

Socioeconomic status, dietary diversity, and nutritional status of Javanese and Batak children: Evidence from the Indonesian Family Life Survey

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Background and purpose

Living in high-SES household offers children access to different type of foods and allows them to eat a diverse diet: a prerequisite for improved nutritional status [1]. We analyse the linkages of socioeconomic status (SES), dietary diversity, and nutritional status in greater nuance. We examine how food stigma and cultural value of food might influence the SES-related dietary diversity of school-aged children in two ethnic groups with different food cultures in Indonesia. Food cultures of the Javanese and the Batak are interesting because traditionally the Javanese cuisine is more vegetable-based while the Batak cuisine is heavily meat-based. However, the nutritional status of the Javanese was higher than that of the Batak [2]. This is in contrast to literature promoting meat consumption as the means to improve nutritional status [3].

Methods

We analysed data from the latest three waves of the Indonesian Family Life Surveys (2000-2015) consisting of 5,769 school-aged children (7-12 years of age) born to 3,478 mothers. Based on the food consumption frequency, we measured the children's dietary diversity by using an adapted Berry-Index [4]. We opted for the SES expenditure approach, classifying children into quintiles based on the real Personal Consumption Expenditure (PCE). Cluster-robust multivariate linear regression was used to examine SES-related differences in dietary diversity by ethnic groups. The same model specification was also applied to explore the dietary composition at food groups level. Marginal contrasts followed to find between-ethnic-groups differences in dietary diversity and nutritional status (height-for-age z-scores) by SES.

Results

The results show Javanese children had higher dietary diversity (Berry-Index: Javanese=0.61 vs Batak=0.60; p-val.<0.01) and better nutritional status than Batak children (height-for-age Z-score: Javanese=-1.41 vs. Batak=-1.81; p-val.<0.01). We found that living in a high-SES household correlated with a higher dietary diversity for children of both ethnic groups (Javanese children: b=0.01; p-val.<0.01; Batak children: b=0.05; p-val.<0.01) However, the SES-related dietary composition of Javanese and Batak children differed. For Javanese children with a high-SES background, we found a decrease in tubers consumption with rising SES (b=-0.05; p-val.<0.05). The low tubers consumption among high-SES Javanese children is probably due to the negative food stigma linking cassava to poverty in the Javanese food culture [5]. While fruits, animal-source foods, and dairy product consumption increased with SES for Javanese children, there was no difference in animal-source foods consumption by SES for Batak children. This is not surprising since animal-source foods are an important part of the Batak food culture irrespective of SES [6]. However, such high priority for the expensive animal-source foods came at the expense of a reduced consumption of other types of food and decreased the dietary diversity of low-SES Batak children. Additional analyses indicated that compared to Javanese

children belonging to the lowest-SES quintile, Batak children of the same SES category had a worse nutritional status (height-for-age Z-score diff.=-0.24; p-val.<0.01).

Conclusions and Implications

Although socioeconomic status positively correlates with dietary diversity, food stigma and cultural value of food may influence the SES-related dietary composition and could affect the children's nutritional status. In the case of low-SES Batak children, the high priority for the expensive animal-source foods comes across with decreased dietary diversity and worse nutritional status. Policy makers and stakeholders should give particular attention to food cultures of different ethnic groups in their nutrition intervention strategies. For example, Batak children from the low-SES background should be advised not rely mainly on animal-source foods but to overall diversify their food consumption.

Keywords: dietary diversity, nutritional status, SES, ethnic, food cultures

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