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RESEARCH ARTICLE

Household food insecurity and early childhood development: Longitudinal evidence from Ghana

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Abstract

The burden of food insecurity is large in Sub-Saharan Africa, yet the evidence-base on the relation between household food insecurity and early child development is extremely limited. Furthermore, available research mostly relies on cross-sectional data, limiting the quality of existing evidence. We use longitudinal data on preschool-aged children and their households in Ghana to investigate how being in a food insecure household was associated with early child development outcomes across three years. Household food insecurity was measured over three years using the Household Hunger r Score. Households were first classified as "never food insecure" if they were food insecure at any round. We also assessed persistence of household food insecurity by classifying households into three categories: (i) never food insecure; (ii) transitory food insecurity, if the household was food insecure only in one wave; and (iii) persistent food insecurity, if the household was food insecure in two or all waves. Child development was assessed across literacy, numeracy, social-emotional, short-term memory, and self-regulation domains. Controlling for baseline values of each respective outcome and child and household characteristics, children from never food insecure households had lower literacy, numeracy and short-term memory. When we distinguished between transitory and persistent food insecurity, transitory spells of food insecurity predicted decreased numeracy ($\beta = -0.176, 95\% \text{ CI: } -0.317, -0.035$), short-term memory ($\beta = -0.237, 95\% \text{ CI: } -0.382, -0.092$), and self-regulation ($\beta = -0.154, 95\% \text{ CI: } -0.325, 0.017$) compared with children from never food insecure households. By contrast, children residing in persistently food insecure households had lower literacy scores ($\beta = -0.243, 95\% \text{ CI: } -0.436, 0.009$). No gender differences were detected. Results were broadly robust to the inclusion of additional controls. This novel evidence from a Sub-Saharan African country highlights the need for multi-sectoral approaches including social protection and nutrition to support early child development.

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Household Food Insecurity and Early Childhood Development: Longitudinal Evidence from Ghana

The burden of food insecurity is large in Sub-Saharan Africa, yet the evidence-base on the relation between household food insecurity and early child development is extremely limited. Furthermore, available research mostly relies on cross-sectional data, limiting the quality of existing evidence. We use longitudinal data on preschool-aged children and their households in Ghana to investigate how being in a food insecure household was associated with early

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