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Research on Aging 2010 32: 97 originally published online 13 October 2009
DOI: 10.1177/0164027509348143

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Research on Aging

32(1) 97-121

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Abstract

This study uses panel data from Cape Town to document the role played by aging parents in caring for grandchildren who lose parents due to illnesses such as AIDS. The authors quantify the probabilities that older adults and their adult children provide financial support to orphaned grandchildren. The authors find significant transfers of public and private funds to older adults caring for orphans. Perhaps because of these transfers the authors find no differences in expenditure patterns between households with orphans and other older adult households. They also find no impact of either the death of a child or taking in orphaned grandchildren on adult well-being as measured by ability to work, depression, or self-reported health. Findings suggest that the combined public and private safety net in South Africa mitigates many of the consequences older adults could suffer when an adult child dies and leaves behind grandchildren needing care.

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Keywords

AIDS, South Africa, intergenerational support, orphans

The HIV and AIDS crisis in sub-Saharan Africa has resulted in the death of a large number of prime-aged men and women. These deaths have in turn affected both the children and the parents of those who died. A large body of research over the past decade has examined the educational and health outcomes for AIDS orphans who have been absorbed into nonparental households, generally headed by kin (Case and Ardington 2006; Case, Paxson, and Ableidinger 2004; Subbarao and Coury 2004). More recent work has analyzed the impact of HIV/AIDS on the older generation. Parents of those infected with HIV are affected in many ways, including providing care during illness, absorbing direct financial costs of illness and death, losing financial support, and providing care for orphaned children (Knodel 2008; Knodel et al. 2007; Knodel and Im-Em 2004; Ntozi and Nakayiwa 1999; Nyambedha, Wandibba, and Aagaard-Hansen, 2003; Schatz and Ogunmefun 2007; Williams and Tumwekwase 2001). This article focuses primarily on the last of these impacts—the burden imposed on older South Africans of caring for the orphaned children of their adult children who die of AIDS.

The role of grandparents caring for AIDS orphans has received extensive discussion in research on the impact of HIV and AIDS in Africa and Asia. Saengtienchai and Knodel (2001) found that grandparents were almost always the primary caretakers of AIDS orphans in Thailand, although other surviving children sometimes played an important role. Studies from a number of countries indicate that grandparents play a major role in caring for AIDS orphans in Africa (Foster and Williamson 2000; Ntozi and Nakayiwa 1999; Nyambedha et al. 2003; Subbarao and Coury 2004). While a number of studies report that caring for orphans imposes a burden on grandparents, most of the evidence is qualitative and does not directly compare grandparents who are caring for grandchildren with other grandparents. Nyambedha et al. (2003), for example, provided a number of reports from grandparents about the burdens imposed by having to provide schooling, food, and discipline to orphaned grandchildren. Quantitative evidence about the impact on grandparents of caring for AIDS orphans is more limited. The goal of this article is to use survey data on a representative set of older adults to improve our understanding of the role that older persons play in caring for AIDS orphans in South Africa and to examine how public and private transfers may mitigate the burden on older caregivers.

Using panel data collected in a representative survey of Coloured and African households in metropolitan Cape Town, we document the role played

by parents in caring for the offspring of children who die. In addition, we quantify the probabilities that older adults (and their surviving children) provide financial support to their orphaned grandchildren (orphaned nieces and nephews). We find that Africans are significantly more likely to absorb their orphaned grandchildren than are Coloured respondents. In addition, we find that orphans are significantly more likely to be absorbed into poorer households. Among all older adults who report having lost children, it is the poorest among them who report being coresident with their orphaned grandchildren. Older adults are significantly more likely to absorb grandchildren when their own child died after an illness, such as AIDS, and less likely when their child died a sudden death. Characteristics of the older adult's surviving children—whether those coresident or those living elsewhere—are not significantly associated with whether orphaned grandchildren live with the grandparent interviewed in the Cape Area Panel Study (CAPS).

We also look at how sources of public and private support may help older adults deal with the burdens of caring for orphaned grandchildren. We find that government grants and adjustments in the flow of resources between older adults and their remaining living children play a role in support for orphans. Households are significantly more likely to report foster care grant receipt when there are orphaned minors in the household. In a similar vein, older adult grandparents—grandmothers, to be specific—are significantly more likely to report foster care grant receipt if they report living with an orphaned grandchild. In addition, we find the probability that older adults report transferring resources to living children is significantly diminished if they are housing orphaned grandchildren and that living children are significantly more likely to send resources to a parent who is housing orphaned grandchildren.

We look at the impact of an adult child death and coresidence with orphaned grandchildren on several measures of the quality of life of older adults. Perhaps in part because of the mediating flow of public and private resources, we see no difference in the spending patterns of households with orphaned children relative to other households followed by CAPS. We also find no effect of reporting that a child died, or of coresidence with orphaned grandchildren, on the older adults' reports of depression or on their self-assessed health.

The article proceeds as follows. First, we discuss some salient background features of South Africa in general and Cape Town in particular. Then, the next section introduces our data. We discuss the living arrangements of orphans in the following section. Next, we examine how households meet the needs of orphans through government transfers and changes in intergenerational flows

between older adults and their living children. Following that, we discuss the impact of orphans on household spending patterns and on measures of older adults' quality of life. The last section provides a summary and conclusions.

The Setting

Our analysis is based on data from Cape Town, South Africa's second largest city. Relevant to our analysis is the fact that Cape Town has a somewhat different population composition than the rest of South Africa. Microdata from the 2007 South Africa Community Survey (Statistics South Africa 2007) indicate that Cape Town's population of 3.5 million was roughly 35% African (Black), 44% Coloured, 19% White, and less than 2% Asian (Indian), using the standard self-identified classifications collected by Statistics South Africa. This compares to a national population that is 79% African, 9% Coloured, 10% White, and 3% Asian. Part of our analysis will focus on contrasts between the African and Coloured respondents in our survey. These two groups both experienced significant disadvantages relative to Whites under apartheid, but they had important differences. Africans had the least access to services, the most restrictions on work and migration, and the lowest state-provided expenditures on schooling. The Coloured population, which is heavily concentrated in Cape Town, occupied an intermediate status under apartheid, with higher expenditures on schooling, fewer restrictions on residential mobility, and better access to jobs than Africans.

HIV prevalence rates are lower in Cape Town than in the rest of South Africa, but are nonetheless high enough to cause a significant burden on the elderly. According to the 2005 national HIV survey done by the Human Sciences Research Council, the HIV prevalence rate for African women aged 15 to 49 was 24.4% for South Africa as a whole, compared to 14.5% for the Western Cape province that includes Cape Town (Shisana et al. 2005). HIV prevalence is much lower in the Coloured population. While the national HIV prevalence rate for 15- to 24-year-olds was estimated at 12.3% for Africans in 2005, the Coloured HIV prevalence rate for the same age group was only 1.7% (Shisana et al. 2005).

As expected, Cape Town's lower HIV prevalence leads to a somewhat smaller problem of orphanhood than in other parts of South Africa. The problem of orphaned children in Cape Town is nonetheless quite serious. Our analysis of data from the 2007 Community Survey indicates that 9.5% of African children younger than age 10 in Cape Town had at least one deceased parent. This compares to 11.8% in Johannesburg (South Africa's largest city) and 14.9% in South Africa as a whole.

An important feature of support networks in South Africa is the relatively generous system of government grants. Three major public grants—the old age pension, the child support grant, and the foster care grant—are highly relevant to the impact of HIV/AIDS on older persons. The old-age pension is a noncontributory pension that provides monthly payments to women beginning at age 60 and men beginning at age 65 regardless of work history. The value of the pension in 2006 (the year our data were collected) was 820 rands per month (about \$200 in Purchasing Power Parity dollars). As discussed in Case and Deaton (1998), the pension is equivalent to twice median per capita African income and plays an important role in the budgets of African households. There is a means test, with individuals losing eligibility in 2006 when their income reached R20,232 (about \$5,000) per year. In practice, the means test is rarely binding for the African elderly. As shown in Lam, Leibbrandt, and Ranchhod (2006), about 90% of age-eligible Africans report receiving the pension in recent national household surveys. Details about the child support grant and the foster care grant will be discussed in the following.

Data

We investigate the caregiving and intergenerational transfers in households with resident orphans using data from the Cape Area Panel Study, a longitudinal study conducted in four waves between 2002 and 2006 in metropolitan Cape Town (Lam et al. 2008). CAPS has followed young adults (aged 14 to 22 in Wave 1) through all four waves. Wave 4 had an additional module for adults aged 50 and older who had been resident in households sampled in Wave 1. Much of our analysis is based on interviews with these older adults (OAs). In addition, Wave 4 had a special focus on intergenerational support and asked a battery of questions about transfers of time and money between parents, children, and grandchildren.

Table 1 provides summary statistics on the African and Coloured OAs interviewed in Wave 4. Approximately 60% of all OAs are women. On average, OAs are 60 years old. Approximately a third of these adults are eligible for the state old age pension. Of those who are age eligible, 87% of African OAs and 82% of Coloured OAs report that they receive the pension.

Both African and Coloured OAs report 3.7 living children on average. However, we find markedly different numbers of deceased children by racial group—0.8 for African OAs and 0.3 for Coloured OAs. For each deceased child, OA respondents were asked a number of questions, including the child's age at death, whether the child "died suddenly or after an illness," whether the OA helped care for the child during the illness, whether the deceased

Table 1. Summary Statistics for Cape Area Panel Study Older Adults, Wave 4

	African	Coloured
Summary statistics on older adults (OAs)		
Female	0.57	0.61
Age	60.0	60.5
Pension age	0.33	0.39
Receiving pension, conditional on being pension age	0.87 (<i>n</i> = 239)	0.82 (<i>n</i> = 457)
Number of living children	3.68	3.68
Number of deceased children	0.84	0.30
Number of children who died aged 15 to 44	0.33	0.11
Number of children who died aged 15 to 44 after illness	0.16	0.04
Number of children cared for during illness who died aged 15 to 44 after illness	0.15	0.03
An orphaned grandchild lives with OA	0.10	0.02
An orphaned grandchild lives elsewhere	0.08	0.05
An orphaned grandchild lives with OA, conditional on having a deceased child with offspring	0.574 (<i>n</i> = 141)	0.241 (<i>n</i> = 79)
Years of education	6.31	7.58
Wave 1: household finances poor or very poor	0.56	0.17
Number of observations	719	1,172
Summary statistics on older adult–children dyads		
Older adult provides financial support	0.37	0.14
Older adult receives financial support	0.16	0.20
Older adult provides time	0.61	0.63
Older adult receives time	0.68	0.69
Number of observations	2,752	4,375

Note: Means by race for older adults (OA) and OA-child dyads. Questions on support refer to support to or from each child and their offspring and to or from the offspring alone in cases where the child has died. Sample is restricted to African and Coloured adults ages 50 and older who report ever having had a child.

child left any living children, whether those children live with the respondent, and whether there are financial transfers between the OA and the children of the deceased child. Focusing on the deaths of children who were adults, the mean number of children who died between age 15 and 44 is 0.33 for African OAs and 0.11 for Coloured OAs. The mean number of children who died at age 15 to 44 after an illness is 0.16 for African OAs and 0.04 for Coloured

OAs. The respondents almost always helped care for adult children who died after an illness—the mean number of children who died at age 15 to 44 and were cared for by the OA is 0.15 for African respondents and 0.3 for Coloured respondents.¹

While respondents were not asked to identify AIDS as the cause of death, information from other studies can be used to estimate the proportion of deaths attributable to AIDS. Hosegood, Vanneste, and Timæus (2004) provided estimates of cause-specific death rates in the Africa Centre Demographic Information System in rural KwaZulu-Natal, using verbal autopsies to identify deaths attributable to AIDS. According to their estimates, 81% of deaths of those aged 15 to 44 that followed an illness (AIDS, TB, heart disease, cancer, etc.) were attributable to AIDS. This compares to only 5% attributable to AIDS for those aged 60 and older. While HIV prevalence is higher in KwaZulu-Natal than in Cape Town, it seems likely that the majority of deaths due to illness in the 15 to 44 age group for Africans were attributable to AIDS.

In related statistics, we see in Table 1 that there are racial differences in the fraction of OAs who report living with at least one orphaned grandchild: 10% of African OAs live with an orphaned grandchild, in contrast to 2% of Coloured respondents. Conditional on being at risk for such a living arrangement—that is, reporting that a child has died leaving grandchildren—57% of African OAs and 24% of Coloured OAs report at least one of those grandchildren is resident in their household.

Africans report themselves as poorer than Coloured respondents on many dimensions. They have completed a full year less education on average. In addition, more than half of African OAs live in households that reported their financial situation as “poor” or “very poor” in Wave 1. This was reported for less than 20% of Coloured OAs.

Part of our analysis will follow OA-child dyads. Summary statistics for these dyads are shown at the bottom of Table 1. We have 2,752 OA-child dyads in the African sample and 4,375 in the Coloured sample. For each child, the OA is asked to report on transfers of time and money (or goods given in kind). Questions on support refer to support to or from each child and their offspring or to or from the grandchildren alone in cases where the OA's child has died.² The bottom panel of Table 1 suggests that African and Coloured OAs are equally likely to report exchanges of time with their children and grandchildren (approximately two thirds report providing or receiving time or help with tasks). In contrast, African OAs are almost three times as likely to report providing financial support to their children or grandchildren. Of Africans, 37% report giving financial help, true of only 14% of Coloured respondents. Coloured OAs are more likely

than Africans to report that they receive financial help from their children (20% vs. 16%). We will use responses on these transfers when we examine support for orphans later in the article. We turn first to the question of where orphaned grandchildren live.

Determinants of Orphans' Residential Status

Using the questions asked in Wave 4 about each deceased child and his or her children, we focus on whether orphaned grandchildren were living with the OA respondent at Wave 4. Specifically, knowing that a child has died leaving grandchildren, we examine whether characteristics of the household and those of the OA, the deceased child, and the OA's living children are associated with reporting that orphaned grandchildren are coresident with the OA. Table 2 presents results of ordinary least squares (OLS) regressions in which the dependent variable is equal to one if the OA responds that any children of the deceased child are living in his or her household. The sample here is restricted to OA-deceased child dyads for which the OA reports that there are living children of the deceased. Column 1 presents results on whether household socioeconomic status at Wave 1 is associated with the presence of orphans at Wave 4. We find that among those OAs who have lost children, it is the poorer households that house orphans. OAs residing in households that reported their financial situation was "poor" or "very poor" in Wave 1 are 17 percentage points more likely to report that children of the deceased are resident. This is consistent with work in sub-Saharan Africa more broadly, and South Africa in particular, which finds orphans are significantly more likely to live in poor households (see Case and Ardington 2006; Case et al. 2004).

Column 2 adds controls for OA characteristics, including race, sex, and age of the OA, and indicators for whether the OA was of pension age or worked for money at Wave 4. Of these controls, only race is significantly associated with reporting resident orphaned grandchildren. On average, African OAs are 30 percentage points more likely to report coresident orphaned grandchildren. (Note that this effect is not due to the fact that Africans are more likely to have deceased children: The sample here is restricted to only those OAs who have lost children who themselves had children.) The inclusion of a racial indicator slightly reduces the association between reporting a resident orphan and the indicator that the household was poor in 2002.

These results are surprising for what we don't find: Respondents old enough to receive the pension are no more likely to take in orphaned grandchildren than are OAs who were below pension age at Wave 4. We do not know the ages of the deceased's children. It may be that pensioners, generally

Table 2. Determinants of Orphans’ Residential Status

	Model 1	SE	Model 2	SE	Model 3	SE
Wave 1: log (household income per member)	−0.038	0.048	0.036	0.048	0.007	0.049
Wave 1: household finances “poor” or “very poor”	0.171**	0.076	0.135*	0.077	0.154**	0.076
Older adult (OA) pension age	—		−0.064	0.180	−0.059	0.151
OA Pension	—		−0.122	0.201	−0.075	0.175
Age × Female						
OA female	—		0.130	0.193	0.144	0.165
OA African	—		0.318***	0.073	0.236***	0.076
OA years of education	—		0.003	0.011	0.007	0.011
OA Wave 4: works for money	—		−0.092	0.184	−0.071	0.162
OA Wave 4: Works for Money × Female	—		−0.013	0.207	−0.050	0.185
Deceased child’s age at death	—		—		−0.009**	0.004
Deceased sudden death	—		—		−0.237***	0.069
Controls for living children’s characteristics	no		no		no	
Observations	220		220		213	
R ²	0.041		0.135		0.204	

Note: Ordinary least squares regression coefficients with standard errors .The dependent variable is equal to 1 if the OA reports that any of the deceased child’s children live with the OA. Unobservables are clustered at the older adult level.All regressions include a constant term and an indicator that the report of household financial status was missing in Wave 1.The sample is restricted to OA-deceased child dyads for OA respondents who report having a child who died leaving offspring.
***p value < .01, **p value < .05, *p value < .1.

having stopped working, are better positioned to take care of orphans, but the orphaned grandchildren of pensioners are old enough to live on their own. In addition, we find no evidence that women are more likely than men to take in orphaned grandchildren. This is apparent in the raw means: Conditional on being at risk of living with at least one orphaned grandchild, 60% of African women, 51% of African men, 24% of Coloured women, and 25% of Coloured men report doing so.

Column 3 adds controls for characteristics of the deceased child. The older the child was at the time of death, the less likely is the OA to report orphaned grandchildren of that child to be coresident. We interpret this negative coefficient as a marker that the grandchildren are older, perhaps old enough to be living on their own.

Orphaned grandchildren are significantly more likely to live with the OA if the OA's child died after an illness (as opposed to a sudden death). Specifically, grandchildren left after a child dies following an illness are 24 percentage points more likely to be living with the OA than are grandchildren left following a sudden death. As discussed previously, we do not know the cause of the OA's child's death, although we estimate that well over half of the deaths due to illness were due to AIDS. These results suggest that AIDS orphans would be more likely to live with grandparents than those whose parents died in, say, a traffic accident. One possible contributing factor is that an adult child who died of AIDS may be more likely to have also had his or her spouse die than is an adult child who died in a car accident. Unfortunately, we have no information about whether the surviving grandchild's other parent is living or dead.

The question of whether both parents have died may also be related to the fact that African OAs are so much more likely to live with orphaned grandchildren than are Coloured OAs. Note that the coefficient on the African dummy declines when we control for whether the death was sudden or from an illness in Regression 3. Given the much lower HIV prevalence in the Coloured population, orphaned grandchildren of Coloured OAs are much less likely to have had a parent die of AIDS. As a result, they are probably also much less likely to have had both parents die, even when one parent died of natural causes.

Whether the OA's home is the residence for orphaned grandchildren may depend upon the other possible living arrangements for these children. To explore this, we included in our regression a set of characteristics about the OA's living children, including age, education, residency in the OA's household, and living children's financial status, employment status, and health status. Individually and jointly these controls were insignificant. We explored the mean of living children's characteristics (as listed previously) for children resident in the OA's household and, separately, the mean characteristics of living children who were not resident. In no case did we find the OA's living children's characteristics significantly associated with whether the orphans lived with their grandparents. In addition, we examined whether the composition of the household in Wave 1 with respect to nonorphaned children was associated with placement of orphans in OA households. We had thought

Table 3. Orphans' Residential Status by Race

	African	SE	Coloured	SE
Wave 1: household finances "poor" or "very poor"	0.147*	0.085	0.150	0.124
Deceased child's age at death	-0.010*	0.005	-0.008*	0.005
Deceased sudden death	-0.277***	0.083	-0.131	0.107
Constant term	0.959***	0.178	0.585***	0.205
Observations	136		77	
R ²	0.112		0.072	

Note: Ordinary least squares regression coefficients with standard errors. The dependent variable is equal to 1 if the older adult (OA) reports that any of the deceased child's children live with the OA. Unobservables are clustered at the older adult level. Regressions include an indicator that the report of household financial status was missing in Wave 1. The sample is restricted to OA-deceased child dyads for OA respondents who report having a child who died leaving offspring.

***p value < .01, **p value < .05, *p value < .1.

perhaps households with nonorphaned children may provide an attractive environment for orphans. We found no robust associations between numbers of nonorphaned children aged 0 to 5, or aged 6 to 17, and reports of orphaned grandchildren residing in the household at Wave 4.

Our sample of OA-deceased child dyads is small, and for that reason we are reluctant to divide the sample by race. However, doing so, and including in our orphan residency regressions the variables that were significant correlates in Table 2, we find coefficients for Africans and Coloureds that are very similar. We present these results, again for the OA-deceased child dyads, in Table 3. For both African and Coloured respondents, poor household financial status is associated with a 15 percentage point increase in the probability that at least one orphaned grandchild is resident, and a one-year increase in age at death is associated with a 1 percentage point decline in the probability of having a resident orphan. Death after an illness is associated with increased odds of reporting a resident orphan, significantly so for Africans. Given the similarity in coefficients between races and our sample size, we will analyze the two groups together and control for race with an indicator variable.

Public and Private Transfers to Households With Orphans

Who provides resources for orphaned children? We can use the CAPS data to examine whether the presence of orphaned children is associated with public and private transfers to households.

Table 4. Grant Receipt in Households With Orphans

	Household grant receipt (rands)			Indicator: OA reports grant receipt (= 1 if receipt)					
	Child support grant	SE	Foster care grant	SE	Child support grant	SE	Foster care grant	SE	Foster care grant
Number of orphaned minors in Wave 4 household OA reports living with an orphaned grandchild	—	—	—	—	0.029	0.036	0.194***	0.040	—0.016
Female OA reports living with orphaned grandchild	—	—	—	—	—	—	—	—	0.286***
Number of children 0 to 5 in Wave 4 household	92.87***	7.81	5.64	10.88	0.010	0.008	—0.006	0.006	—0.006

(continued)

Table 4. (continued)

	Household grant receipt (rands)			Indicator: OA reports grant receipt (= 1 if receipt)		
	Child support grant	SE	Foster care grant	Child support grant	SE	Foster care grant
Number of children 6 to 17 in Wave 4 household	35.24***	4.60	14.90	0.016***	0.005	0.015***
OA is female	—	—	—	0.045***	0.008	0.016***
African	45.21***	8.15	0.68	0.049***	0.010	0.009
Household "poor" or "very poor" at Wave 1	25.35***	8.82	6.43	0.033***	0.012	-0.004
Number of observations	1,469		1,469	1,889		1,890

Note: Ordinary least squares regression coefficients reported, with robust standard errors. Standard errors allow for correlation in the unobservables from the same geographic cluster. Columns 1 and 3 report results at the household level, and in Columns 5, 7, and 9 at the older adult (OA) level. All regressions include an indicator that the household report of poverty at wave 1 is missing.

***p value < .01, **p value < .05, *p value < .1.

Public Transfers

Table 4 investigates households' receipt of the two most widely reported, publicly available transfers that could aid grandparents caring for orphans: government-provided child support grants and foster care grants. Poor children younger than age 14 are eligible for monthly support from the government. In 2006, if the child's parents' or primary caregiver's total income did not exceed R1,100 per month (\$275 per month in Purchasing Power Parity dollars), the primary caregiver could receive a monthly amount of R190 per eligible child (\$48). A grandparent could apply for a child support grant for an age-eligible orphan if the OA was the child's primary caregiver and if they lived in a poor household (for more details on the child support grant, see Case, Hosegood, and Lund 2005). In addition, the government has on the books a more generous foster care grant. The government's Web site states that this grant is for children who are placed into foster care because either the child has no parent or guardian, or the child has a parent or guardian who cannot be traced, or the child is in the custody of a parent, guardian, or any person who is unable or unfit to have custody. In the past 10 years it has been easier for grandparents to access the (less generous) child support grant for orphaned grandchildren than it has been to access the (more generous) foster care grant. The foster care grant in 2006 was R590 per child per month (\$148).

Table 4 explores household and OA receipt of child support and foster care grants. Columns 1 and 2 present regression results in which the amount of money households report receiving in the form of child support or foster care grants monthly is regressed on the number of children younger than 18 in the household who have lost at least one parent. In addition, we control for the number of children aged 0 to 5 and the number aged 6 to 17 in the household and include indicators that the household is African and that it reported itself as "poor" or "very poor" in Wave 1. Household reports of child support grant receipt are highly associated with the number of children in the household, especially those aged 0 to 5. Each additional child younger than age 6 in the household is associated with 93 rands per month from a child support grant. Without controls for the number of children by age category, the number of orphans younger than 18 in the household is positively and significantly related to child support grant receipt (results estimated but not included in Table 5). However, inclusion of these controls for household composition renders the coefficient on orphaned minors insignificant. Orphaned children do receive child support grants but are no more or less likely to have one than are other children. In contrast, even with controls for the number of children by age category, households report an additional 80 rands per month in foster care grant receipt for each orphaned minor in the household.

We find a very similar pattern when we analyze a simple indicator of whether or not OAs report grant receipt, rather than the amount received. Columns 3 through 5 present results in which indicators that the OA reports child support grant receipt or foster care grant receipt are regressed on an indicator that the OA responds that at least one orphaned grandchild is coresident. Controlling for the number of children in the household, we see no significant relationship between the presence of orphaned grandchildren and child support grant receipt. However, the OA is 20 percentage points more likely to report receipt of a foster care grant when orphaned grandchildren are in the household. Column 5 suggests this effect works entirely through female OAs, who are almost 30 percentage points more likely to report a foster care grant when living with orphaned grandchildren. Men are eligible to be recipients of grants for children. However, it is less common to see men take up these grants (for similar findings, see Case et al. 2005).

In summary, we find evidence that both child support grants, which benefit a broad range of children, and foster care grants, which are more closely targeted, help households and OAs care for orphaned children. As with the old age pension, these government grant programs differentiate South Africa from most other African countries with high HIV prevalence. The grants at least partially offset the burden on older South Africans of absorbing the orphaned children of their own adult children who die of AIDS.

We turn now to investigate whether and to what extent OAs and their living children give and receive financial help from each other and the extent to which the presence of orphans affects the existence and size of such transfers.

Private Transfers

Table 5 examines OAs' reports that they provided financial help to each of their living children in the past year and their reports that they received financial help from each of their living children during that same period. We regress these reports on an indicator that the OA reports living with an orphaned grandchild and on OA characteristics and those of their children. Each observation is an OA-living child dyad.

We find that female OAs are significantly less likely than men to report providing financial help to their children. African OAs are significantly more likely to provide financial help than are Coloured OAs. Female children are significantly more likely than male children to receive financial help. However, children residing outside the OA's household and those with characteristics that suggest greater financial stability (having more education, reported to be working at Wave 4) are significantly less likely to receive support. Results in Table 5 suggest that an OA is 10 percentage points less likely to provide

Table 5. Financial Transfers to and From the Older Adult's (OA's) Children

	OA reports providing financial help to a child		OA reports receiving financial help from a child	
	SE	SE	SE	SE
OA reports living with an orphaned grandchild	-0.109***	0.033	-0.070**	0.033
OA is female	-0.069***	0.016	-0.056***	0.015
African	0.220***	0.018	0.172***	0.019
Child is female	—	—	0.032***	0.010
Child does not reside with OA	—	—	-0.157***	0.013
Child's years of education	—	—	-0.004*	0.002
Child is working at Wave 4	—	—	-0.150***	0.014
Number of observations	6,941	6,702	6,954	6,696

Note: Ordinary least squares regression coefficients reported, with robust standard errors. Standard errors allow for correlation in the unobservables from the same OA. The sample is the set of all OA-living child dyads. All regressions include the number of children in the OA household who are aged 0 to 5, aged 6 to 17, an indicator that the household reported being "poor" or "very poor" in Wave 1, and an indicator that the household's poverty report at Wave 1 is missing.

***p value < .01, **p value < .05, *p value < .1.

financial support to a living child if the OA is currently living with at least one orphaned grandchild. This may be one of the levers that households can use to redirect resources after a death: By giving less money to children, OAs may be able to provide goods needed by orphaned grandchildren.

Table 5 also suggests that children in better financial positions are significantly more likely to make financial transfers to their parents. For example, better educated children and children who are working are significantly more likely to help their parents. OAs are 5 percentage points more likely to receive financial help from children when they live with orphaned grandchildren. This result, however, is not robust to the inclusion of controls for the sex, education, and labor force status of the OA's living child.

In summary, older adults are less likely to make financial transfers to their living children when they have taken in orphaned grandchildren. Whether this is a joint decision by the older adults and their living children or a unilateral action by the older adults is unclear, but it is consistent with other evidence in our regressions that transfers to children are less likely when the OA is less likely to be financially better off than the child. This suggests that in cases in which the OA provides the home for the orphaned grandchild, the financial burden is at least partly shared by the OA's living children in the form of reduced financial support from the OA.

Expenditure Patterns and Quality of Life in Older Adult Households

Data collected in Wave 4 of CAPS can also be used to examine whether older adults' quality of life responds to the presence of orphaned grandchildren in their households. We investigate this in two steps. We begin by examining whether households with orphans display different expenditure patterns than other OA households. Taking spending reported by category in the household module, we test whether expenditure shares vary with household composition, specifically with the fraction of members that are orphaned children younger than the age of 18. We then turn to the question of whether the death of a child and the presence of that child's children have an effect on the OA's labor force participation, reports of depression, and self-assessed health status.

Household Expenditure Patterns

We define the expenditure shares, for each spending category i reported for household h as $w_{ih} = (x_{ih} / X_h)$ where X_h is the sum over all household expenditures. We express each expenditure share, using a Working-Leser

framework, as a function of total household expenditure per member (X_h/N_h). Specifically:

$$w_{ih} = \beta_0 + \beta_1 \ln \left(\frac{X_h}{N_h} \right) + u_{ih}. \quad (1)$$

We want to allow for the fact that orphans may have different effects on household spending than do other members. For this reason, we express “effective” household size as

$$\tilde{N}_h = N_h + \alpha n_h = N_h \left(1 + \alpha \frac{n_h}{N_h} \right)$$

where n_h is the number of orphaned children younger than the age of 18 in the household.³ If orphaned children have the same effect on household spending as other members, α will be equal to zero, and effective household size will be equal to observed household size. We approximate the log of effective household size as

$$\ln(\tilde{N}_h) = \ln(N_h) + \ln\left(1 + \alpha \frac{n_h}{N_h}\right) \approx \ln(N_h) + \alpha \frac{n_h}{N_h}.$$

Substituting this into Equation 1, our estimating equation becomes

$$w_{ih} = \beta_0 + \beta_1 \ln(X_h) - \beta_1 \ln(N_h) - \beta_1 \alpha \left(\frac{n_h}{N_h} \right) + u_{ih}. \quad (2)$$

Our test of whether spending patterns in OA households with orphans is different from those in other OA households is a test of whether the fraction of orphans in total household size is significantly different from zero in Equation 2.

Table 6 presents sample means and coefficients from estimating Equation 2 for each expenditure category. Each row presents coefficients for a different OLS regression. All regressions include the log of household size, the fraction of members aged 0 to 5 and aged 6 to 17 at Wave 4, indicators for race and for the household reporting itself as “poor” or “very poor” in Wave 1 of the survey, and a constant term. The table shows the coefficients on log of total household expenditure and that on the fraction of members who are orphaned children.

The coefficient on log of total expenditure indicates whether the category in question is a necessity, which by definition implies the budget share falls as total income (expenditure) rises, or a luxury, for which we would observe the budget share rising with income. By this measure, utilities and “groceries and food eaten at home” are the only “necessities” in the households’

Table 6. Expenditure Patterns in Households With Orphans Younger Than Age 18

Expenditure category	Mean expenditure share	Coefficient on log (household expenditure)	SE	Coefficient on fraction of members who are orphaned minors	SE
Food at home and nonfood groceries	0.411	−0.090***	0.011	0.006	0.042
Meals eaten outside the home	0.008	0.010***	0.001	−0.002	0.005
Utilities	0.126	−0.053***	0.006	0.009	0.020
Rent or bond payment	0.060	0.012**	0.006	−0.030	0.023
Clothing	0.072	0.020***	0.005	0.017	0.031
Telephone and cell phone	0.049	0.004*	0.002	−0.001	0.011
Health care	0.030	0.016***	0.003	0.000	0.014
Transportation	0.092	0.031***	0.004	0.003	0.028
School fees, uniforms and other school-related expenses	0.036	0.013***	0.004	−0.023	0.027
Life insurance, burial society, funeral policies	0.052	−0.003	0.003	0.017	0.017

Note: Ordinary least squares regression coefficients reported, with robust standard errors. Standard errors allow for correlation in the unobservables from the same geographic cluster. Each row reports results from a different regression, one for each expenditure category.

The sample is restricted to households with at least one older adult (OA) who reports ever having had a child, with one observation per household. The number of observations in each regression is 1,459. Also included in each regression are: log(household size), the fraction of household members that are aged 0 to 5 and the fraction aged 6 to 17 at Wave 4, indicators for race and for household reporting itself as “poor” or “very poor” at Wave 1, an indicator that the household’s financial report is missing, and a constant term.

****p* value < .01, ***p* value < .05, **p* value < .1.

budgets. With the exception of life insurance, which shows no pattern with total expenditure, expenditure shares on all other categories—meals eaten out, rent, clothing, telephone, health care, transportation, and spending on schooling—are observed to increase significantly with increases in total expenditure. This breakdown between luxuries and necessities is not uncommon in poor

Table 7. Older Adult (OA) Outcomes and the Presence of Orphans

	Dependent variable					
	OA working at Wave 4	SE	OA depressed some or most of the time	SE	OA self- reported health status	SE
Indicator: at least one child deceased	-0.012	0.023	0.024	0.016	-0.025	0.055
Indicator: orphaned grandchildren in the household	-0.024	0.037	-0.010	0.033	-0.111	0.084
OA is female	-0.210***	0.020	0.046***	0.012	-0.238***	0.041
OA is African	0.122***	0.024	0.071***	0.016	-0.114**	0.054
OA years of education	0.015***	0.003	-0.001	0.002	0.023***	0.007
OA age	-0.024***	0.001	-0.000	0.001	-0.019***	0.002
Household "poor" or "very poor" at Wave 1	-0.062**	0.024	0.042**	0.017	-0.183***	0.054
Number of observations	1,890		1,884		1,890	

Note: Ordinary least squares regression coefficients reported, with robust standard errors. Standard errors allow for correlation in the unobservables from the same household. The sample is one observation per OA. Health status is equal to 1 if *poor* and 5 if *excellent*.

****p* value < .01, ***p* value < .05, **p* value < .1.

areas: Almost everything aside from food and utilities are goods one can find a way to do without.

We find for every spending category in Table 6 that the fraction of household members who are orphaned children has no significant effect on spending patterns, which is consistent with α being equal to zero in Equation 2. This implies that orphaned children entering the household have much the same effect on consumption choices as the addition of any other children. In other words, we do not see any evidence that the presence of orphaned children has a significant impact on the way in which resources are allocated in the household.

Older Adult Well-being

We analyze the impact of having an adult child die and taking in their orphaned children further in Table 7. We look at three outcomes reported by our OA respondents. In Column 1 we look at whether the loss of a child or the presence of orphaned grandchildren caused the OA to stop working. In Column 2 we look at whether the OA is depressed some or most of the time, given responses to a screening module in the Wave 4 questionnaire based on the K6 mental health screening scale (Kessler et al. 2002). In Column 3 we look at whether the loss of a child or the presence of orphaned grandchildren affects the OA's self-assessed health (which is reported categorically: 1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *very good*, and 5 = *excellent*).

We find many of the correlates of well-being that have been documented elsewhere are significant for these measures of well-being for the CAPS older adults. Women are more likely to report depression and more likely to report themselves in worse health (Case and Paxson 2005). In addition, the probability of not working and the probability of reporting poorer health both increase with age. Africans, who are poorer on average than Coloureds by almost every measure, are more likely to report depression and more likely to report themselves as less healthy. Education is associated with an increased probability of working, conditional on age, and a significantly better report of self-assessed health (Cutler and Lleras-Muney 2008). Having been in a household that reported it was "poor" or "very poor" in 2002 is associated with a lower probability of working at Wave 4, an elevated probability of reporting being depressed, and a poorer report of health at Wave 4.

These data are consistent with many patterns witnessed for well-being across communities at very different levels of development. It is interesting, then, that neither a report that an OA has lost a child nor the presence of orphaned grandchildren in the OA's household is significantly associated with labor force participation, reports of depression, or self-assessed health. The coefficients on at least one child deceased and orphaned grandchildren in the household are small and statistically insignificant in all three regressions. Together with the fact that expenditure patterns for households with orphans are not significantly different from those of other households, it appears that the safety net in South Africa—public and private—protects older adults against many of the consequences that could befall adults who must pick up the mantle when their adult children die.

Summary and Conclusions

This article focuses on one of the most important ways in which older people are affected by HIV and AIDS—the burdens imposed on parents when they must take in the orphaned children of their deceased adult children. Using data on a sample of respondents aged 50 and older in metropolitan Cape Town, we find that 33% of African respondents had a child aged 15 to 44 die, with about half having died after an illness. Based on estimates from other sources, we expect that well over half of these illness-related deaths were due to AIDS. Among those older African respondents whose deceased children left an orphaned grandchild, the orphan lives with the older adult 57% of the time, with poorer households more likely to take in orphaned grandchildren.

We find that two sources of financial support help buffer the impact of taking in orphaned grandchildren. First, South Africa's unusual government grant programs play a role. In particular, households are much more likely to receive the relatively generous foster care grant when there are orphaned grandchildren in the household. Second, private financial transfers between parents and their surviving children adjust in predictable ways. Older adults are less likely to provide financial support to surviving adult children and are more likely to receive support from surviving adult children when they are caring for orphaned grandchildren.

We find no impact of either the death of a child or taking in orphaned grandchildren on three measures of adult well-being. We find no statistically significant effect of either the death of a child or coresidence with an orphaned grandchild on the grandparent's ability to work, whether the grandparent is depressed some or most of the time, or the grandparent's self-reported health. This result may be due to the fact that both public and private transfers buffer what would otherwise be negative effects of losing a child or caring for an orphaned grandchild.

Our results are consistent with the evidence from many African countries that grandparents play a key role in caring for grandchildren who are orphaned due to AIDS deaths. Our results suggest that this burden does not have significant effects on the quality of life of these grandparents, however, at least as measured by their ability to work, their mental health, or their subjectively reported health. An obvious caveat is that this result may be due to the unique features of the South African social safety net. The old age pension, child support grant, and foster care grant may all help offset the burden of caring for orphaned grandchildren. We also find that private intergenerational transfers move in parallel directions, shifting in ways that give grandparents additional resources to support coresident orphaned grandchildren.

Acknowledgments

We thank Winford Masanjala and conference participants at the University of Michigan conference, The Impact of AIDS on Older Persons in Africa and Asia, for comments on an earlier version of the article that was presented there in November 2008.

Declaration of Conflicting Interests

The author(s) declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: Grants from the National Institute on Aging (R01 AG20275-01, P01 AG05842-14, and P30 AG024361) and funding from the National Institute of Child Health and Development (R01 HD045581-01).

Notes

1. The high percentage of parents who reported caring for a child who died after an illness may indicate that the respondents defined providing care in a broad way. The questionnaire did not probe specific types of care provided but simply asked if the parent “cared for” the child when the child was ill.
2. For example, on financial transfers, for each of their children separately, older adults are asked “In the past year, have you given _____ or _____’s children any money or in-kind transfers, such as clothing, or have you paid any of _____’s or _____’s children’s expenses, such as school fees, or health expenses? Do not include gifts such as birthday presents.”
3. Orphan minors are defined as household members younger than age 18 who are reported in the household module to have at least one parent who is dead at Wave 4.

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