HIV/AIDS, Parental Death, and Child Schooling in Southern Africa

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INTRODUCTION

The HIV/AIDS situation in Southern Africa is one of the most pressing global health concerns today. Across Southern African countries, between 19% and 33% of adults 15-49 years are infected with the virus. Effective diagnosis and treatment has lagged, and life expectancy is exceedingly low. Life expectancy at birth now ranges between 34 and 47 years in Southern African countries (Population Reference Bureau 2006).

The personal human suffering due to illness is great. In addition, the high prevalence of HIV among adults, and the maturity of the epidemic in the region, is fueling concerns about the social and economic fabric of affected societies. The welfare of children is of particular concern. Some children are infected with HIV/AIDS, and like adults, until recently have had limited access to treatment. Many more children are not infected, but are affected by illness and death in their families, schools, and communities.

Within families, the experience parental death is exceedingly common. For example, in the southern African country of Lesotho, as we will show below, about 40% of sixteen year old children have at least one parent who has died. Although reasons for parental death vary, the primary cause of parental death in most Southern African countries is AIDS, and AIDS as a cause of death has been growing in this region (Children on the Brink 2004; Children on the Brink 2002). Among children who do not experience parental death, many co-reside with a parent or other adult infected with HIV. The family environments of children in this context are indeed fragile.

Although loss of a parent affects many dimensions of children's lives, a very tangible effect concerns schooling. Attending school is a primary childhood activity in Southern Africa, and one that is positively associated with health and social mobility. Emerging evidence suggests parental death is negatively associated with school attendance and attainment (Bicego et al. 2003; Case et al. 2004; Case and Ardington 2004; Nyamukapa and Gregson 2005; Nyamukapa et al. 2003). Despite this evidence, we have limited understanding about which children are most negatively affected and why, bounding the practical significance of this work. Our paper aims to elaborate this relationship between parental death and child schooling through analysis of survey and in-depth data from Lesotho, a country with high HIV prevalence.

Previous research suggests that living arrangements are important to the relationship between parental death and schooling. In fact, one of the most well-regarded papers on orphan disadvantage, that by Case, Paxson, and Abledinger (2004) drawing on DHS data for ten countries, concludes "…our results suggest that the special disadvantage that orphans face is primarily due to their living arrangements…the degree of relatedness between orphans and their adult caregivers is highly predictive of children's outcomes" (2004:506). Two points

are relevant here. First, the authors' careful analyses consider several factors, including household wealth, but identify living arrangements as especially important. Second, the authors measure children's relationships to the listed household head, and not living arrangements per se.

Household headship is a relevant, but incomplete measure of living arrangements for several reasons. First, household heads may or may not actually live with a child. In Southern Africa, as we will demonstrate, it is not uncommon for men to be household heads and live away from the household. Second, the social role of a household head may depend greatly on gender. Thus, living in a household headed by a mother could have different implications for a child than living in a household headed by father, although in both cases the child would be considered a child of the head. Third, the relationship of a child to a head captures a dyadic relationship. While headship is a key relationship, by measuring only headship we do not capture other potentially significant adult-child relationships. In this paper we explore whether and how these other dimensions are relevant.

We do so by drawing on survey and in-depth interview data from the country of Lesotho, where about 23% of those15-49 years are estimated to be infected with HIV (UNAIDS). It is noteworthy that we are investigating the relationship between parental death and schooling in a high HIV prevalence setting. Much of the previous work has been done in places where HIV prevalence at the time of survey was much lower than it is in southern Africa today.

DATA

The 2004 Lesotho Demographic and Health Survey includes roughly 10,000 school age children 6-16 years. With these data we are able to investigate associations between parental death, living arrangements, and schooling, with an emphasis on social role as it is defined by kinship and gender, as well as physical presence or absence. In addition to DHS data, we analyze over 100 in-depth interviews conducted with caregivers, children, and key informants in two village locations in Lesotho in 2004. These interviews provide detail on the factors that lead to observed associations between parental death and schooling. Importantly, they contain rich data on decisions related to living arrangements, in addition to information about decisions related to schooling.

The selectivity of living arrangements is a standard issue in analyses of this type. We use standard statistical techniques including household fixed effects. However, we also draw on the qualitative data to aid us in developing sound assumptions for statistical inference.

PRELIMINARY RESULTS

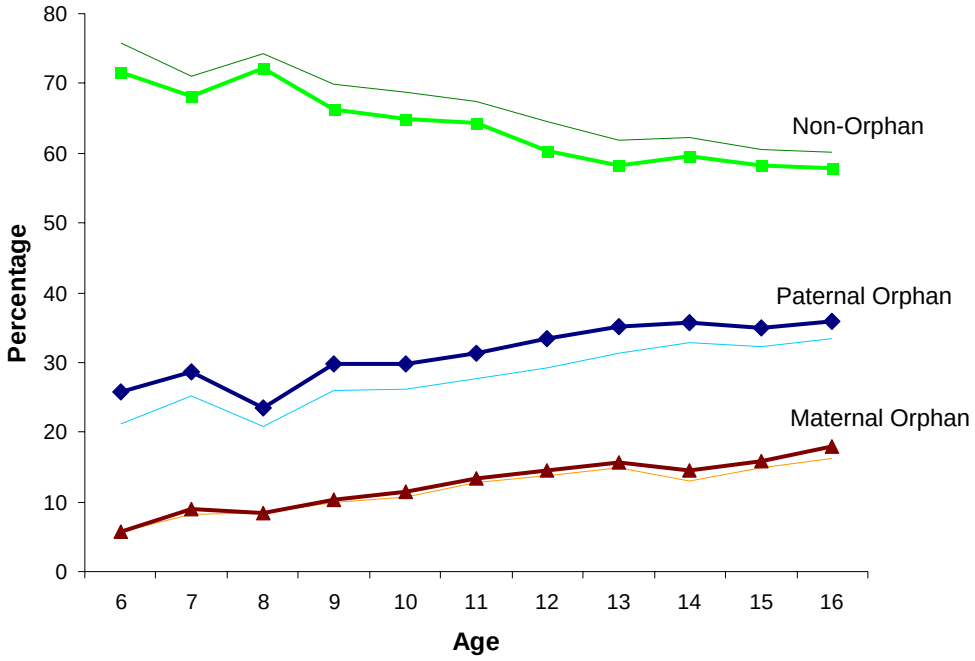
Figure 1 details the levels of orphan experience by age among children 6-16 in Lesotho. As expected the experience of parental death increases with age. However, in all years roughly 30% to 40% of children have experienced the death of at least one parent.

Nonetheless, as shown in Figures 2 and 3, many children are separated from parents for reasons other than parental death. During the schooling years between half and two-thirds of children live with a mother, while roughly 30% live with a father. Presence and absence of parents is an important component of all children's living arrangements and has potential implications for our understanding of the effects of parental death on children.

Finally, Table 1 shows a set of very simple models regarding child school enrollment. The first specification demonstrates the negative effect of orphan status on school enrollment. The second specification explores the extent to which this negative effect is due to differences in relationship to household head. Indeed, once headship is controlled, the effect of orphan status disappears. The third and fourth specifications explore whether the presence or gender of the head matters above and beyond kin connection. Presence seems to matter (and is negatively related to school enrollment) when considered in this additive fashion. Other models (not shown) suggest that interactions are important, however. We see no gender effects in the fourth specification. At the same time, we must be cautious in any conclusion about gender at this point. We know that headship, as well as headship presence and absence, is gendered; men are often absent heads, but women are rarely absent heads. In on-going analyses we are exploring these complexities and their implications for analysis. The qualitative data are also very helpful here, as they provide detail on how it is that men and women become heads, and stay or leave the household, and what they do in these capacities.

In further analyses we will explore more fully the intersection of gender, kinship, and presence as it relates to the relationship between parental death and schooling. We will consider whether and how child characteristics are important to the relationships we observe. We will also assess the importance of selectivity issues. To this point fixed effects specifications reveal similar results. However, we believe that blended orphan-non orphan households may exaggerate differences given how it is that orphans come to live in these households. We will explore this issue further with our in-depth interviews and in on-going analyses with the DHS.

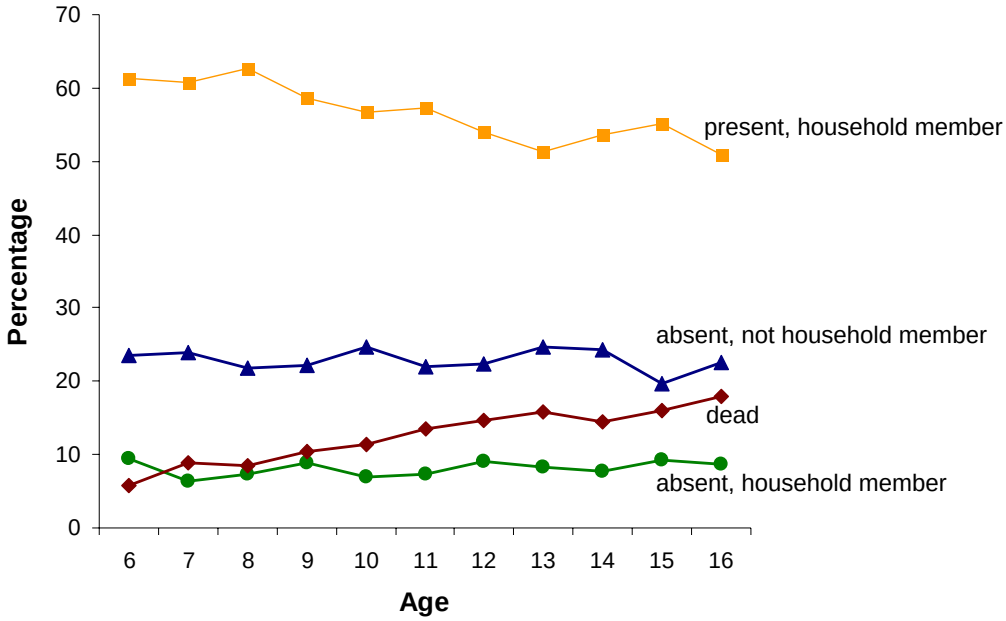
Figure 1. Orphan Status among Children 6-16 in Lesotho by Age, 2004



Source: Lesotho DHS 2004

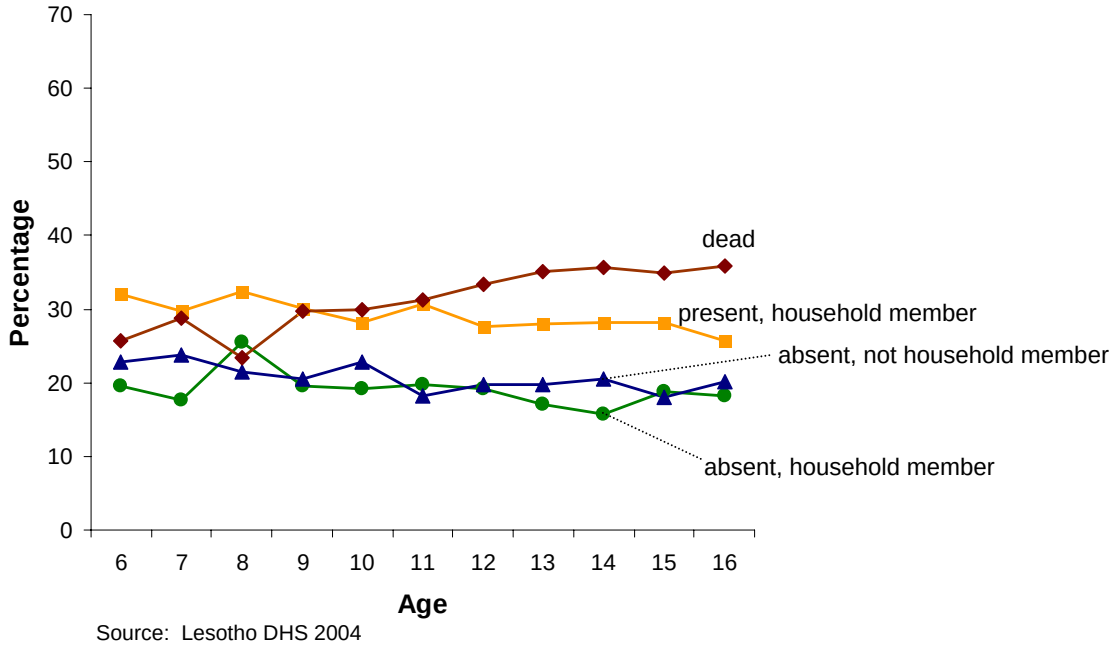
Note: Heavy marked lines indicate orphan level under the assumption that parents of missing or unknown status are dead. Light lines indicate orphan level under the assumption that parents of missing or unknown status are alive.

Figure 2. Mother Presence and Household Affiliation among Children 6-16 in Lesotho by Age, 2004



Source: Lesotho DHS 2004

Figure 3. Father Presence and Household Affiliation among Children 6-16 in Lesotho by Age, 2004



Source: Lesotho DHS 2004

Table 1. Logistic Regression of Current School Enrollment on Child and Household Characteristics for Children 6-16 in Lesotho, 2004

	(1)		(2)		(3)		(4)	
n=10,681	Coefficient	OR	Coefficient	OR	Coefficient	OR	Coefficient	OR
Intercept	-0.701 ***	0.50	-0.804 ***	0.45	-0.590 ***	0.55	-0.817 ***	0.44
	(0.097)		(0.103)		(0.120)		(0.104)	
Household Location								
Urban	0.104	1.11	0.059	1.06	0.084	1.09	0.053	1.05
	(0.092)		(0.095)		(0.096)		(0.095)	
Sex								
Male	-0.667 ***	0.51	-0.623 ***	0.54	-0.622 ***	0.54	-0.621 ***	0.54
	(0.058)		(0.059)		(0.059)		(0.059)	
Age								
Age 7	1.577 ***	4.84	1.619 ***	5.05	1.628 ***	5.10	1.619 ***	5.05
	(0.109)		(0.110)		(0.110)		(0.110)	
Age 8	2.360 ***	10.59	2.419 ***	11.24	2.426 ***	11.31	2.419 ***	11.24
	(0.132)		(0.134)		(0.134)		(0.134)	
Age 9	2.697 ***	14.84	2.797 ***	16.39	2.802 ***	16.48	2.799 ***	16.43
	(0.144)		(0.147)		(0.147)		(0.147)	
Age 10	2.579 ***	13.18	2.675 ***	14.51	2.681 ***	14.60	2.674 ***	14.50
	(0.134)		(0.136)		(0.137)		(0.137)	
Age 11	2.617 ***	13.70	2.791 ***	16.29	2.792 ***	16.31	2.794 ***	16.35
	(0.143)		(0.147)		(0.147)		(0.148)	
Age 12	2.544 ***	12.73	2.740 ***	15.49	2.750 ***	15.65	2.741 ***	15.50
	(0.133)		(0.138)		(0.139)		(0.138)	
Age 13	2.249 ***	9.48	2.422 ***	11.27	2.427 ***	11.33	2.424 ***	11.29
	(0.122)		(0.126)		(0.126)		(0.126)	
Age 14	1.872 ***	6.50	2.034 ***	7.65	2.037 ***	7.67	2.033 ***	7.64
	(0.113)		(0.117)		(0.117)		(0.117)	
Age 15	1.300 ***	3.67	1.478 ***	4.38	1.489 ***	4.43	1.476 ***	4.38
	(0.110)		(0.114)		(0.115)		(0.114)	
Age 16	0.638 ***	1.89	0.830 ***	2.29	0.834 ***	2.30	0.829 ***	2.29
(Omit Age 6)	(0.100)		(0.103)		(0.104)		(0.103)	
Household Wealth								
wealth index	0.382 ***	1.47	0.424 ***	1.53	0.409 ***	1.51	0.425 ***	1.53
(1=poorest; 5=richest)	(0.024)		(0.025)		(0.025)		(0.025)	
Orphan Status								
Orphan	-0.158 **	0.85	-0.041	0.96	-0.020	0.98	-0.071	0.93
(Omit Non-Orphan)	(0.058)		(0.062)		(0.062)		(0.068)	
Relationship to Household Head								
Grandparent Head			-0.057	0.95	-0.007	0.99	-0.076	0.93
			(0.069)		(0.070)		(0.071)	
Other Relative Head			-0.523 ***	0.59	-0.522 ***	0.59	-0.519 ***	0.60
			(0.089)		(0.089)		(0.089)	
Non Relative Head			-3.011 ***	0.05	-3.008 ***	0.05	-2.996 ***	0.05
(Omit Parent Head)			(0.170)		(0.170)		(0.170)	
Household Head Presence								
Head Present					-0.263 ***	0.77		
(Omit Head Absent)					(0.076)			
Household Head Sex								
Female Head							0.076	1.08
(Omit Male Head)							(0.076)	
-2 log likelihood	8280.067		7906.629		7893.624		7893.624	
df	14		17		18		18	

* p< .05; **p<.01; *** p < .001

Source: Lesotho DHS, 2004