Family Structure and Membership: Who affects the Nutritional Status of Children in Cambodia?

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Abstract:

While the literature on children's nutritional status is wide, there still remains little consensus on the factors affecting the nutritional status of child. Yet, the literature on grandparents suggests their important role in poor households in addition to other household members. Therefore, this paper uses the Cambodia Demographic and Health Survey to examine the influence of household structure and members affect on the nutritional status of children under the age of five. The analysis shows different household members having different impact on young children.

Introduction and Literature Review:

While there has been numerous works exploring the factors that influence nutritional status of children, there still remains little consensus (Babu et al. 2009). Moreover, there has been little progress in identifying an intervention with sustained improvement in child nutrition despite the investment in education on nutrition in developing countries (Aubel et al. 2004). Therefore, instead of examining nutritional status from a macro perspective, which may potentially entail massive resources for a public health intervention, this study examines the influence of children nutritional status from a micro perspective. As the immediate environment of children is their family and the household in which they are raised. The context of this environment can potentially shape their health status. Thus, this research will be exploring the nexus of family structure and children's nutritional status.

This nexus is explored for Cambodia, a developing country where 40% of the children under the age of five experience chronic malnutrition. In addition, approximately 35% of the Cambodian population lives in non-nuclear households. Most of these non-nuclear households have at least one coresiding grandparent. The prevalence of these multigenerational households offers a unique opportunity to examine the role of grandparents in a poor agricultural environment where time for labor and childcare is vital.

While the roles of grandparents can make a dramatic difference for poor families, other household members are also essential members in considering chidren's nutritional status. This includes the roles of parents. The level of investment children receive from either single or two-parents may impact children's growth potential (Bronte-Tinkew and DeJong 2004, Desai 1992). Moreover, coresiding siblings may either benefit young children in the household through their early

labor market participation or prove to competitors for resources (Desai 1992,1995, Ho 1979, Linnemayr et al. 2008).

Research Question:

Therefore, this research asks the following questions:

1) Do children gain a nutritional advantage living in multigenerational household compared to nuclear households? That is, does the presence of grandparents improve children nutrition?
2) Do children residing in single-parent households experience a nutritional disadvantage?
3) Does the presence of other siblings in the household provide a nutritional advantage or disadvantage?

Data and Method:

To address these questions, I analyzed the 2000, 2005, and 2010 Cambodia Demographic and Health Surveys (CDHS). Through a complex multistage probability sampling design of households, information was collected from women aged 15-49. In half of the household sample, the CDHS collected nutritional data for children under the age of five.

Only households with children under the age of five whose anthropometric measurement were collect at the time of the survey were considered for the analysis. Furthermore, the sample was also restricted to nuclear and multigenerational households. Therefore, the analytic sample contained 7, 971 children from 6,144 households.

The analysis was conducted in two parts. First, a descriptive analysis is conducted examining children's height status in relationship to the presence of other household members and by household structure. Second, as children are nested in households, a two-level multilevel model analysis conducted. In addition, as children level of malnutrition differed by aged group, the analysis was conducted separately for childrend aged 0-2 and 2-4.

Results:

Preliminary analysis suggests that there are differences in children's height by household structure. The presence of siblings in the household increase the level of malnutrition for younger children, and grandparents help mitigate malnutrition for coresiding children.

Addressing Research question 1:

Children height does not seem to differ by household structure until examined by other household factor. At which point, it appears that the presence of grandparents in multigenerational household slightly improve children's growth.

Addressing Research question 2:
Children residing in single-parent household are shorter than two-parent households and are worse off than those with coresiding grandparents. That is, children with a single parent in a multigenerational household are about -1.82 sd on their height-for-age z-score (HAZ) compared to -1.96 sd for those in nuclear households.

Addressing Research question 3:
The presence of other children in the household increases the risk of malnutrition for children under the age of five. The age groups of siblings have different impact on different age group of children. For instance, children under the age of five have a greater impact on children aged 0-2. That is, each additional child under the age of five in the household reduces a child, whose of the age 0-2, HAZ score by -0.18. Whereas the presence of older children in the household—those over the age of five—have a greater impact on children aged 2-4. The presence of each additional child over the age of five reduces the HAZ score by -0.07 for a child aged 2-4.

Study Limitation:

As the composition of household structure shifts with members entry and exit, the presence of grandparents in the household may occur after children's nutritional status deteriorate. This would then not be captured by the cross-sectional surveys. Instead, longitudinal data on the household would elucidate the relationship between the presence of grandparents and children nutritional status.

Furthermore, as the anthropometric measurements were only collected on surviving children, this may bias the results since children who died before the survey could have died of sever malnutrition.

Bibliography:

Aubel, J., Tour´e, I., and Diagne, M. (2004). Senegalese grandmothers promote improved maternal and child nutrition practices: the guardians of tradition are not averse to change. Social Science & Medicine, 59(5):945 – 959.

Babu, S. C. and Sanyal, P. (2009). Chapter 9 - effects of individual, household and community indicators on child's nutritional status–application of simple linear regression. In Food Security, Poverty and Nutrition Policy Analysis, pages 155 – 174. Academic Press, San Diego.

Bronte-Tinkew, J. and DeJong, G. (2004). Children's nutrition in jamaica: do household structure and household economic resources matter? Social Science & Medicine, 58(3):499 – 514.

Desai, S. (1992). Children at risk: The role of family structure in Latin America and West Africa. Population and Development Review, 18(4):pp. 689–717.

Desai, S. (1995). When are children from large families disadvantaged? evidence from cross- national analyses. Population Studies, 49(2):pp. 195–210.

Ho, T. J. (1979). Time costs of child rearing in the rural philippines. Population and Development Review, 5(4):pp. 643{662.

Linnemayr, S., Alderman, H., and Ka, A. (2008). Determinants of malnutrition in senegal: Individual, household, community variables, and their interaction. Economics & Human Biology, 6(2):252 – 263.