, family size, multilevel analysis

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