

## Do food taboo and dietary diversity associated with risk of chronic energy deficiency among pregnant women living in rural setting of Southeast Sulawesi, Indonesia?

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Improper food taboo<sup>(1, 2)</sup> and poor dietary practices<sup>(3–5)</sup> would influence poor quality of dietary intake which hence the risk of chronic energy deficiency (CED) among pregnant women. Investigation of the both factors in East Kolaka, a new established district in Southeast Sulawesi Province, Indonesia may be beneficial for its nutrition and health program. Current study aimed to assess the risk of CED and to determine its association with food taboo and dietary diversity among pregnant women.

This cross-sectional study was conducted in April 2014 and involved 178 pregnant women aged 15–45 years randomly selected 30 villages. Food taboos were collected by focus group discussion. Single 24 hours food recall was used to determine Individual dietary diversity questionnaire (IDDQ) which consisted of nine food groups<sup>(6)</sup>. Low dietary diversity score was defined for IDDQ less than four groups<sup>(6, 7)</sup>. Respondents were classified as CED if having less than 23.5 cm of MUAC measurement<sup>(8)</sup>. All main variables together with potential confounding variables such as educational level, working status<sup>(9)</sup>, gestational age, pregnancy history (birth spacing, parity), and maternal age dan height<sup>(8)</sup> were collected by trained personnel's. Binary logistic regression analysis with 95% confidence interval was performed to provide adjusted associations. Written informed consent had been obtained from all participants while ethical approval had been obtained from Ethic Committee, Faculty of Medicine, Universitas Indonesia.

About one-fifth of the respondents had the risk of CED (19.7%) and almost half of respondents had food taboo (43.8%) and low dietary diversity (43%). There were four food groups (fruits 48.7%, vegetables 18.6%, animal protein 14.2%, beverages 7.1% and others 11.5%) that perceived as taboos in which health and cultural reason were the most frequent responses for avoidance of those foods. Pregnant women with food taboo  $\geq 2$  items (OR 0.75, 95% CI = 0.24–2.32) and low dietary diversity (OR 0.51, 95% CI = 0.20–1.31) had no statistical association with the risk of CED after adjusted by parity, working status, and household income. The risk of CED was higher by five fold in those women with parity  $>2$  (OR 5.08, 95% CI = 2.151–11.999) and by two fold (OR 2.60, 95% CI = 1.280–5.289) in working pregnant women if compared with those with parity  $<2$  and not working, respectively.

The risk of CED in the study area was more determined by pregnancy history and social factor than the taboo and dietary diversity.

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