

I recently completed a report on the prevalence, trends, and consequences of orphanhood for a single country, Malawi, with support from UNICEF. In that project I pooled three national surveys that were conducted during the 2004-6 interval: a DHS sponsored by USAID; a MICS sponsored by UNICEF; and an IHS sponsored by the World Bank. For the proposed PAA paper, I plan to use only DHS surveys from three to five Sub-Saharan countries, following a similar design to the one used for Malawi but focusing on education, measured with current school attendance and highest completed grade. I am not certain which countries will be selected, but expect to use Zambia, Malawi, and Tanzania. The remainder of this extended abstract refers only to the analysis already completed for Malawi. It consists of a much-distilled version of one chapter of the UNICEF report. I emphasize that the UNICEF report and the proposed PAA paper will be very distinct documents.

In Malawi, as in many other Sub-Saharan African countries, a substantial number of children do not live in the same household as their parents, even when the parents are alive. It is possible that children who live separately from their parents—even though the parents are alive—have outcomes that are similar to those for children whose parents have died. This empirical question can be investigated because all three surveys include information about co-residence as well as survivorship of parents.

An appendix [not included in this abstract] goes into some detail to develop a variable that captures the distinction between orphanhood and parental absence. The result is a four-category typology described as “parental status”. The four categories are described below. The first and largest category consists of children who have two living parents and are living with both of them.

Parental Status 1: Both parents are alive; child lives with both of them

Parental Status 2: Both parents are alive; child does *not* live with both of them

Parental Status 3: Child is double orphan or a single orphan living with the surviving parent

Parental Status 4: One parent has died; the child does not live with the surviving parent

Type 1 is a natural reference category. Type 2 represents a deviation from category 1 that is due completely to non-coresidence. Type 3 represents a deviation from category 1 that is due completely to orphanhood. Type 4 consists of a combination of orphanhood and non-coresidence; there is only one surviving parent and the child does not live with him or her.

Table 1 Percentages of children in categories of parental status, by age group of child. Combo 2004-6, weighted.

Parental Status	Age of Child				
	0-4	5-9	10-14	15-17	0-17
Parental Status 1	74.6	59.2	49.4	43.1	60.2
Parental Status 2	21.8	28.7	29.1	30.5	26.7
Parental Status 3	2.8	8.1	14.3	17.7	8.9
Parental Status 4	0.8	4.1	7.2	8.7	4.3
All	100.0	100.0	100.0	100.0	100.0

Table 1 gives the percentage distribution of children in these four types within age intervals 0-4, 5-9, 10-14, and 15-17. The reference category, 1, is the largest in each age group, but progressively becomes a smaller share as parents die or as living parents and the child tend to live separately. The levels and increases in category 2 are entirely due to children not living with surviving parents. The levels and increases in category 3 are entirely due to parental deaths. Category 4, which is smallest, consists largely of maternal orphans with a surviving father who are not living with that father. To a lesser degree it consists of paternal orphans with a surviving mother who are not living with that mother.

The principal observation from table 1 is that non-coresidence is far more common than orphanhood, and not just at the ages when children could be expected to leave the parental home, but also during ages 0-4, when issues of immunizations, nutrition, and other aspects of child health are important, and during ages 5-9, when it is crucial that children begin school and that their labour not be exploited.

Nearly all of the children who do not live with their parents are living with other relatives. The high prevalence of fostering, even when parents are alive, helps provide a ready cultural mechanism for the care of a child if the parents die (see Madhavan, 2004).

Several of the multivariate models used earlier in the report have been repeated in the same form, but with parental status, rather than orphan type, included as the explanatory variable. The results are presented in table 2.

Table 2. Adjusted coefficients (from OLS regressions) and odds ratios (from logit regressions) for the categories of the parental status variable. Regressions include controls for age (in single years), combinations of type of place of residence and sex, and survey.

Indicator	Parental Status Category			
	1	2	3	4
Has health Card	1.00	.81***	.78*	.61*
Number of DPT immunizations	0.00	-.27***	-.21***	-.82***
Underweight	1.00	1.11	1.18	1.54*
Fever in last two weeks	1.00	1.04	1.19*	1.44
Used bednet last night	1.00	.63***	.70***	.45***
Current school attendance	1.00	.78***	.85***	.78***

* one-tailed test is significant at .05 level

*** one-tailed test is significant at .001 level

A value of 1.00 in column 1 of table 2 indicates that the results come from a logit regression and are given as odds ratios. A disadvantage for children is indicated by odds ratios *greater than* 1.00 for “underweight” or “fever in last two weeks”. Odds ratios *less than* 1.00 indicate a disadvantage for “has health card”, “used bednet last night”, and “current school attendance.” A

value of 0.00 in column 1 indicates that OLS regression was used, and the results will be coefficients that are mean deviations from parental category 1. Thus, a negative deviation for “number of DPT immunizations” indicates a disadvantage.

A significant coefficient or odds ratio for category 2 indicates a disadvantage that is due entirely to non-orphans living separately from one or both parents. A significant coefficient or odds ratio in category 3 indicates a disadvantage that is due entirely to orphanhood. In category 4, orphanhood and non-coresidence with parents are confounded; these children are single orphans who are not living with the surviving parent. One-tailed critical values for test statistics have been used, because of the research hypothesis that it is optimal to have two living parents *and* to be living with both of them, and that any departure from this will be a disadvantage.

For these six selected indicators, table 2 contains a total of 18 coefficients or odds ratios. Every one of them is consistent with the hypothesis of a disadvantage from either orphanhood or non-coresidence. 14 of them are statistically significant, 10 of them at a .001 level. The numbers in columns 2 and 3 are comparable in magnitude, indicating that the impact of living apart from the parents is comparable to having lost one or both parents through death. The most serious penalties are consistently found in category 4, which consists of single orphans who are living apart from their surviving parent. The results given here indicate that fostering, when the parents are alive, typically has the same kinds of negative consequences as orphanhood.

Another dimension of household composition that could affect the welfare of orphans—and possibly non-orphans—is whether all the children age 0-17 in the household are orphans, or all are non-orphans, or there is a mix of the two types of children. To some degree, children in the same household are competing for limited resources, and it is possible that when there is a mix of the two types, orphans tend not to fare as well as non-orphans.

Table 3 [omitted] gives the weighted percentages of children age 0-17 in each combination of a household characteristic—whether the children in the household were all non-orphans, all orphans, or a mix—and the orphan status of the child. The great majority of children, 77.5%, are non-orphans and live in a household that consists entirely of non-orphans. At the other extreme, 6.7% of children are orphans and live only with orphans. 15.8% of all children live in mixed households; this percentage consists of the 9.3% who are non-orphans but have orphans in the same household, and the 6.5% who are orphans but have non-orphans in the same household.

The four types described in the previous paragraph can be a basis of a new typology or classification, called “mixture type”: (1) Non-orphan in a household with all non-orphans; (2) Non-orphan in a mixed household; (3) Orphan in a mixed household; (4) Orphan in a household with all orphans.

A subset of four indicators will be used to look at differences between these groups of children. Rather than tabulations, the analysis will simply use the appropriate form of regression. Controls include the number of children (of all types) age 0-17 in the household, in addition to the child’s age, sex, type of place of residence, and the survey. The number of children in the household is included as a categorical variable for the values 1, 2, 3, 4, 5, 6, 7, and 8+.

Table 4 [omitted] shows that orphans in households consisting exclusively of orphans are disadvantaged on all indicators. For two indicators, having a health card and household wealth, the disadvantage for the all-orphan households is statistically significant at the .05 (one-tailed) level. For example, the odds of having a health card in the all-orphan category are .79 times (or 21% less than) the odds in the reference (all-non-orphan) category.

For all indicators other than household wealth, orphans are also at a disadvantage when living with non-orphans. For example, the odds of being in school, for orphans in this type of household, are .93 times (or 7% less than) the odds in the all-non-orphan category.

Particularly striking, however, is the apparent *advantage* for children in the second column of the table, that is, for non-orphans who are living in a household that also includes orphans. A plausible interpretation of the fact that all the numbers in the second column are higher than the corresponding numbers in the first column is that orphans tend to be placed in households that are better off than average. Certainly, the presence of orphans in the household does not *cause* the other children to be better off; rather, there is probably selectivity, such that an orphaned child tends to be taken in by better-off members of the extended family. Evidence of this was seen earlier, especially in the analysis of the wealth index.

In order to focus on the hypothesis that orphans have a within-household disadvantage when they live with non-orphans, a direct comparison will be made between orphans and non-orphans living in mixed households. As stated earlier, 9.3% of all children are non-orphans who live with non-orphans and 6.5% are orphans who live with non-orphans. The relative size of these two percentages implies that in households that contain both types of children, the orphans are usually in the minority.

Table 5 [omitted] compares the orphans with the non-orphans in those households that include both types of children. The status of the orphans is compared with that of the non-orphans within these mixed households. Household wealth is not included, because it is a characteristic of the household, not the child, and should be the same for orphans and non-orphans in the same households.

The differences are dramatic. The odds that an orphan has a health card are only 75% as great as the odds for non-orphans. This is not statistically significant because of the relatively small number of cases, but is almost certainly real, because similar disadvantages are observed for the other indicators. The odds of using a bednet are only 60% as great for orphans as for non-orphans, and the odds of being in school are 73% as great. Orphans tend to do less well than non-orphans in the same household.