NUTRITION TRANSITION AND THE DOUBLE BURDEN OF MALNUTRITION IN INDONESIA

A mixed method approach exploring social and contextual determinants of malnutrition

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Akademisk avhandling

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Nutrition Transition and the Double Burden of Malnutrition in Indonesia

ABSTRACT

Introduction
Nutrition transition concerns the broad changes in the human diet that have occurred over time and space. In low- to middle-income countries such as Indonesia, nutrition transition describes shifts from traditional diets high in cereal and fibre towards Western pattern diets high in sugars, fat, and animal-source foods. This causes a swift increase in the prevalence of overweight and obesity while undernutrition remains a great public health concern. Thus a double burden of malnutrition occurs in the population. The main aim of this investigation was to explore social and contextual determinants of malnutrition in Indonesia. The specific objectives were: (i) to examine body mass index (BMI) changes at the population level, and between and within socioeconomic groups; (ii) to estimate which context (i.e., household or district) has a greater effect on the variation of BMI; (iii) to assess the prevalence of double burden households (defined as the coexistence of underweight and overweight individuals residing in the same household) and its variation among communities as well as its determining factors; and (iv) to explore and understand what contributes to a double burden of malnutrition within a household by focusing on gender relations.

Methods
A mixed method approach was adopted in this study. For the quantitative analyses, nationally representative repeated cross-sectional survey data from four Indonesian Family Life Surveys (IFLS; 1993, 1997, 2000, 2007) were used. The IFLS contains information about individual-level, household-level and area-level characteristics. The analyses covered single and multilevel regressions. Data for the qualitative component were collected from sixteen focus group discussions conducted in Central Java and in the capital city Jakarta among 123 men and women. Connell’s relational theory of gender and Charmaz’s constructivist grounded theory were used to analyse the qualitative data.

Results
Greater increases in BMI were observed at higher percentiles compared to the segment of the population at lower percentiles. While inequalities in mean BMI decreased between socioeconomic groups, within group dispersion increased over time. Households were identified as an important social context in which the variation of BMI increased over time. Ignoring the household level did not change the relative variance contribution of districts on BMI in the contextual analysis. Approximately one-fifth of all households exhibited a double burden of malnutrition. Living in households with a higher socioeconomic status resulted in higher odds of double burden of malnutrition with the exception of women-headed households and communities with the highest social capital. The qualitative analysis resulted in the construction of three categories: capturing the significance of gendered power relations, the emerging obesogenic environment, and generational relations for child malnutrition.

Conclusion
At the population level, greater increases in within-group inequalities imply that growing inequalities in BMI were not merely driven by socioeconomic factors. This suggests that other under-recognised social and contextual factors may have a greater effect on the variation in BMI. At the contextual level, recognition of increased variation among households is important for creating strategies that respond to the differential needs of individuals within the same household. At the household level, women’s empowerment and community social capital should be promoted to reduce inequalities in the double burden of malnutrition across different socioeconomic groups. Ultimately community health and nutrition programmes will need to address gender empowerment and engage men in the fight against the emerging obesogenic environment and increased malnutrition that is evident within households, especially overweight and obesity among children.

Keywords Double burden of malnutrition, Child obesity, Body Mass Index, Gender relations, Social capital, Multilevel modelling, Grounded theory, Indonesian Family Life Surveys, and Indonesia