

The Role of Nutrition and Women's Empowerment in Human Capital Development

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Abstract

Nutritional status and the empowerment of women have massive implications on the physical and mental development of their children. We explore the role of nutrition of women and children in the household and further posit the importance of the mother's human capital. Increases in women's human capital positively affect the efficiency of management and the allocation of other inputs for household production, especially for staples, vegetables and poultry. A model for human capital is postulated in which the primary input variables are the education of men, the education of women, health, training and a mother's human capital. Due to the amplifying and intergenerational benefits of women's human capital, we find that investments in women's capital have greater positive benefits and implications for long-term food security and economic development than traditional academic models credit.

Keywords: nutrition, food insecurity, poverty, women's empowerment.

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Introduction

Good nutrition is not only a concern for the health and development of an individual but also has major implications for the health and productivity for an entire country. “Good nutrition starts in the household, but the benefits ripple outward. The health and productivity gains from ending malnutrition can elevate an entire country’s economic growth and human development” (UNDP 2012a, p 86). While malnutrition can negatively impact an individual at any stage, it is during pregnancy and the first two years of a child’s development that malnutrition can cause permanent damage to the growth, cognitive capacity, and the immune system of the child (UNDP 2012a). Thus, the nutrition of women – prior to pregnancy, during pregnancy, and while breast feeding – significantly impacts the human capital potential of their children.

Physical and mental development stunting, as well as the increased likelihood of perinatal diseases, are highly associated with mothers who were malnourished prior to and during pregnancy. For a child, the first 1,000 days of life, beginning at conception, are the most vital for development. It is during this time frame that irreversible damage can be caused by malnutrition (UNDP 2012a). Thus, the health and nutrition of both women and children are a vital concern for developing countries (Figure 1).

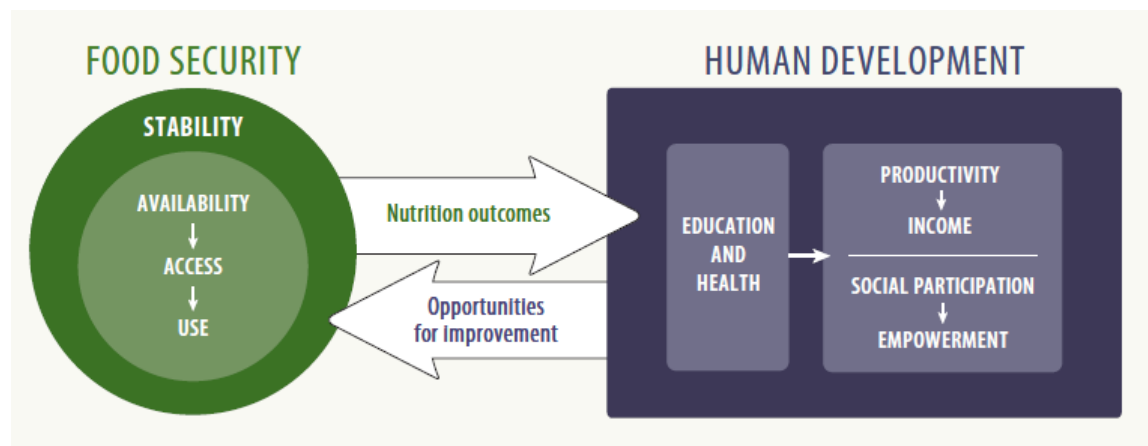


Figure 1. Nutrition Outcomes Are at the Intersection of Food Security and Human Development
Source. UNDP Africa Human Development Report 2012a

Economists have long recognized that human capital was an important input for economic development but strayed away from explicitly analyzing the effects of investments in human capital (Shultz 1961). This analysis was avoided for many reasons, among them that it was associated with cultural, moral and philosophical stigmas. For many, it was offensive to consider man as a form of capital, because it reminisced on the ugly past of treating man as property: i.e., slavery. Despite these social limitations, it was clear that human capital was a vital input for economic development and that different levels of investment in human capital resulted in differing rates and levels of economic return (Shultz 1961). But the analysis of investments in human capital cannot stop there. What must now be asked is, “Are all investments in human capital equal? And, do increases in men’s and women’s human capital have the same effects and implications?”

For the past half century, economists, politicians, and activists alike have been promoting the suffrage, equality and empowerment of women worldwide. But today, the importance of women's role in development is still not generally isolated and emphasized economically. Analysts have been wary of postulating the idea that men and women are possibly unequal in effecting differential returns to human capital development. Thus, our objective is to further analyze the role of women in human capital development within developing nations.

The benefits of nutritional improvements and social empowerment of women, the nexus of intergenerational changes in human capital (Figure 2), suggests a hypothetical model that highlights the cumulative and intergenerational importance of women's human capital. That is, at the margin, investments in women's human capital, at least in rural communities and developing nations, have greater positive implications in human capital development than do investments in men's. Because children are the future human capital resource of a country, it is vital to more effectively invest in and promote the development of those intellectual and physical resources.

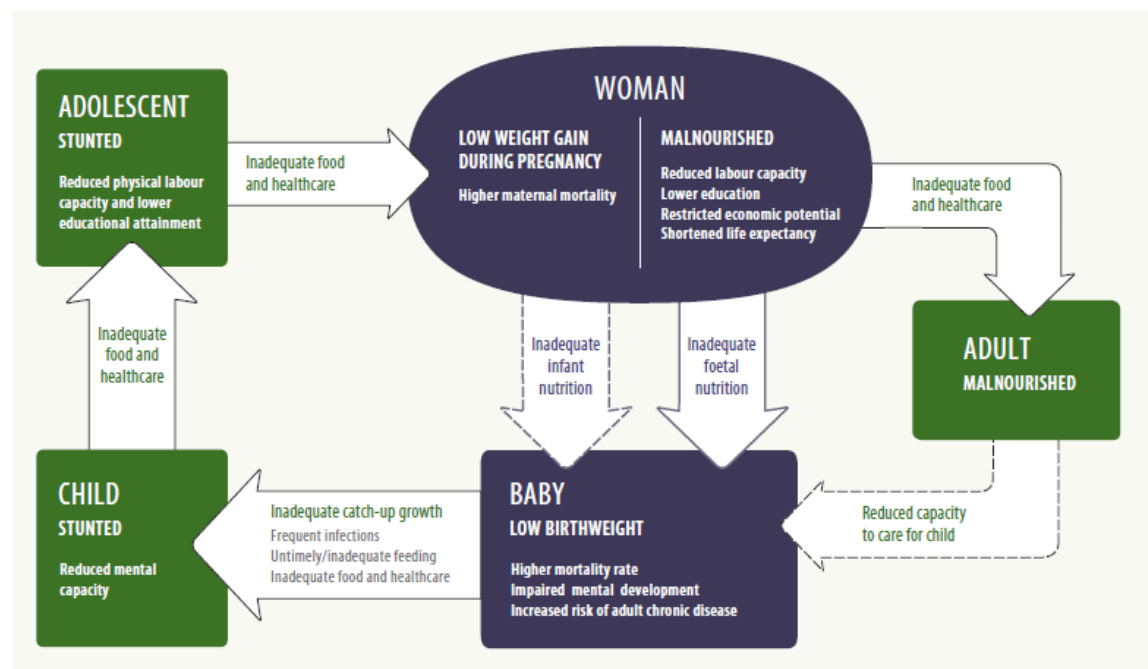


Figure 2. Intergenerational Effects

Source. UNDP Africa Human Development Report 2012a

A Model for Household Production in Development

Many women in developing countries participate in the informal production/ marketing sector of the economy, but the magnitude of this role can be undervalued. The household production function is a vital component of household welfare in developing nations. Management plays a primary role in this function, and increases in women's human capital positively affect the efficiency of management and the allocation of other inputs for household food production, especially for staples, vegetables and poultry.

Initially, most economic models of household production and consumption prescribed households as single production and consumption bodies with a unitary structure (Doss 2013). This unitary structure implied that there was conformity in household decision-making and that the household decision-making process was not affected by the distribution of and access to resources within the household. The unity structure also assumes that there are no conflicting dynamics between household members in the decision-making process (Doss 2013). Since the initial introduction of the unitary model, research has shown that the household decision-making process is much more complex than originally implied, especially for households that do not fit the western assumption of the nuclear family and may have multiple spouses and generations within a 'family unit'.

Collective models contrast to the unitary model in that they treat the household as a collection of different decision-making units, instead of representing the household as single conformed unit (Elad 1999). The concept of different measures of utilities for different household members has a real effect on the evaluation of household welfare. Under the unitary structure model, household utility was the same for all household members, because it was assumed that they all had equal access to household resources household utility could be measured by a general indicator such as total household income. But what if members of a household do not have equal access to resources or there are disparities between members? Then the assumptions of the unitary structure of the household would not hold true, and it would be necessary to find better indicators of the welfare of different household members.

Empowerment can be described as the process through which an individual gains access to the ability to make more choices (Kabeer 1999). Women's empowerment is often associated with increased access to education, income-earning opportunities, health care, legal rights, etc. Women's empowerment also relates to increases in participation in household decision-making processes and thus the allocation of resources within the household. Research has shown that increases in women's involvement in the household decision-making process have positive implications for the health, education, and nutrition of their children (Todaro and Smith 2003). Typically, the main inputs in the household production function have been considered to be Land (D), Labor (L) and Capital (K). The household transforms these intermediate inputs into final goods that they can use and consume (Ironmonger 2000). However, another component and an important input for household production to consider is Management (M):

$$(1) \quad \text{HH production } Q = f(D, L, K, M)$$

Management is a measure of the ability to optimally allocate and organize resources in production. The quality and productivity of management as an input depends largely on the household's ability to internally negotiate and allocate resources to maximize utility. Efficient management is affected by the household's equity, education, social climate, and experience, or the household's accumulation of human capital.

A subset of the collective models, which treats households as a collection of decision-making units, includes cooperative bargaining models (Doss 2013). Bargaining power is the capability of different members of the household to exert influence on the other members. Women's bargaining power affects their ability to participate and negotiate in the household decision-making process. Since bargaining power is a social dynamic, it is physically unobservable and

difficult to truly capture and quantify. Yet much research strongly suggests that education, income and assets (both physical and social) all contribute to women's bargaining power (Doss 2013). From the assumptions that women's bargaining power is positively affected by education, income and acquisition of assets (Doss 2013), and that human capital is vital for economic productivity (Todaro and Smith 2003) as well as a function of education, health, training and empowerment, it can therefore be implied that women's bargaining power is also positively affected by increases in human capital. Increases in women's bargaining power, corresponds with their ability to participate in the household decision-making process. Women's participation in the household decision-making process is associated with more equitable resource allocations and increases in child health, education, and overall welfare. It is thus hypothesized that increases in women's human capital have a greater positive impact on households, communities and society as a whole than men's. Additionally, in the biological sense, a mother's health and nutrition (or lack thereof) during pregnancy and breastfeeding affects the child's health and development, which are fundamental building blocks to the child's human capital. Thus, a child's human capital is based on the accumulation of his/her mother's human capital, posited:

$$(2) \quad HK = h(E_m, E_f, H, T, MHK, Ch),$$

Where $HK = HDI$, combining indicators of life expectancy, educational attainment and income into a composite human development index....expressed as a value between 0 and 1.... "Using disaggregated HDIs at the national and sub-national levels helps highlight the significant disparities and gaps: among regions, between the sexes, between urban and rural areas and among ethnic groups. The analysis made possible by the use of the disaggregated HDIs should help guide policy and action to address gaps and inequalities." (UNDP 2013).

E_m = Expected Years of Schooling, Male
 E_f = Expected Years of Schooling, Female
 H = Health (Relative Life Expectancy)
 T = Training
 MHK = Mothers Human capital
 Ch = under five mortality (per 1,000 births)

Through marginal analysis and due to the amplifying and intergenerational benefits of women's human capital, we find that investments in women's capital have greater positive benefits and implications for long-term food security and economic development than traditional academic models have given credit (Huguley 2013).

Conclusions and Implications

The intent of this research was to explicitly analyze the role of women's human capital in overall human capital development. While much of this research focuses on improvements in women's human capital in relation to the benefits it has to the human capital of their children, this should not take away from the fact that improvements in women's human capital have positive implications in their own right. However, what truly separates the difference between investments in men's and women's human capital is the intergenerational implications of women's human capital. We conclude with reaffirming that investments in men's and women's human capital can have very different implications. In countries where inequalities between men

and women are high, investments in women's human capital have greater positive implications for the long-term development of such countries than do equivalent investments in men's.

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