



ABSTRACT

Micronutrients intake as risk factor of stunting in toddlers aged 6-24 months in Kintamani District, Bali

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Background and objectives: Reducing stunting is a priority program for the Indonesian government. Kintamani District is one of the areas in Bali Province with a stunting prevalence above the provincial average. Micronutrients play an essential role in growth and development, but their intake in children is often overlooked. This study aimed to investigate micronutrient intake as a risk factor for stunting in toddlers aged 6-24 months in the Kintamani district, Bali.

Methods: This is a case-control study conducted in the Kintamani district, Bali. The samples were 43 stunting toddlers and 43 non-stunting toddlers aged 6-24 months. Data were obtained through direct interviews using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ). We quantified the micronutrient intake using the Nutrisurvey 2007 application. The micronutrient was classified as deficit if <70% and adequate if ≥70%. Data analysis was performed in SPSS version 23.

Result: The prevalence of low vitamin A, iron, zinc and calcium intake in the stunting group was 72.1%; 86.0%; 86.0%; and 90.7%, respectively, while in the non-stunting group was 51.2%; 67.4%; 53.5%; and 62.8%, respectively. The risk of stunting was higher in toddlers with low intake of Vitamin A (OR=2.46; 95% CI:1.01-6.03; p=0.046), iron (OR=2.97; 95% CI:1.01-8.70; p=0.041), zinc (OR=5.36; 95% CI:1.87-15.3; p=0.001), and calcium (OR=5.77; 95% CI:1.73-19.1; p=0.002).

Conclusion: Low micronutrient intake is a risk factor for stunting. To overcome this problem, education on food diversification and distribution of micronutrient supplementation or fortified food is necessary. A further study examining serum micronutrients in stunted toddlers is recommended.

Keywords: micronutrients, stunting, toddler, zinc, calcium

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