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Why Is Child Malnutrition Lower in Urban than Rural Areas? Evidence from 36 Developing Countries

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While ample evidence documents that urban children generally have better nutritional status than their rural counterparts, recent research suggests that urban malnutrition is on the rise. The environment, choices, and opportunities of urbanites differ greatly from those of rural dwellers—from employment conditions to social and family networks to access to health care and other services. Given these differences, understanding the relative importance of the various determinants of child malnutrition in urban and rural areas—and especially whether they differ—is key to designing context-relevant, effective program and policy responses for stemming malnutrition.

Purpose of This Paper

This study uses Demographic and Health Survey data from 36 developing countries to address the question of whether the socioeconomic determinants of child nutritional status differ across urban and rural areas. The purpose is to answer the broader question of why child malnutrition rates are lower in urban areas. The socioeconomic determinants examined are women's education, women's status, access to safe water and sanitation, and household economic status.

The Data

The research employs data from 36 of the most recent Demographic and Health Surveys conducted between 1990 and 1998 in South Asia, Sub-Saharan Africa (SSA), and Latin America and the Caribbean (LAC). The countries were chosen based on the availability of data on child nutritional status. The sample analyzed for this paper includes 129,351 children under age 3 and 117,007 women of childbearing age, usually their mothers.

The DHS data sets are from nationally representative surveys of households. Due to similar survey instruments and data collection methodologies, the data are largely comparable across countries.

The determinants of child nutritional status examined in the present research are all closely related to at least one of the three underlying determinants of child nutritional status—household food security, care for women and children, and quality of the health environment. These determinants are fundamental to a child's dietary intakes and health status, which are more immediately related to nutritional status. This study further divides these underlying determinants into two groups: "proximal" (mother's nutritional status, prenatal and birthing care for mothers, and caring practices for children), and "socioeconomic" (maternal education, women's status,

access to safe water, access to sanitary toilet facilities, and economic status).

The Methodology

To investigate which determinants of child nutritional status are responsible for children's better nutritional status in urban areas, both height-for-age Z-score (HAZ) and weight-for-height Z-score (WHZ) are used as dependent variables. The analysis seeks to establish whether the *levels* of various determinants differ across urban and rural areas and, in addition, whether the strength of association between them and child nutritional status differ. The first step of the analysis is to test for structural differences in the determinants of child nutritional status and their strength of association across urban and rural areas. The second step is to compare the levels of both the socioeconomic and proximal determinants across urban and rural areas, taking into account any structural differences found in the socioeconomic determinants.

The Results

The analysis shows little evidence of differences in the nature of the socioeconomic determinants of child nutritional status or in the strength of their association between urban and rural areas. This is true across the three regions and for most of the determinants examined. Where urban-rural differences in the strengths of associations are detected, they are usually of small magnitude.

The socioeconomic factors studied are generally associated with HAZ in the expected direction: higher maternal education and decisionmaking power relative to men within households, improved water and sanitation services, and higher household economic status are all positively associated with HAZ.

The same findings apply to WHZ, although associations with the socioeconomic determinants are generally weaker than with HAZ, and the overall predictive power of the models

is lower. This is typically found for WHZ, which seems to be more difficult than HAZ to predict accurately with the types of child, maternal, and household socioeconomic characteristics generally used.

Thus, to a large extent, the overall hypothesis of the existence of fundamental urban-rural differences in the socioeconomic determinants of children's nutritional status

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was not confirmed by this analysis. As expected, however, there were marked differences in the levels of the socioeconomic determinants themselves between urban and rural areas. This is generally true for individual countries as well as overall regional averages. Large differences in favor of urban areas are found in women's education, availability of water and sanitary facilities, socioeconomic status, and, to a lesser extent, women's relative decisionmaking power.

Across regions, women living in urban areas are three to four times more likely to have secondary schooling than those who live in rural areas. Similarly, while 10–20 percent of the urban population lacks access to sanitary facilities, more than three-quarters of the rural population in South Asia, and close to half in SSA and LAC, are in this situation.

Large gaps between urban and rural areas are also observed in levels of all the proximal determinants examined, especially maternal prenatal and birthing care, quality of complementary feeding, and immunization levels. The only exception is breastfeeding practices, which are consistently worse in urban areas.

Discussion and Policy Implications

These findings suggest that the better nutritional status of urban children compared to their rural counterparts is due not to a difference in the nature of the determinants, but to the cumulative effect of a series of more favorable conditions, including better socioeconomic conditions and an advantage related to proximal determinants.

Overall, compared to rural children, urban preschoolers have better nourished mothers who also are more likely to receive prenatal and birthing care, which, in turn, may reduce the risk of intrauterine growth retardation. Urban infants are therefore more likely to be born of adequate size and be less susceptible to early morbidity and mortality. These favoring conditions, combined with better feeding practices, greater use of health services for preventive and curative care, and greater use of adult substitute caretakers result in improved growth and probably reduced morbidity. These characteristics, potentiated by higher maternal education, higher

incomes, greater decisionmaking power of women relative to men, and wider availability of health, water, and sanitation services, result in lower rates of childhood malnutrition in urban areas.

Despite some limitations, the analysis presented here demonstrates such a high level of consistency in findings across countries and regions with widely different environmental and economic conditions that there is no doubt that when considered as a whole, urban areas offer, on average, more favorable living conditions and opportunities. There are, of course, distinct groups of urban children who live in conditions that are at least as precarious as those of their rural counterparts and who are as vulnerable and at-risk of poor health and nutrition as rural children.

The fact that the determinants of malnutrition do not differ between urban and rural areas implies that the same program and policy frameworks and tools can be used in both areas. Targeting mechanisms, however, will have to be designed differently for urban areas, because the urban poor tend to be geographically scattered and urban livelihoods are largely dependent on employment away from home for both men and women. This greatly limits the ability of the urban poor to participate in programs and interventions targeted to their place of residence.

Thus, urban program targeting, implementation, and operations will have to be tailored to take into consideration the specific nature of urban livelihoods and to ensure that interventions complement, rather than interfere with, the livelihood strategies of the urban poor.

Keywords: child nutritional status, malnutrition, urban, rural, Demographic and Health Survey data

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