

TITLE

Factors associated with dietary diversity and food frequency among Indonesian children

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ABSTRACT

Background: Adequate infant and young child feeding practices during the first 1000 days of life are essential to optimal child development and health. While it is well documented that dietary diversity and food frequency (among other behaviors) are critical to improving children's nutritional status as well as other outcomes such as cognition and labor force productivity, little is known regarding the determinants of these feeding practices in Indonesia. **Objectives:** The purpose of this study was to better understand what factors predict appropriate child feeding behaviors among children 6-23 months of age. These findings can support efforts of policy makers and program planners in Indonesia to improve optimal infant and young child feeding behaviors. **Methods:** Research associates conducted a 1-hour, in-home interview with mothers of children 6-23 months of age to identify infant and child feeding practices. Measures of feeding practices included dietary diversity and meal frequency. Adequate dietary diversity was defined as the proportion of children 6-23 months of age who received foods from 4 or more of seven key food groups identified by the WHO. The minimum meal frequency was defined as: twice for breastfed infants 6-8 months, three times for breastfed children 9-23 months, and four times for non-breastfed children 6-23 months. Multivariate logistic regression was used to identify factors associated with dietary diversity and separately with meal frequency. **Results:** A total of 1498 women with children 6-23 months of age were included. More than half (54.9%) of children met the minimum meal frequency while 22.0% and 13.0% met the minimum dietary diversity and minimum acceptable diet, respectively. After adjusting for regression model covariates, maternal education (post-secondary vs. little/none) [OR = 2.11], age of child [OR = 0.90], knowledge of stunting [OR = 1.80], and having received nutrition information [OR = 1.89] were associated with dietary diversity. Age of the mother, wealth, sex of child, total children in the family, and delivering with a professional provider were not associated with dietary diversity. Wealth

[OR = 1.17] and age of child [OR = 1.09] were associated with meal frequency while no significant association was found between maternal age or education, sex of child, total children in the family, delivering with a professional provider, knowledge of stunting, and having received nutrition information were not associated with meal frequency after adjusting for model covariates.

Discussion: The proportion of children receiving minimum meal frequency among this sample in Indonesia is relatively low while approximately half of children receive adequate dietary diversity. Increasing maternal education, knowledge of stunting, and knowledge of nutrition may improve dietary diversity while poverty alleviation has the potential to improve minimum meal frequency. While the findings are not surprising, they do reiterate the importance of continued development efforts to improve educational opportunities for girls and poverty reduction. Additionally, findings suggest that efforts to raise awareness of stunting and to provide information on nutrition are positively associated with improved feeding practices.