



Structural Equation Modeling for Undernutrition and its Determinants among Children Aged 0–59 Months

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Brief Description

Child undernutrition continues to be the leading public health problem in developing countries.

Especially in Ethiopia, undernutrition is a leading cause of child illness and death.

Many underlying factors are assumed to contribute to the disparities in the magnitude of childhood undernutrition.

The undernutrition of children in Ethiopia is highest, still needs to continue substantial investment in undernutrition.

Therefore, this study aim of this to assess factors associated with undernutrition problems among children aged 0–59 months in Ethiopia using structural equation modeling.

The study involved 8,757 children aged 0–59 from the 2016 EDHS.

The three anthropometric indicators of stunting, underweight, and wasting were used to measure children's undernutrition.

Structural equation modelling (SEM), such as exploratory factor analysis, was employed to identify the factors contributing to undernutrition.

The relationships among factors and latent child undernutrition indices were also explored using SEM.

This study result shows that the mean of wasting (weight-for-height), underweight (weight-for-age), and stunting (height-for-age) was -1.12, -1.31, and -0.73, respectively.

The correlation between stunting and underweight was 0.631, whereas the correlation between wasting and underweight was 0.745.

The age of children (in a month), mother education, and wealth index were associated with the nutritional status (stunting and underweighting) of children in Ethiopia.

Besides, the age of children in a month, mother education, and wealth were 0.208 associated with nutritional status (wasting and underweighting).

The problem of undernutrition among children aged 0–59 months in Ethiopia was high.

A significant association between underweight and stunting; and underweight and wasting was perceived.

The structural equation model results show that for children under the wealth index of a family, the mother's education, the sex of the household head, the place of delivery, the age of the child in months of delivery by caesarean, and the type of toilet facilities were influential variables significantly associated with childrens nutritional status in Ethiopia.