

The application of probability method to estimate micronutrient deficiencies prevalence of Indonesian adults

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Abstract	<p>The objective of this study was to analyze micronutrient deficiencies (Ca, Fe, Zn, Vitamin A and C) of Indonesian adults using probability method (PBM) and cut-off point method (CPM). This research was conducted by analyzing secondary data from Total Diet Study of the Ministry of Health of Indonesia, obtained from 24-h food recall method. The subjects were 58, 014 adults aged 19-49 years. The nutrient requirement from Institute of Medicine were used as benchmark. Both PBM and CPM were applied to assess micronutrient deficiencies. The results showed that by applying PBM, the prevalence of calcium, iron, zinc, vitamin A and C deficiencies was 54.2%, 36.4%, 74.3%, 44.8% and 71.4% respectively; while the prevalence of calcium, iron, zinc, vitamin A and C deficiencies using CPM-100 was 63.9%, 42.5%, 80.7%, 55.8% and 81.7% respectively. PBM result showed more men than women were categorized as suffering from Zn, Vitamin A and C deficiencies; and more women were categorized as Ca and Fe deficiencies. The application of CPM-100 tended to result in overestimation compared to PBM. The nutrient densities of Ca, Fe, Zn, Vitamin A and C were higher in women than in men ($p < 0.05$). The nutrient densities of Ca, Zn, vitamin A and C were below the recommended level for both men and women. This implies micronutrient deficiencies are prevalent among Indonesian adults thus there is a need to improve the quality of their diet. This can be achieved by increasing the consumption of protein source foods (fish, meat and legume), fruits and vegetables as sources of micronutrients.</p>
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