DETERMINANT OF MATERNAL AND HAIR ZINC LEVEL ON STUNTING AND DEVELOPMENTAL DISORDERS IN UNDER FIVE AGED CHILDREN: A PATH ANALYSIS

Nunik Ike Yunia Sari, Estin Gita Maringga

School of Health Sciences Karya Husada Kediri

ABSTRACT

Background: Stunting can cause various developmental problems in children under five. Stunting can reduce a person productivity at a young age and increase the risks of developing non-communicable diseases when older. This study aimed to determine of maternal and hair zinc level on stunting and developmental disorders in under five aged children.

Subjects and Method: This was a case study conducted at Gurah Public Health Center, Kediri Regency, East java, August 4-29, 2020. approach with a fixed disease sampling technique. A sample size of 100 subjects was selected by simple random sampling. The dependent variable was stunting and developmental disorders. The independent variables were pregnant women Mid-Upper Arm Circumference, exclusive breastfeeding, LBW, birth length, hair zinc level. The data were collected by questionnaire, measuring height and weight and checking hair zinc levels in the laboratory. The data were analyzed by path analysis.

Results: Child development was influenced by Mid-Upper Arm Circumference ($b = 0.12$; $SE = 0.36$; $p < 0.001$), birth weight ($b = 0.29$; $SE = 0.15$; $p = 0.042$); birth length ($b = 0.37$; $SE = 0.15$; $p = 0.011$), breastfeeding ($b = 0.08$; $SE = 0.04$; $p = 0.033$), stunting ($b = 0.39$; $SE = 0.10$; $p < 0.001$), hair zinc levels ($b = 0.58$; $SE = 0.67$; $p < 0.001$). Hair zinc levels were affected by birth weight ($b = 0.92$; $SE = 0.04$; $p < 0.001$). Stunting was affected by breastfeeding ($b = 0.12$; $SE = 0.04$; $p < 0.001$); birth length ($b = 0.73$; $SE = 0.06$; $p < 0.001$), zinc levels ($b = 0.16$; $SE = 0.06$; $p = 0.006$)

Conclusion: Child development was influenced by Mid-Upper Arm Circumference, birth weight, birth length, breastfeeding, stunting, hair zinc levels. Hair zinc levels were affected by birth weight. Stunting was affected by breastfeeding, birth length, zinc levels.

Keywords: maternal determinant factor, hair zinc level, predictor of stunting, developmental disorder

Correspondence:

Nunik Ike Yunia Sari. School of Health Sciences Karya Husada Kediri. Email: agharda1502@gmail.com. Mobile: +6282257969278.