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Grandmother Co-Residence and School Enrollment in sub-Saharan Africa

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Abstract

The HIV/AIDS pandemic in sub-Saharan Africa has brought renewed attention to the role of grandmothers as caregivers of children. Using 2004 DHS data, we examine the relationship between co-residence with a grandmother and child schooling in Lesotho, a country with one of the highest rates of HIV infection. Results confirm the critical role grandmothers play in the event of maternal death. Maternal orphans who live with a grandmother are just as likely to be in school as children living with a mother. The protective effect of living with a grandmother is also important for children whose mothers are alive but not affiliated with their households. The results of the analysis underscore the importance of attending to the simultaneous presence of mothers and grandmothers, as well as the circumstances associated with mother absence, when assessing the relationship between grandmother co-residence and child outcomes.

Keywords

grandmother; living arrangements; Africa; orphan; education; HIV/AIDS

The growing likelihood of illness and death among middle-aged adults in HIV affected areas in sub-Saharan Africa means that children are increasingly reliant on extended family, including grandparents, for their day to day needs (Bicego, Rutstein, & Johnson, 2003; Foster, Makufa, Drew, Kambeu, & Saurombe, 1996; HelpAge International, 2006; Madhavan, 2004; Ntozi, Ahimbisibwe, Odwee, Ayiga, & Okurut, 1999; Stephen Lewis Foundation, 2006; UNAIDS, 2006; Wilson & Adamchak, 2001). Indeed, considerable evidence suggests that grandmothers may be among the most important carers of children in the areas most affected by HIV and AIDS, such as southern Africa, where HIV prevalence among those 15–49 years now ranges between 16% and 26% (UNAIDS 2007).¹

Despite the growing attention grandmothers in this region receive for the care they provide in the midst of the HIV/AIDS pandemic, we know surprisingly little about the implications of grandmother-grandchild co-residence for children. In this paper we explore children's co-residence with a grandmother and its association with school enrollment in Lesotho. Because in Lesotho women are the primary caregivers of children, as they are in much of southern Africa, we focus on the implications of grandmother co-residence in situations of maternal presence and absence. Significantly, our analysis focuses on more than maternal death. We explore the implications of grandmother co-residence when mothers are present, absent and household members, absent and not household members, and dead. These distinctions recognize that the circumstances surrounding mother absence are relevant to

¹Southern Africa includes Botswana, Lesotho, Namibia, South Africa, and Swaziland.

associations between grandmother co-residence and child outcomes. In addition, these comparisons sharpen our understanding of the relationship between grandmother presence and child school enrollment for maternal orphans.²

We focus on schooling because it plays a key role in a child's later life opportunities (United Nations, 1994) and is frequently disrupted by parental absence or death (Allemano, 2003). Previous research on child schooling has considered the implications of headship in greater detail than the implications of co-residence. Children living in parent or grandparent headed households have better schooling outcomes than those in households headed by other relatives or non-relatives (Ainsworth, Beegle, & Koda, 2005; Case, Paxson, & Ableidinger, 2004; Nyamukapa & Gregson, 2005; Shapiro & Tambashe, 2001). Indeed, in many sub-Saharan African countries, including those much affected by HIV/AIDS, most children live in households headed by parents or grandparents (Case et al., 2004). Thus, our study builds on and complements this literature on headship by examining in greater detail children's co-residential experiences and their association with schooling, with a focus on the implications of grandmother co-residence.

Lesotho is a particularly appropriate context in which to examine this relationship. HIV prevalence in Lesotho was estimated at 23% among adults 15–49 in 2005, with only about 14% of infected individuals receiving antiretroviral therapy (ART) treatment (UNAIDS, 2006). In 2005, approximately 18% of children in Lesotho were orphans, of these an estimated 65% were orphaned due to AIDS (UNICEF, 2005). Lesotho is one of the many countries in sub-Saharan Africa where grandmothers have been recognized as particularly important caregivers (UNICEF, 2004a). It is also one of the many countries where concern exists about schooling differentials between orphans and non-orphans (UNAIDS, 2006). At the same time, in Lesotho, as in other countries of southern Africa, care of children by extended relatives is not solely a response to high HIV prevalence. In 2004, 43% of children 6–16 years in Lesotho did not live with a mother, most for reasons other than maternal death. This variation in living arrangements is useful analytically for understanding how differences in family contexts shape the associations between grandmother co-residence and schooling.

Grandmothers and Child Well-being

Existing evidence from African settings suggests that co-residence with a grandmother may offer benefits to grandchildren. Ethnographic research from Sierra Leone indicates that grandmothers are thought to be good caretakers of young children because they “love and pamper their small charges” (Bledsoe & Brandon, 1992, p. 290). These “grannies” are also assumed to be less likely than other women to discriminate against children because they have no young children of their own competing for food (Bledsoe & Brandon, 1992).³ Research in Zimbabwe has also established that grandmothers are believed to be impartial and generous compared to other relatives (Nyamukapa & Gregson, 2005).

Evolutionary theory supports the idea that grandmother co-residence may be beneficial for children. Hamilton's rule (Hamilton, 1964), which proposes that biological relatedness is positively related to altruism, suggests that in the absence of parents, children living with grandparents may be better off than children living with more distant relatives or non-relatives. Moreover, *grandmothers* may be especially likely to support the well-being of their grandchildren. The 'grandmother hypothesis' in human evolutionary biology proposes

²In accordance with the literature on orphans in sub-Saharan Africa, we use the term orphan to refer to any child with one or more deceased parents. A maternal orphan is a child with a deceased mother, regardless of the vital status of the father.

³In Bledsoe and Brandon's work the term “grannies” refers to both grandmothers and elderly women, but commonly the maternal grandmother.

that one reason that human females live beyond reproductive age is that their survival can be beneficial to the reproductive success of their kin and the survival of their kin's offspring (for example, see Sear, Steele, McGregor, & Mace, 2002).

Other research, however, questions whether grandmothers are ideal caregivers. A grandmother's promotion of the well-being of her grandchildren may be affected by her beliefs, knowledge, access to resources, and other physical and emotional constraints. For example, grandmothers might be less knowledgeable than other caregivers about modern healthcare and child care (Bledsoe & Brandon, 1992; Foster et al., 1995). Hunter (1990) expresses doubt that older guardians in Africa, such as grandmothers, will be as able as younger caregivers to provide children with discipline, socialization, food, clothing, shelter, and healthcare. In fact, many researchers suggest that grandmothers may be too old and weak to care effectively for AIDS orphans in Africa (Foster et al., 1995; Hunter, 1990; Ntozi & Mukiza-Gapere, 1995; Nyambedha, Wandibba, & Aagaard-Hansen, 2003). Further, households headed by older individuals, such as grandmothers, may have lower incomes, compromising their ability to provide for children (Lloyd & Gage-Brandon, 1993; Nyambedha et al., 2003).

Finally, grandmothers of orphans may face extra difficulties in caring for their grandchildren if their own child is the parent who died, especially from a long illness such as AIDS. Along with the new responsibilities of looking after their orphaned grandchildren, they may simultaneously face the financial difficulty of paying for their adult child's treatment and funeral, as well as the loss of income support from this adult child (Knodel & VanLandingham, 2002). These financial stresses combine with the emotional impact of losing a child and the emotional impact their grandchildren face from losing a parent (Knodel & VanLandingham, 2002; Makame, Ani, & Grantham-McGregor, 2002; Sengendo & Nambi, 1997), all of which could negatively affect their abilities as caregivers.

Thus, our investigation into the association between co-residence with a grandmother and child schooling in Lesotho is motivated by a literature with mixed views on the implications of grandmothers for children's well-being. It is further motivated by the significance of grandmothers in children's lives in the midst of a generalized HIV epidemic. With about one-fifth of young children orphaned in Lesotho, and many more with parents who are ill, grandmothers provide significant alternative care for children. We focus on grandmothers rather than grandparents because grandmothers are the most common grandparent caregivers in Lesotho, where child care is considered women's work, women's formal employment opportunities are limited, and male labor migration historically has been high (Ansell, 2002; Bureau of Statistics, Lesotho, 2002; Murray, 1981; Timaeus & Graham, 1989; Wilkinson, 1983). In general, living with grandchildren is associated with living with a spouse for older men but not for older women in sub-Saharan Africa (Zimmer & Dayton, 2005). Indeed, in Lesotho, 27% of children lived with a grandmother in 2004, while only 10% lived with a grandfather. Fewer than 3% of children lived with a grandfather and no grandmother.

Our approach assumes that the implications of co-residence with a grandmother will depend on the presence or absence of the child's mother in the household. Previous research focused on orphan status and schooling has shown that parental death, particularly maternal death, is detrimental to children's schooling outcomes (Bicego et al., 2003; Case & Ardington, 2006; Case et al., 2004; Evans & Miguel, 2007; Nyamukapa & Gregson, 2005). It has also suggested the importance of living arrangements to children's schooling (Aspaas, 1999; Lloyd & Blanc, 1996; Shapiro & Tambashe, 2001; Townsend, Madhavan, Tollman, Garenne, & Kahn, 2002). Given this literature, we expect grandmother co-residence to be especially beneficial to children when mothers are not present, and thus consider grandmother co-residence and mother co-residence simultaneously.

Child Fostering

Because we focus on the simultaneous presence or absence of mothers and grandmothers, our analysis connects to an established literature on child fostering in sub-Saharan Africa (including Akresh, 2007; Bledsoe, Ewbank, & Isiugo-Abanihe, 1988; Castle, 1995; Eloundou-Enyegue & Stokes, 2002; Isiugo-Abanihe, 1985; Lloyd & Desai, 1992). Child fostering has been defined as the “transfer of children from biological or natal homes to other homes where they are raised and cared for by foster parents” (Isiugo-Abanihe, 1985, p. 53).⁴ In the sub-Saharan African context, fostering has long been a mechanism for exchanging economic and social resources between households. At the same time, types of fostering, and the frequency of and reasons for fostering, vary significantly within the region, and such differences have been shown to have consequences for child outcomes (Akresh, 2007; Castle, 1995).

Scholars sometimes distinguish between “voluntary” and “crisis” fostering. Voluntary fostering refers to an arrangement between the biological parents and foster parents of a child that occurs in line with cultural norms regarding childrearing, while crisis fostering occurs in response to hardship, such as poverty or death (Madhavan, 2004).⁵ In West Africa, where the tradition of fostering is greatest and fostering is primarily short term and “voluntary,” fostering appears beneficial to the schooling of fostered children (Akresh, 2007). In contrast, in southern Africa, fostering is more typically organized around parental death, labor migration, or the unplanned pregnancies of young mothers, situations in line with “crisis” fostering (Madhavan, 2004).

While significant attention has been focused on HIV/AIDS as an impetus for fostering of children in southern Africa, it is only one of several factors that lead to the separation of children from parents. Economic and political development in the region, including the mining industry and its protocols under Apartheid in South Africa, have contributed to a long history of men's labor migration. While women generally remained at home in men's absence, tending to agricultural activities and the family, in recent years women's migration has been more prevalent in the region. The textile factories in and near Maseru, the capital city of Lesotho, are one form of industry providing new wage labor opportunities specifically for women. Indeed, analysis of qualitative interviews with caregivers in Lesotho suggests that labor migration of mothers is one reason for skipped-generation grandmother and grandchild co-residence (Parker, Short, Goldberg, & Hlabana, 2007). Fostering that results from parent labor migration can be considered crisis based, because it derives from economic necessity and structural factors often prevent children from migrating along with parents (Madhavan, 2004; Murray, 1981). At the same time, labor migration can be positive for children if parents send remittances. Given poverty in Lesotho, a country where more than half the population live on less than \$2 per day (UNAIDS 2006), children who stay with appropriate caregivers, such as grandmothers, may be advantaged relative to other children when they have both the benefits of a working parent as well as the daily support of an able caregiver.

In addition to parental death and migration, practices related to marriage and romantic partnerships also affect child residence patterns in southern Africa. In Lesotho, children may be fostered by a grandmother when their mother is young and unmarried at the time of birth or marries someone other than the child's father at some time subsequent to the birth.

⁴The term fostering has also been used more generally to refer to children not living with a mother (for example, see Bledsoe et al., 1988). Children not living with a mother may or may not have been moved from their natal home--in some cases it is the mother rather than the child that changes residences.

⁵In practice it is very difficult to distinguish between voluntary and crisis fostering, and much voluntary fostering has an economic component.

Occasionally, mothers “give” an older child to a grandmother, for example when they perceive the grandmother to be lonely or overburdened because she is staying on her own (Murray, 1981; Parker et al., 2007).

Because of the variation in reasons for maternal absence, when we consider the implications of co-residence with a grandmother, we distinguish between mothers who are absent and household members, mothers who are absent and not members of the child's household, and mothers who have died. We consider the first group to be migrants and the second group to be mothers who have fostered their children and are not formally affiliated with the child's household. In this way, we extend analyses that focus exclusively on maternal orphanhood through recognizing first, that not all children who are non-orphans live with a mother, and second, that among children who do not live with a mother, reasons for maternal absence vary.

Data, Methods, and Models

The data source for this project is the 2004 Lesotho Demographic and Health Survey (DHS). The DHS collected information from a nationally representative sample of more than 9,000 households across the country of Lesotho in 2004. For this analysis, we draw on the household questionnaire to examine the household composition and school enrollment of school age children. The household questionnaire contains basic information on the household dwelling as well as household member characteristics, including age, sex, education, residence and relationship to the household head. Household composition with respect to the child is determined by comparing the child's relationship to the household head to other household members' relationships to the head.

There are numerous benefits to using DHS data to study living arrangements. DHS data originate from nationally representative household based surveys that collect basic information on every member of the household. The data also include the parental vital status for all children under 18, which allow us to determine the orphan status of every child in the household. Moreover, for children whose parents form part of the household, children are linked to their parents. We are thus able to establish the presence or absence of these parents in the household. Finally, the large sample size makes sub-group comparisons possible that would not be feasible with a smaller data set. However, DHS data do have limitations. Because the surveys are household based, we are unable to capture the circumstances of children living in institutions or on the street.⁶ Nor are we able to capture child relationships beyond the household, such as parents or grandparents living in other households that participate in the child's life. Finally the data are cross sectional, so we cannot examine changes in children's living situations and school enrollment over time, which would enhance causal inference (for example, see Akresh, 2007; Evans & Miguel, 2007; Yamano & Jayne, 2005). Despite these limitations, on balance, the large, nationally representative nature of the DHS data, and the detail on parental death, household membership, and presence, makes it a good source for studying associations between child living arrangements and schooling.

The sample used for analysis includes 10,641 children of school age (6–16 years) that are listed as “usual residents” of a household. All descriptive statistics are weighted to account for sampling design, thus providing nationally representative estimates. Table 1 gives detail on the variables used in analysis and Table 2 presents means and standard deviations.

⁶However, these children are not living with grandmothers and are also not likely to be in school, which would suggest that the positive benefits of grandmother co-residence are underestimated in our models.

Grandmother Co-Residence and Child School Enrollment

The dependent variable is current school enrollment. Figure 1 depicts current enrollment by age and sex in Lesotho. Enrollment is curvilinear with respect to age. Children move into primary school beginning at age six, the official age of enrollment. Enrollment continues to increase until about age eight, and begins to decline at approximately age 13, the age when most children begin transitioning to secondary school. During the peak enrollment years, enrollment exceeds 80% for girls and boys. Lesotho is one of few countries in sub-Saharan Africa where the enrollment of girls equals or exceeds that of boys.⁷ In 2000, the government introduced free primary schooling starting with grade 1 and has added one free year of primary education in every year since. In 2004, the year of our data, free primary education was available for grades 1–5. However, families still incurred school-related expenses, such as school uniforms and shoes. Thus school attendance was likely still difficult for some children.⁸

We are most interested in the relationship between grandmother co-residence and school enrollment and how this relationship varies by mother presence. Figure 2 describes the intersection of grandmother and mother presence. Among mothers who are not present, we distinguish between mothers who are household members but away, mothers who are not members of their child's household, and mothers who have died. Figure 2 shows that while most children live with a mother, over 40% do not. Notably, children who live with a mother usually do not live with a grandmother. Only 6% of children live in three generation grandmother-mother-child households. Of the 8% of children who have a mother who is a household member, but away, one quarter live with a grandmother. A full 23% of children have mothers who are alive but not affiliated with their households. More than half of these live with a grandmother. Finally, about 12% of children have a mother who has died. Among these maternal orphans, slightly less than half live with a grandmother.

Is grandmother presence related to child schooling? Table 3 presents logistic regression results of current school enrollment on grandmother presence controlling for child, parent, and household characteristics. Since households can contribute multiple children to the analysis, the standard errors are corrected for clustering at the household level. Four specifications are presented. The first, which is additive, suggests that a grandmother's presence is significantly and positively related to school enrollment. Children living with grandmothers are 1.6 times more likely to be in school than children not living with grandmothers. The size of the effect is similar to that of children living with mothers, who are also more likely to be in school than children not living with mothers.

Does the effect of a grandmother depend on the presence of a mother? In the second specification we consider this question by adding an interaction between grandmother presence mother presence. The results suggest that the effect of a grandmother does depend on a mother's presence in the household. When a mother is not present in the household, children living with a grandmother are 1.9 times more likely to be enrolled in school than children not living with a grandmother. However, having a mother present reduces the benefit of a grandmother. Children who live with grandmothers and mothers are only

⁷Lloyd & Blanc (1996) note comparable levels of enrollment for boys and girls in Southern Africa. The lower enrollment for boys in Lesotho may be affected by local labor opportunities for men that do not require formal schooling, such as working in the mines in South Africa. In addition, the gendered division of child chores may affect school enrollment. Boys tend to be responsible for the herding of small animals while girls tend to be responsible for cooking and cleaning. Although all chores potentially affect enrollment, herding is more likely to be required during the schooling hours (Bureau of Statistics, Lesotho, 2002; Kimane, Molise, & Ntumo-Makara, 1999). In addition to lower enrollment, boys in Lesotho also have lower overall school attainment.

⁸Results in this paper were assessed for the sensitivity to the introduction of free schooling by testing for differences in the relationships we report for children above and below age 11. Results did not suggest differences, or an improvement in model fit ($p < .05$).

slightly more likely to be enrolled in school than children living with mothers but no grandmothers.

Next, we explore the relevance of mother's household membership in addition to presence. We distinguish between mothers who are present, mothers who are absent but a part of the child's household, and mothers who are not part of the household. Mothers who are absent household members are considered migrants and are likely away working or looking for work. These absent mothers may well be actively involved in decisions regarding their children's schooling as well as paying school costs. Mothers that are not household members belong to another household or have died.

The results of this third specification confirm the importance of taking into account mothers' household membership in addition to their presence. As shown in the third model in Table 3, having a mother who is absent, but a household member, can be beneficial in terms of school enrollment for children—regardless of whether a grandmother is present in the household. Indeed, among children with a mother that is a household member, having a mother who is absent is as positively associated with school enrollment as having a mother who is present.⁹ Further, these results suggest that grandmothers may be most beneficial for children whose mothers are not part of the household. Among children whose mothers are not household members, those with co-resident grandmothers are over two times more likely to be in school than children who are not living with grandmothers.

In the fourth specification in Table 3, we distinguish between mothers who are alive and not household members and mothers who have died. Results indicate that co-residing with a grandmother is positively associated with school enrollment when mothers are not household members whether these mothers are alive or dead. Among children who do not live with grandmothers, children whose mothers are alive but not household members are less likely to be currently enrolled in school than children whose mothers have died. This result is consistent with observations by UNICEF and others that vulnerable children need not be orphans (Ainsworth & Filmer, 2006; UNICEF, 2004b).

To summarize the relationship between grandmother presence and school enrollment for children, in Table 4 we present simulated probabilities of school enrollment by grandmother and mother presence. These simulations are based on the fourth specification in Table 3. Overall, they reinforce the conclusion that co-residence with a grandmother is beneficial to school enrollment. They show that children with mothers who are not affiliated with the household are most at risk of non-enrollment, and that living with a grandmother appears to promote school enrollment for such children. Most significantly, children living with grandmothers (and no mothers) are just as likely as children living with mothers (and no grandmothers) to be enrolled in school.

To this point, all analyses indicate that children living with grandmothers are on average more likely to be in school than children not living with grandmothers. However, unobserved factors may contribute to both living arrangements and schooling. To explore this possibility further we estimate OLS fixed effects specifications that take into account unobserved household factors. Essentially the school enrollment of children with different living arrangements within the same household are compared. The results (not shown) are consistent with those presented above. Children whose mothers are not household members due to either absence or death are disadvantaged in terms of school enrollment when they do

⁹The coefficient for mother absent household member is slightly larger than for mother present household member, but the difference is not statistically significant.

not live with a grandmother, and the magnitude of this disadvantage appears even greater in the fixed effects specification.¹⁰

Next, we investigate whether the relationship between grandmother co-residence and school enrollment varies by grandmother characteristics. We limit the sample to children living with grandmothers, and explore the importance of grandmother age, education, and headship sequentially. Results are presented in Table 5. In the first specification we distinguish between grandmothers who are less than 55 years; between 55 and 69 years of age; and 70 or older. A concern with elderly caretakers is that they may be too old to adequately care for children (Foster et al., 1995; Hunter, 1990; Ntozi & Mukiza-Gapere, 1995). In fact, older adults are often depicted as in need of care and support rather than as supporters and caregivers (Ansell & van Blerk, 2004; Mba, 2002). Results show little evidence that older grandmothers are worse for children with respect to school enrollment.

Does a grandmother's education matter for school enrollment? In the second specification we divide co-resident grandmothers into three groups—those with no education; those with 1–5 years of education; and those with 6 or more years of education. Because nearly 60% of co-resident grandmothers are household heads, we exclude the controls for education of household head in this model. The coefficients confirm that living with a more highly educated grandmother may indeed be positively related to child school enrollment.

What about headship? Household heads may have greater ability than others in the household to allocate resources, which could have consequences for children's school enrollment. In the third specification, we include co-resident grandmothers' headship status. Net of other factors, grandmother headship is not related to child school enrollment.

A final concern with grandmother caregivers is that grandmothers may live in households that are especially poor. In all previous analyses we included controls for household wealth, with a focus on grandmother effects net of wealth. To explore the importance of wealth further, we regressed the wealth index on grandmother presence in specifications with and without our standard controls. The results (not shown) confirmed that children living with grandmothers do indeed live in significantly poorer households than children not living with grandmothers. Further, they showed that grandmother age is negatively associated with household wealth. Finally, we tested an interaction between household wealth and grandmother presence in equations predicting child school enrollment. We found no support for this interaction, suggesting that the positive association between grandmother presence and school enrollment is not affected by household wealth.

Conclusion

Because family structure is widely believed to affect child well-being, numerous studies have examined the relationship between family structure and child outcomes in sub-Saharan Africa and other parts of the world. In sub-Saharan Africa, where schooling is not universal, research attention has focused on the relationship between child living arrangements (including household composition, parent vital status, and household headship) and child schooling outcomes. Results depend on the study particulars, but in general, orphan children and children not living with parents have been found to be at risk of negative schooling outcomes (Bicego et al., 2003; Case & Ardington, 2006; Case et al., 2004; Evans & Miguel, 2007; Nyamukapa & Gregson, 2005; Shapiro & Tamashe, 2001; Townsend et al., 2002),

¹⁰While the basic findings and patterns were similar in the fixed effects specifications, we note one difference. Among children whose mothers were present, those with co-resident grandmothers were slightly less likely to be enrolled than those without co-resident grandmothers.

although the importance of parent status to children's schooling is debated (Ainsworth & Filmer, 2006; Lloyd & Blanc, 1996).

It is in the context of these findings that we examine in more detail the relationship between co-residence with a grandmother and child schooling in Lesotho. This research is especially timely given the high prevalence of parent death due to HIV/AIDS in southern Africa, and the resulting concern over overburdened grandmother caregivers in the region. Our approach examines variation in children's co-residential experiences in two ways. First, we explore the implications of grandmother co-residence when mothers are present and absent. Second, we take into account multiple reasons for mother absence, moving beyond a simple orphan/non-orphan dichotomy. In this way, our study complements and extends current understandings of the associations between family structure and child outcomes in the region.

Results confirm the importance of mothers' household membership for child school enrollment as well as the value of grandmother co-residence for children whose mothers are not household members. For such children, those living with a grandmother are as likely to be enrolled in school as children living with a mother (and no grandmother). The benefits of grandmother co-residence exist for children with mothers who have died as well as children with mothers who are alive but not affiliated with the child's household.

It is of significant practical importance that, net of other factors, children living with grandmothers are just as likely to attend school as children living with mothers. How should we understand this result? Results of another project based on in-depth interviews with 74 caregivers in Lesotho in 2004 suggest that with the exception of concern over grandmother age and inability to work, grandmothers and mothers are thought to play similar roles in the lives of children. This similarity is noteworthy. In many contexts, grandmother and mother roles are different. Indeed some have cited role conflict as a problem for grandmothers that are put in a situation of parenting their grandchildren (Landry-Meyer & Newman, 2004). When asked a series of questions about what it means to be a mother, father, and grandmother, most of the caregivers interviewed in Lesotho in 2004, irrespective of relationship to the child for whom they were providing care, replied that mothers and grandmothers were similar in their relationships to children.¹¹ Three examples follow:

What does being a mother mean to you?

It means [being] a care provider to the children.

How does it differ from being the father?

It differs because the mother is always with the children at home. I am most knowledgeable of their everyday difficulties.

How does it differ from being the grandmother?

There's no difference between them.

(Mother, age 32)

Do you see any difference between being a grandmother and a mother?

There is no difference.

(Maternal Grandmother, age 55)

How does being a mother differ from being a grandmother?

¹¹In contrast, fathers were described as being less knowledgeable about children's everyday activities, less able to provide everyday care, and more responsible for providing financially.

There's no difference.

Why?

Because she is taking responsibility just like the mother.

(Mother, age 38)

Finally, we return to the implications of this work. The results we present elaborate the association between grandmother co-residence and child school enrollment in southern Africa. They confirm the importance of grandmothers to maternal orphans, but also to children who do not share household membership with a mother for other reasons. These results suggest that policies intended to promote child welfare in the region, including schooling, will indeed need to consider vulnerable children in addition to orphans.

More generally, our results connect to a broader literature on family structure and child outcomes in southern Africa and elsewhere. They underscore the benefits of examining household composition beyond headship, especially in contexts where household heads may not be physically present. In particular, they indicate the importance of attending to the simultaneous presence or absence of significant kin. Finally, they point to the advantages of attending to the varied circumstances surrounding parent absence.

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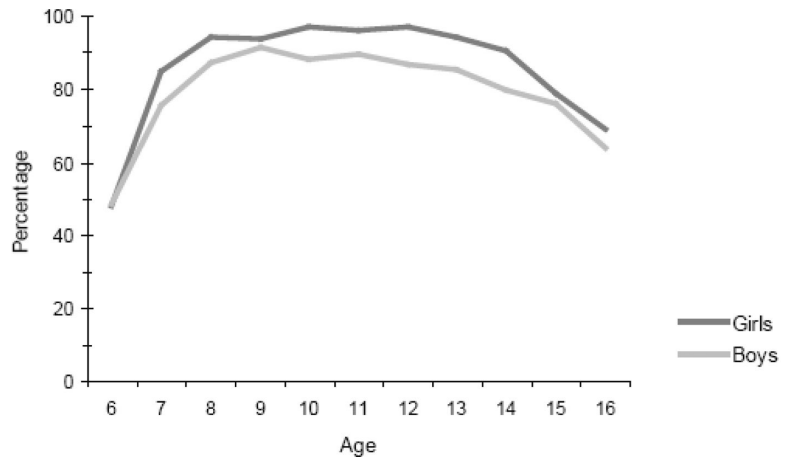


Figure 1.
Current School Enrollment for Children 6–16 in Lesotho by Age, 2004

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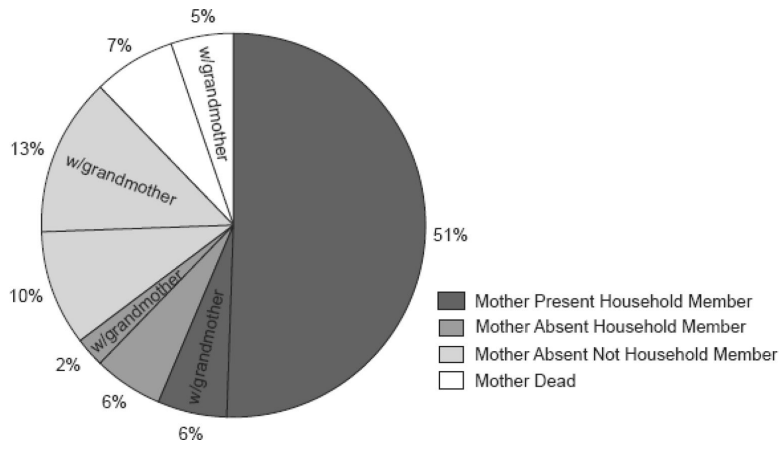


Figure 2. Mother Status and Household Affiliation and Grandmother Co-Residence for Children 6–16 in Lesotho, 2004

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Table 1

Description of Variables Used in Analysis of Child School Enrollment in Lesotho

Variable	Description
Current School Enrollment	Dichotomous variable set equal to 1 if child is currently enrolled in school (dependent variable).
Household Urban Location	Dichotomous variable set equal to 1 if child's household is located in an urban area.
Household Wealth Index	Wealth index created using household asset information and dwelling characteristics. Index developed through principal component analysis. Sample divided into quintiles (1=poorest; 5=richest).
Household Size (Log)	Log of count of all "usual resident" household members.
Education of Household Head	Four category set of dummy variables indicating the education level of the household head—no schooling; some primary; completed primary; completed secondary or more.
Male	Dichotomous variable set equal to 1 if child is male.
Age	Eleven category set of dummy variables indicating the child's age in years.
Grandmother Co-Residence	Dichotomous variable set equal to 1 if child lives with a grandmother. Co-residence is determined by comparing child's relationship to the household head to other household members' relationships to the head. Co-resident grandmother must be at least 30 years older than the child and a usual resident.
Grandfather Co-Residence	Dichotomous variable set equal to 1 if child lives with a grandfather. Co-residence is determined by comparing child's relationship to the household head to other household members' relationships to the head. Co-resident grandfather must be at least 30 years older than the child and a usual resident.
Mother Status	Four category set of dummy variables indicating mother's presence, household affiliation, and vital status. Mothers who are <i>present</i> are household members and usual residents of the child's household. Mothers who are <i>absent household members</i> are household members but not usual residents of the child's household. Mothers who are <i>absent not household members</i> are alive but not members of the child's household. Mothers who are <i>dead</i> are dead or of unknown vital status.
Father Status	Four category set of dummy variables indicating father's presence, household affiliation, and vital status. Fathers who are <i>present</i> are household members and usual residents of the child's household. Fathers who are <i>absent household members</i> are household members but not usual residents of the child's household. Fathers who are <i>absent not household members</i> are alive but not members of the child's household. Fathers who are <i>dead</i> are dead or of unknown vital status.

Table 2

Basic Descriptive Statistics for Variables Used in Analysis of Child School Enrollment in Lesotho

	<u>Mean</u>	<u>SD</u>
Current School Enrollment	0.83	0.4
Household Urban Location	0.15	0.4
Household Wealth Index	2.98	1.4
Household Size (Log)	1.65	0.4
Education of Household Head		
No Schooling	0.25	0.4
Some Primary	0.48	0.5
Completed Primary	0.22	0.4
Completed Secondary or More	0.05	0.2
Male	0.51	0.5
Age	11	3.1
Grandmother Co-Residence	0.27	0.4
Grandfather Co-Residence	0.10	0.3
Mother Status		
Mother Present	0.57	0.5
Mother Absent Household Member	0.08	0.3
Mother Absent Not Household Member	0.23	0.4
Mother Dead	0.12	0.3
Father Status		
Father Present	0.29	0.4
Father Absent Household Member	0.19	0.4
Father Absent Not Household Member	0.21	0.4
Father Dead	0.31	0.5

n=10,641

Note: Weighted by household weight.

Source: Lesotho DHS, 2004

Table 3

Logistic Regression of Current School Enrollment for Children 6–16 in Lesotho, 2004

	(1)		(2)		(3)		(4)					
	Coefficient	OR	Coefficient	OR	Coefficient	OR	Coefficient	OR				
Intercept	2.098***	(0.201)	8.15	2.008***	(0.202)	7.45	1.728***	(0.209)	5.63	1.958***	(0.229)	7.09
Household Urban Location	-0.013	(0.104)	0.99	-0.013	(0.104)	0.99	0.042	(0.105)	1.04	0.046	(0.105)	1.05
Household Wealth Index	0.347***	(0.028)	1.41	0.348***	(0.028)	1.42	0.316***	(0.029)	1.37	0.315***	(0.029)	1.37
Household Size (Log)	-0.508***	(0.082)	0.60	-0.494***	(0.083)	0.61	-0.425***	(0.084)	0.65	-0.422***	(0.084)	0.66
Education of Household Head												
Some Primary	0.343***	(0.075)	1.41	0.338***	(0.075)	1.40	0.389***	(0.076)	1.48	0.386***	(0.077)	1.47
Completed Primary	0.512***	(0.105)	1.67	0.508***	(0.105)	1.66	0.591***	(0.109)	1.81	0.585***	(0.109)	1.79
Completed Secondary or More (Reference No Schooling)	0.859***	(0.212)	2.36	0.871***	(0.212)	2.39	0.965***	(0.213)	2.62	0.945***	(0.214)	2.57
Male	-0.677***	(0.059)	0.51	-0.677***	(0.059)	0.51	-0.677***	(0.059)	0.51	-0.677***	(0.060)	0.51
Grandmother Co-Residence	0.479***	(0.088)	1.61	0.638***	(0.100)	1.89	0.773***	(0.105)	2.17	0.375*	(0.173)	1.46
Grandfather Co-Residence	0.163	(0.115)	1.18	0.144	(0.114)	1.16	0.202 [†]	(0.115)	1.22	0.195 [†]	(0.116)	1.22
Mother Presence												
Mother Present (Reference Mother Not Present)	0.488***	(0.076)	1.63	0.597***	(0.081)	1.82						
Mother Presence and Household Membership												
Mother Present							0.572***	(0.091)	1.77			
Mother Absent Household Member (Reference Mother Not Household Member)							0.668***	(0.183)	1.95			
Mother Presence, Household Membership, and Vital Status												
Mother Present										0.355***	(0.123)	1.42
Mother Absent Household Member										0.450*	(0.202)	1.57
Mother Absent Not Household Member (Reference Mother Dead)										-0.358**	(0.136)	0.70
Father Presence												
Father Present (Reference Father Not Present)	0.213**	(0.080)	1.24	0.206**	(0.080)	1.23						
Father Presence and Household Membership												
Father Present							0.365***	(0.090)	1.44			

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	(1)	(2)	(3)	(4)
	Coefficient	Coefficient	Coefficient	Coefficient
Father Absent Household Member (Reference Father Not Household Member)			0.618*** (0.109)	1.86
Father Presence, Household Membership, and Vital Status				
Father Present				0.343*** (0.094) 1.41
Father Absent Household Member				0.601*** (0.112) 1.82
Father Absent Not Household Member (Reference Father Dead)				-0.020 (0.088) 0.98
Grandmother Interactions				
Grandmother × Mother Present		-0.527** (0.167) 0.59	-0.561*** (0.172) 0.57	-0.165 (0.221) 0.85
Grandmother × Mother Absent Household Member			-0.532 [†] (0.279) 0.59	-0.137 (0.307) 0.87
Grandmother × Mother Absent Not Household Member				0.609** (0.206) 1.84
log likelihood	-4044.49	-4038.33	-4000.83	-3995.03
df	21	22	25	28
Number of Cases	10,641	10,641	10,641	10,641

Note: Standard errors are adjusted for clustering at the household level- All models control for child age (yearly age dummies).

Source: Lesotho DHS, 2004

[†] p<.10;

* p<.05;

** p<01;

*** p < .001

Table 4

Simulated Probability of School Enrollment for Children 6–16 in Lesotho by Mother's Household Membership, Presence, and Vital Status and Grandmother Co-Residence, 2004

	Mother Household Member		Mother Not Household Member	
	Present	Absent	Alive	Dead
No Co-Resident Grandmother	0.83	0.84	0.74	0.79
Co-Resident Grandmother	0.85	0.87	0.86	0.83

n=10,641

Note: Using Model 4 from Table 3.

Source: Lesotho DHS, 2004

Table 5

Logistic Regression of Current School Enrollment for Children 6–16 Living with Grandmothers in Lesotho by Grandmother Age, Education, and Headship, 2004

	(1)	(2)	(3)
	Coefficient	Coefficient	Coefficient
Type of Grandmother			
Grandmother Age			
Age < 55	-0.047 (0.192)		0.95
Age 55–69 (Reference Grandmother Age 70+)	0.132 (0.152)		1.14
Grandmother Education			
1–5 Years of Education		0.295 [†] (0.160)	1.34
6+ Years of Education (Reference Grandmother with No Education)		0.489* (0.196)	1.63
Grandmother Headship			
Grandmother Head of Household (Reference Grandmother Not Head)			0.222 (0.222)
Number of Cases	2,874	2,874	2,874

Note: Standard errors are adjusted for clustering at the household level. Models control for child age (yearly age dummies), child sex, household characteristics (location, wealth, size and education of head), grandfather status (present or not present), mother status (present, absent household member, absent not household member, or dead), and father status (present, absent household member, absent not household member, or dead). Model 2 excludes controls for education of household head.

Source: Lesotho DHS, 2004

[†] p<.10;

* p<.05;

** p<.01;

*** p < .001