Women's Education or Household Wealth: Which is the Best Predictor of Child Health in Developing Countries?

1. Introduction

The association between socioeconomic status (SES) and child health and survival has been extensively investigated in the developing world, with consistent evidence of poorer health outcomes among people from less privileged socioeconomic groups. Mosley and Chen's and UNICEF's frameworks postulate that socioeconomic factors at different levels (community, family) operate through more proximate determinants to influence child health and survival. The socioeconomic factors that influence child health include family-level variables such as education, employment, income or wealth, as well as community-level covariates such as place of residence, availability of health-related services and relevant socioeconomic infrastructures. Other community-level socioeconomic factors calculated from individual and household variables such as percentage of educated adults or mean income have also been shown to affect resident's health beyond and above the corresponding individual or family-level variables. Though a considerable body of research has shown a strong association between mother's schooling and child health and survival in developing countries, the extent to which the relationship merely reflects the impact of economic advantage on health and survivorship, or reflects the influence of education in the community, has not yet been fully elucidated.

This piece of research seeks to contribute to the debate by focusing on the effects of women's education and household wealth on child health. More specifically, the objectives of this paper are three-fold: (i) to compare the effects on child malnutrition of household wealth and women's education measured at both the household and community levels; (ii) to investigate the extent to which community female education influences child's nutritional status, above and beyond the child's own mother's education; and (iii) to examine the interrelations and pathways between community female education, maternal schooling and household wealth as determinants of child malnutrition.

2. Data and methods

We use the most recent data sets available as of January 2005 from the Demographic and Health Surveys (DHS) of the following 15 countries: Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Ghana, Nigeria, and Togo from Western and Central Africa; and Kenya, Madagascar, Malawi,

Mozambique, Tanzania, Uganda, Zambia and Zimbabwe from Eastern and Southern Africa. The outcome variable is child stunting, which results from recurrent episodes or prolonged periods of nutrition deficiency for calories and/or protein available to the body tissues, inadequate intake of food over a long period of time, or persistent or recurrent ill-health. Three key predictors are of interest: (i) Household wealth index that captures household's possessions, type of drinking water source, toilet facilities and flooring material, and recoded as poorest (bottom 30%), middle (next 40%), and richest (top 30%), with poorest as the reference category; (ii) Mother's education, coded as no education (reference category), primary, secondary or higher; and (iii) community women education, defined as the proportion of educated adult female (level of education primary or higher), and recoded as poorest (bottom 30%), middle (next 40%), and richest (top 30%), with poorest as the reference category. The control variables used in this study are urban-rural place of residence, father's education, and relevant variables at the mother and child levels. Multilevel logistic regression models are used for the analyses.

3. Summary of the results

Our results show that the maternal education effects are statistically significant in 11 countries (out of 15); community education is significantly associated with child health and in the expected direction in five countries, and in the opposite direction in Kenya and Madagascar. Overall, household wealth emerges to be the best predictor of child malnutrition in almost nine countries, whereas maternal education has the largest effects in five countries. Finally, the effect of community women education outweighs that of the two other socioeconomic variables in Nigeria. Our results also indicate that where they are present, the effect of mother's schooling on child malnutrition could be largely attributed to economic advantage.