# Demographic Challenges Facing the Elderly in Sub-Saharan Africa

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**Abstract:**

This paper analyzes the situation of the elderly in a large number of sub-Saharan African countries. The paper uses data from two sources – IPUMS-International census microdata on over 1.9 million individuals aged 60 and over from 23 censuses for 12 countries and Demographic and Health Survey data from 79 surveys for 34 countries. We find large differences in living arrangements across countries. The percentage of elderly women living alone varies from 2% in Senegal to over 15% in Kenya. The percentage of elderly in "skip-generation" households ranges from 2% in Senegal to 26% in Malawi. The paper analyzes the characteristics of elderly who care for their grandchildren. We hypothesize that they are positively selected on a number of characteristics, helping explain the fact that studies of the impact of caregiving often find little or no apparent negative impact on the elderly from caring for orphaned grandchildren.

**Introduction**

    The elderly in sub-Saharan Africa face many challenges.  Many of them have had to take on a substantial caregiving role in response to HIV/AIDS, caring both for their adult children suffering from the disease and for the orphaned grandchildren.  Rural-urban migration by younger adults may be leaving the elderly disproportionately in rural areas, with limited access to infrastructure and without adult children to help care for them.  The elderly in most African countries have low levels of education and very limited financial resources.

    This paper analyzes the situation of the elderly in a large number of sub-Saharan African countries.  The paper takes advantage of data from two main sources – census data provided via the Integrated Public Use Micro Samples – International (IPUMS-I) (Minnesota Population Center 2011) and the Demographic and Health Surveys (2011).  We believe it is by far the most ambitious attempt to analyze the status of the elderly in a large number of African countries.  The data include 79 DHS samples representing 34 countries and 23 IPUMS samples representing 12 countries (all of which are also represented in the DHS samples).  The DHS data and IPUMS data each have advantages and disadvantages.  The IPUMS census files provide much larger sample sizes, a valuable feature when looking at relatively small older cohorts.  The DHS, on the other hand, has data for more countries, and often at a higher frequency that census data.

**Previous Literature**

    As pointed out in a review by the U.S. National Academy of Sciences (Menken and Cohen 2006), research on the elderly in sub-Saharan Africa has lagged behind research on the elderly in Asia and Latin America.  One important area where there has been substantial research on the elderly in Africa has been research related to the role of the elderly in caring for AIDS orphans. A large body of research over the past decade has examined the educational and health outcomes for AIDS orphans who have been absorbed into non-parental households, generally headed by kin

(Subbarao and Coury 2004; Case, Paxson, and Ableidinger 2004, Case and Ardington 2006).

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 (Ntozi and Nakayiwa 1999; Williams and Tumwekwase 2001; Nyambedha et al. 2003; Knodel and Im-Em 2004, Knodel et al. 2007; Schatz and Ogunmefun 2007, Knodel 2008).

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 (Ntozi and Nakayiwa 1999; Foster and Williamson 2000; 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 a. (2003), for example, provide a number of reports from grandparents about the burdens imposed by having to provide schooling, food, and discipline to orphaned grandchildren.

As pointed out by Williams et al. (2010), many papers analyzing the impact of caregiving on the elderly find little or no apparent negative effect. The elderly who are caring for grandchildren are often somewhat better off, or at least no worse off, than elderly who are not caring for grandchildren when compared in the cross-section (e.g., Ardington et al. 2010). Williams et al. note that one obvious explanation of this pattern is that it is better off elderly who end up taking in orphaned grandchildren. There are very few data sets that provide the kind of information necessary to identify the causal impact of caring for grandchildren. The data we will analyze is

subject to the same criticism, but we will at least be able to look at the characteristics of the elderly who care for grandchildren across a large number of countries and time periods.

Compared to the extensive literature on the living arrangements of the elderly in Asia, there has been relatively little literature analyzing the case of sub-Saharan Africa. One such study is Zimmer and Dayton (2005), who used DHS data collected through 2000 to analyze the living arrangements of the elderly in 24 countries. They find that 46% of adults aged 60 and over lived with a grandchild, with 8% living with a grandchild that had at least one deceased parent. Also using African DHS data, Kautz et al. find a positive relationship between AIDS mortality and the prevalence of elderly living alone and the prevalence of skip-generation households. Our approach will be similar to that of Zimmer-Dayton and Kautz et al. We will supplement the DHS data with the much larger census data sets that have recently become available for a number of African countries. The census data make it possible to look at determinants of living arrangements using micro-data for much larger samples, allowing for more informative multivariate analysis.

**Data**

The distribution of census data through the Integrated Public Use Micro Samples – International (IPUMS-I) project (Minnesota Population Center 2011) has greatly increased the availability of public access census microdata for sub-Saharan Africa. Table 1 summarizes the data available on the population aged 60 and over for African countries as of the June 2011 release of IPUMS-I. There are 23 separate censuses representing 12 countries. We limit the analysis to individuals living in households, excluding those living in group quarters. The average number of individuals aged 60 and over in the IPUMS files is over 80,000, with a range from 112,000 (Guinea 1983) to 251,000 (South Africa 2001). Pooling across all IPUMS-I files for sub-Saharan Africa we have data on almost 1.9 million individuals aged 60 and over. As shown in the table, the elderly are only about 4-5% of the population in most African countries. This is well below

the percentage in this age group in other developing regions, though the absolute number and the proportion elderly will be increasing rapidly in coming decades (Velkoff and Kowal 2006, 2007). Given the small proportion elderly in these populations, having the large sample sizes from census data is extremely valuable in analyzing the elderly.

We also use household data from the Demographic and Health Surveys. Although the DHS surveys focus on women aged 15-49, the DHS household file is based on a representative sample of all households that is used to identify women aged 15-49. As pointed out by Zimmer and Dayton (2005), it therefore provides a representative sample of the elderly and can be used to analyze living arrangements. Table 2 shows the number of individuals aged 60 and over included in each of the 79 DHS surveys for sub-Saharan Africa, representing 34 countries. The average number is about 2,000, for a total of 167,000 individuals across all 79 DHS samples. The obvious advantage of the DHS data is the much larger number of countries represented. The smaller sample size is a clear disadvantage, making it difficult to look, for example, at differences between 60-69 year-old women and 80-89 year-old women.

**Living Arrangements**

Tables 3 to 6 present some simple summary measures describing the living arrangements of men and women aged 60 and over using IPUMS-I census data and DHS data. One advantage of the IPUMS-I census files is that pointers have been created to identify the spouses of all individuals in the household. In order to make the IPUMS-I tables comparable to the DHS data, we created a similar variable in the DHS datasets, following the procedures used to create the spouse identifier variable in the census data as closely as possible (see Sobek and Kennedy (2009) for details on the creation of the spouse identifier variable in IPUMS-I datasets).

The chosen types of living arrangements are mutually exclusive and include the following categories: living alone, living only with a spouse, living with a spouse and household members

aged 0-14 and 15-59 years, living with a spouse and 0-14 year olds only, living with a spouse and 15-59 year olds only, living with household members aged 0-14 and 15-59 years (without a spouse), living with 0-14 year olds only (without a spouse), and living with 15-59 year olds only (without a spouse).  Elderly living with 0-14 year olds but without 15-59 year olds are defined as living in skip-generation households.

Tables 3 and 4 show the living arrangements of the elderly in the IPUMS-I datasets for women and men respectively. As we can see in Table 3, living alone is relatively uncommon, though it is as high as 16% for women in Kenya in 1989 and it is generally more common that living with spouse only in many of the countries.  Comparing these results to those for men in Table 4, men are generally more likely to live with a spouse only than to live alone.  This is a reflection of the fact that women typically out-survive their husbands, a result of the combination of longer life expectancy for women and the fact that men are typically older than their wives.  It is quite common for both women and men to live with 0-14 year old children and with prime-age adults.  We will look more closely at skip-generation households below.

Tables 3 and 4 reveal considerable diversity across countries and between men and women. In Senegal less than 3% of older women live alone or with only a spouse, while in Kenya about 20% of women live either alone or with only a spouse.  In Senegal about 70% of older women live with children and prime-aged adults (no spouse).  The contrasting survival patterns of men and women are seen in the fact only 14% of men live in the "children and prime-aged adults (no spouse)" arrangement, while 75% of men live with spouse, children, and others.  In general, Tables 3 and 4 reveal that while living with prime-aged adults and children is the most common form of living arrangements in all countries, this type is more common in West Africa than in East Africa, where the elderly are relatively more common to live alone or in skip-generation households.

Tables 5 and 6 look at the same categories of living arrangements in the DHS datasets, which provide a richer set of countries, and more frequent observations for a couple of countries than the census data. The qualitative patterns here are similar to the ones in Tables 3 and 4, although the percentages of particular living arrangements sometimes differ quite significantly from the ones in the corresponding IPUMS tables. This seems to be due to the much smaller samples in the DHS datasets as well as due to differences in the definition of households between census data and demographic household surveys.

**Skip-Generation Households**

In light of the previous literature on who is taking care of orphans, one particularly interesting type of living arrangement to look at are skip-generation households. Table 7 provides a more direct look at this issue, and allows us to contrast the "young" elderly with the "old" elderly. We see that living with 0-14 year-olds is extremely common, ranging for men aged 60-69 from 45% in South Africa to 91% in Senegal. The prevalence of skip-generation living arrangements varies considerably across countries and by age and sex. Among women aged 60-69 in Malawi, 30% live in a skip-generation household, caring for children aged 0-14 but having no prime-age adults in the household. This compares to only 2% for women aged 60-69 in Senegal. Among 60-69 year-olds, women are much more likely to be in skip-generation households than are men. This is in part because men in this age group may be married to women who are in the 20-59 age group. Among those aged 80 and over the prevalence of skip-generation living arrangements is fairly similar for men and women. While those aged 80 and over are somewhat less likely to be in skip-generation arrangements, it is striking that over 20% of women aged 80 and over are in such arrangements in Malawi and Rwanda. Overall, living in skip-generation households is much more common in East Africa than in other parts of sub-Saharan Africa.

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Table 8 shows data on skip-generation living arrangements using DHS data. Because of the smaller sample size we do not disaggregate by age or gender. For countries that have both IPUMS and DHS data the estimates in Table 8 are generally consistent with the estimates in Table 7. For example, only about 2% of elderly in Senegal are in skip-generation arrangements in both tables. Rwanda and Malawi have the highest prevalence of skip-generation arrangements in Table 7, with about 26% of individuals aged 60 and over living with 0-14 year-olds but not with 20-59 year-olds.

As pointed out above, one of the surprising results in research analyzing the impact of caregiving on the elderly is the lack of any apparent strong negative effect of caregiving. This is very likely due to the strong endogeneity of caregiving, with only the healthier and better endowed elderly taking in orphaned grandchildren. In order to analyze the hypothesis that the elderly who take care of their grandchildren are positively selected from the pool of all elderly, we use regression analysis in Tables 9 and 10. The dependent variable is an indicator variable equal to one if the elderly person is living in a skip-generation household, and zero otherwise. The independent variables of interest include years of schooling, children ever born (available only for women), and dummy variables for having a disability (typically referring to any disability, although in some countries we just have information on employment disabilities), for living in rural areas, and for having access to electricity and water. Other controls that are included but not reported in Tables 9 and 10 are an indicator variable for living with a spouse, age, and age squared.

Table 9 reports the results for these regressions for women. In most countries, living in a skip-generation household is associated with a lower probability of having a disability: In Malawi in 2008, for example, women living in skip-generation households are about six percentage points less likely to have a disability than other elderly women. Women in skip-generation households

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also tend to live in rural areas, to have less access to services like electricity and water, and to have had slightly more children. The coefficient on years of schooling is typically relatively small but negative, implying that women living without prime-age adults tend to be less educated than other elderly.

The qualitative patterns for men in Table 10 are similar to those for women in Table 9, although the coefficients are often much less precisely estimated. Overall, these regression results suggest that the elderly living in skip-generation households may indeed be positively selected among the general pool of the elderly on the health dimension, although they seem to be somewhat disadvantaged on other factors like access to electricity and water.

Unfortunately, there are no other health measures available in the census files that we could use to supplement these results. We also know nothing about the reason a household turned into a skip-generation household, which could be due to various factors. If the children's parents temporarily migrated in search for work, for example, the caregiving responsibilities of the grandparents may be very different from the permanent situation of caring for children whose parents died from AIDS. We would expect that the elderly taking care of young children permanently should be more positively selected on health than grandparents only temporarily looking after their grandchildren.

To test this hypothesis, we supplement the census data we have with information on AIDS deaths. UNAIDS reports the annual number of deaths from AIDS for a country, which we normalize by the country's total population in that year. Figures 1 and 2 show scatter plots for the AIDS death rate and the coefficient on the disability variable from the regressions of Tables 9 and 10. Since UNAIDS only reports annual deaths from 1990 onwards, and since coefficients should be comparable across countries, this scatter plot excludes country observations prior to 1990 and those countries that do not have a general disability variable.

Figure 1 shows a negative relationship between the AIDS death rate and the estimated disability coefficients: The higher the AIDS death rate in a country, the lower the probability that an elderly woman living in a skip-generation household will be disabled relative to other elderly women. This is consistent with the hypothesis that the elderly that have to take care of their grandchildren permanently should be healthier than other grandparents to be able to fulfill their caregiving responsibilities.

Figure 2 reveals that a similar relationship does not exist for men. This is consistent with the weaker regression results relative to those of women in Table 10, and also with the idea that it is mainly women who take care of children. Therefore, the health of the grandfather may be less important than that of the grandmother for making skip-generation households work.

**Conclusion**

This paper contributes to the existing literatures on the elderly in sub-Saharan Africa. Taking advantage of the large number of census and household survey datasets available through the IPUMS-I and the DHS websites, we document that the elderly live in a wide variety of living arrangements. While it is most common for the elderly to live with prime-aged adults and children in all countries, older people in East Africa are more likely to live alone or in skip-generation households than the elderly in other parts of sub-Saharan Africa. A more detailed analysis of the characteristics of the elderly living in skip-generation households shows that older women and, to a lesser degree, older men are less likely to be disabled, but tend to live in rural areas with worse access to water and electricity. We also find that older women living in skip-generation households in countries with higher AIDS mortality rates are less likely to be disabled than women in countries with lower AIDS mortality rates. These patterns suggest a positive selection of older adults into caregiving roles. This result helps explain the results typically found in studies trying to examine the impact of caregiving on the elderly, which often find no or very little

negative consequences of caregiving on the health status of the elderly. It seems like the elderly who choose take on caregiving responsibilities for young children are healthier than the average older person.

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**Table 1. Number of men and women aged 60 and over in IPUMS-I censuses**

| Country | Year | Number of women aged 60+ | Percentage of Population | Number of men aged 60+ | Percentage of Population |
|---|---|---|---|---|---|
| Ghana | 2000 | 55,766 | 5.9% | 56,082 | 6.0% |
| Guinea | 1983 | 13,493 | 5.8% | 15,021 | 6.7% |
| Guinea | 1996 | 19,043 | 5.1% | 19,637 | 5.5% |
| Kenya | 1989 | 22,509 | 4.2% | 21,617 | 4.1% |
| Kenya | 1999 | 30,942 | 4.4% | 27,359 | 4.0% |
| Malawi | 1987 | 20,930 | 5.1% | 18,910 | 4.9% |
| Malawi | 1998 | 25,137 | 5.0% | 22,441 | 4.6% |
| Malawi | 2008 | 34,436 | 5.1% | 27,921 | 4.3% |
| Mali | 1987 | 18,794 | 4.7% | 19,182 | 5.0% |
| Mali | 1998 | 21,547 | 4.3% | 24,050 | 4.9% |
| Rwanda | 1991 | 17,275 | 4.6% | 15,539 | 4.3% |
| Rwanda | 2002 | 18,311 | 4.2% | 13,269 | 3.4% |
| Senegal | 1988 | 15,162 | 4.2% | 16,670 | 4.9% |
| Senegal | 2002 | 20,999 | 4.2% | 22,541 | 4.6% |
| Sierra Leone | 2004 | 12,208 | 4.8% | 11,914 | 5.0% |
| South Africa | 1996 | 138,354 | 7.6% | 87,759 | 5.4% |
| South Africa | 2001 | 156,773 | 8.2% | 93,920 | 5.6% |
| South Africa | 2007 | 42,495 | 8.5% | 26,383 | 5.9% |
| Sudan | 2008 | 83,198 | 3.1% | 111,825 | 3.9% |
| Tanzania | 1988 | 51,793 | 4.4% | 55,557 | 5.0% |
| Tanzania | 2002 | 94,172 | 4.9% | 86,804 | 4.9% |
| Uganda | 1991 | 30,526 | 3.9% | 31,791 | 4.3% |
| Uganda | 2002 | 48,805 | 3.9% | 51,377 | 4.2% |

**Table 2. Number of men and women aged 60 and over in DHS surveys**

| Country | Year | Number of women aged 60+ | Number of men aged 60+ | Country | Year | Number of women aged 60+ | Number of men aged 60+ |
|---|---|---|---|---|---|---|---|
| Benin | 1996 | 725 | 786 | Mali | 1995 | 876 | 1,421 |
| Benin | 2001 | 713 | 783 | Mali | 2001 | 1,129 | 2,001 |
| Benin | 2006 | 1,823 | 2,007 | Mali | 2006 | 1,207 | 2,183 |
| BurkinaFaso | 1998 | 680 | 951 | Mozambiq | 1997 | 989 | 1,062 |
| BurkinaFaso | 2003 | 1,409 | 1,785 | Mozambiq | 2003 | 1,629 | 1,440 |
| CAR | 1994 | 612 | 576 | Namibia | 1992 | 1,029 | 823 |
| Cameroon | 1991 | 426 | 366 | Namibia | 2000 | 1,121 | 883 |
| Cameroon | 1998 | 737 | 693 | Namibia | 2006 | 1,661 | 1,114 |
| Cameroon | 2004 | 1,424 | 1,289 | Niger | 1992 | 605 | 724 |
| Chad | 1996 | 602 | 723 | Niger | 1998 | 609 | 872 |
| Chad | 2004 | 450 | 563 | Niger | 2006 | 739 | 1,323 |
| Comoros | 1996 | 463 | 474 | Nigeria | 1990 | 900 | 1,495 |
| Congo | 2005 | 670 | 622 | Nigeria | 1999 | 642 | 974 |
| CongoDR | 2007 | 899 | 946 | Nigeria | 2003 | 814 | 1,065 |
| CotedIvoire | 1994 | 681 | 811 | Nigeria | 2008 | 3,505 | 4,626 |
| CotedIvoire | 1998 | 215 | 234 | Rwanda | 1992 | 721 | 714 |
| Ethiopia | 2000 | 1,533 | 1,623 | Rwanda | 2000 | 1,001 | 792 |
| Ethiopia | 2005 | 1,342 | 1,767 | Rwanda | 2005 | 1,177 | 783 |
| Gabon | 2000 | 1,509 | 1,280 | SaoTomeF | 2008 | 456 | 447 |
| Ghana | 1993 | 537 | 534 | Senegal | 1992 | 868 | 901 |
| Ghana | 1998 | 710 | 678 | Senegal | 1997 | 1,390 | 1,385 |
| Ghana | 2003 | 900 | 888 | Senegal | 2005 | 1,974 | 1,936 |
| Ghana | 2008 | 1,615 | 1,483 | SierraLeor | 2008 | 1,140 | 1,516 |
| Guinea | 1999 | 704 | 1,039 | SouthAfric | 1998 | 2,726 | 1,649 |
| Guinea | 2005 | 934 | 1,370 | Swaziland | 2006 | 739 | 469 |
| Kenya | 1993 | 988 | 954 | Tanzania | 1991 | 1,062 | 1,425 |
| Kenya | 1998 | 918 | 926 | Tanzania | 1996 | 976 | 1,237 |
| Kenya | 2003 | 796 | 811 | Tanzania | 1999 | 441 | 541 |
| Kenya | 2008 | 1,066 | 944 | Tanzania | 2004 | 1,318 | 1,296 |
| Lesotho | 2004 | 2,010 | 1,298 | Togo | 1998 | 1,281 | 1,200 |
| Lesotho | 2009 | 2,208 | 1,396 | Uganda | 1995 | 637 | 688 |
| Liberia | 2007 | 679 | 737 | Uganda | 2000 | 660 | 660 |
| Madagascar | 1992 | 620 | 654 | Uganda | 2006 | 947 | 865 |
| Madagascar | 1997 | 757 | 719 | Zambia | 1992 | 612 | 771 |
| Madagascar | 2003 | 867 | 810 | Zambia | 1996 | 773 | 980 |
| Madagascar | 2008 | 1,701 | 1,754 | Zambia | 2001 | 839 | 869 |
| Malawi | 1992 | 617 | 611 | Zambia | 2007 | 817 | 794 |
| Malawi | 2000 | 1,537 | 1,311 | Zimbabwe | 1994 | 843 | 836 |
| Malawi | 2004 | 1,628 | 1,421 | Zimbabwe | 1999 | 885 | 809 |
| | | | | Zimbabwe | 2005 | 1,369 | 1,163 |

**Table 3. Living arrangements of women aged 60 and over, IPUMS countries**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|--------|---------|------|-------|-------------|-----------|---------|-----------|-------------|-----------|-----------|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Eastern** | mean | | **12%** | **5%** | **11%** | **7%** | **4%** | **34%** | **14%** | **9%** |
| | Kenya | 1989 | 16% | 5% | 12% | 4% | 4% | 38% | 9% | 9% |
| | Kenya | 1999 | 15% | 5% | 11% | 4% | 4% | 35% | 11% | 11% |
| | Malawi | 1987 | 11% | 8% | 10% | 10% | 2% | 31% | 17% | 6% |
| | Malawi | 1998 | 11% | 9% | 12% | 10% | 4% | 27% | 16% | 7% |
| | Malawi | 2008 | 13% | 8% | 11% | 9% | 4% | 26% | 15% | 8% |
| | Rwanda | 1991 | 10% | 4% | 17% | 8% | 6% | 25% | 16% | 9% |
| | Rwanda | 2002 | 10% | 3% | 12% | 7% | 4% | 29% | 18% | 10% |
| | Tanzania | 1988 | 8% | 5% | 12% | 5% | 3% | 44% | 10% | 8% |
| | Tanzania | 2002 | 9% | 5% | 11% | 5% | 3% | 42% | 11% | 9% |
| | Uganda | 1991 | 11% | 5% | 10% | 5% | 3% | 40% | 13% | 10% |
| | Uganda | 2002 | 12% | 5% | 10% | 6% | 3% | 35% | 16% | 8% |
| **Western** | mean | | **5%** | **2%** | **16%** | **2%** | **3%** | **58%** | **5%** | **7%** |
| | Ghana | 2000 | 6% | 1% | 14% | 2% | 2% | 52% | 10% | 10% |
| | Guinea | 1983 | 14% | 3% | 18% | 3% | 5% | 45% | 3% | 7% |
| | Guinea | 1996 | 4% | 2% | 21% | 2% | 3% | 56% | 4% | 6% |
| | Mali | 1987 | 6% | 3% | 10% | 3% | 4% | 57% | 4% | 9% |
| | Mali | 1998 | 5% | 4% | 13% | 4% | 6% | 52% | 4% | 7% |
| | Senegal | 1988 | 2% | 1% | 17% | 1% | 1% | 70% | 2% | 4% |
| | Senegal | 2002 | 1% | 0% | 21% | 1% | 2% | 69% | 1% | 5% |
| | Sierra Leone | 2004 | 3% | 1% | 11% | 2% | 2% | 63% | 9% | 7% |
| **Southern** | mean | | **11%** | **9%** | **10%** | **2%** | **5%** | **38%** | **7%** | **14%** |
| | South Africa | 1996 | 13% | 8% | 10% | 2% | 5% | 36% | 7% | 13% |
| | South Africa | 2001 | 11% | 9% | 10% | 2% | 5% | 39% | 7% | 14% |
| | South Africa | 2007 | 9% | 10% | 10% | 2% | 6% | 37% | 7% | 16% |
| **Others** | Sudan | 2008 | 7% | 3% | 13% | 2% | 8% | 42% | 6% | 16% |

Source: Census data via IPUMS-International

**Table 4. Living arrangements of men aged 60 and over, IPUMS countries**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Eastern** | mean | | **9%** | **10%** | **46%** | **7%** | **13%** | **10%** | **3%** | **4%** |
| | Kenya | 1989 | 10% | 9% | 48% | 4% | 12% | 11% | 2% | 4% |
| | Kenya | 1999 | 9% | 9% | 45% | 4% | 14% | 12% | 2% | 5% |
| | Malawi | 1987 | 9% | 16% | 44% | 11% | 13% | 7% | 2% | 3% |
| | Malawi | 1998 | 8% | 15% | 43% | 11% | 15% | 7% | 2% | 3% |
| | Malawi | 2008 | 7% | 14% | 42% | 11% | 15% | 8% | 2% | 3% |
| | Rwanda | 1991 | 4% | 7% | 56% | 10% | 13% | 6% | 2% | 2% |
| | Rwanda | 2002 | 9% | 6% | 46% | 9% | 12% | 9% | 3% | 3% |
| | Tanzania | 1988 | 8% | 9% | 47% | 5% | 11% | 14% | 3% | 4% |
| | Tanzania | 2002 | 8% | 10% | 46% | 5% | 13% | 14% | 3% | 4% |
| | Uganda | 1991 | 13% | 9% | 43% | 5% | 10% | 13% | 3% | 5% |
| | Uganda | 2002 | 12% | 9% | 45% | 6% | 10% | 11% | 4% | 4% |
| **Western** | mean | | **5%** | **4%** | **58%** | **2%** | **10%** | **16%** | **1%** | **3%** |
| | Ghana | 2000 | 7% | 2% | 36% | 2% | 6% | 33% | 5% | 7% |
| | Guinea | 1983 | 16% | 6% | 52% | 2% | 13% | 10% | 1% | 2% |
| | Guinea | 1996 | 2% | 4% | 64% | 2% | 10% | 15% | 1% | 3% |
| | Mali | 1987 | 2% | 7% | 49% | 3% | 14% | 21% | 1% | 4% |
| | Mali | 1998 | 2% | 8% | 58% | 3% | 17% | 9% | 1% | 3% |
| | Senegal | 1988 | 2% | 2% | 74% | 1% | 6% | 14% | 0% | 2% |
| | Senegal | 2002 | 1% | 1% | 75% | 1% | 6% | 14% | 0% | 2% |
| | Sierra Leone | 2004 | 3% | 3% | 59% | 3% | 9% | 17% | 2% | 5% |
| Southern | mean | | **11%** | **19%** | **30%** | **3%** | **18%** | **12%** | **1%** | **7%** |
| | South Africa | 1996 | 13% | 16% | 28% | 3% | 15% | 13% | 2% | 8% |
| | South Africa | 2001 | 10% | 19% | 32% | 3% | 18% | 12% | 1% | 7% |
| | South Africa | 2007 | 10% | 21% | 31% | 3% | 20% | 10% | 1% | 7% |
| **Others** | Sudan | 2008 | 3% | 5% | 50% | 2% | 21% | 13% | 1% | 5% |

Source: Census data via IPUMS-International

**Table 5. Living arrangements of women aged 60 and over, DHS countries**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Eastern** | mean | | **11%** | **6%** | **11%** | **7%** | **4%** | **34%** | **14%** | **8%** |
| | Comoros | 1996 | 2% | 2% | 9% | 3% | 3% | 61% | 7% | 10% |
| | Ethiopia | 2000 | 7% | 3% | 11% | 6% | 3% | 39% | 13% | 12% |
| | Ethiopia | 2005 | 9% | 3% | 11% | 8% | 3% | 38% | 13% | 9% |
| | Kenya | 1993 | 17% | 7% | 11% | 5% | 4% | 28% | 13% | 8% |
| | Kenya | 1998 | 23% | 10% | 10% | 6% | 4% | 23% | 12% | 8% |
| | Kenya | 2003 | 16% | 8% | 9% | 5% | 5% | 31% | 11% | 10% |
| | Kenya | 2008 | 14% | 7% | 9% | 6% | 6% | 27% | 14% | 8% |
| | Madagascar | 1992 | 9% | 6% | 15% | 6% | 5% | 35% | 10% | 10% |
| | Madagascar | 1997 | 11% | 6% | 14% | 6% | 5% | 35% | 12% | 9% |
| | Madagascar | 2003 | 13% | 6% | 13% | 6% | 4% | 30% | 14% | 11% |
| | Madagascar | 2008 | 12% | 7% | 12% | 7% | 6% | 32% | 12% | 9% |
| | Malawi | 1992 | 11% | 9% | 11% | 10% | 4% | 29% | 14% | 6% |
| | Malawi | 2000 | 13% | 8% | 10% | 9% | 3% | 29% | 18% | 6% |
| | Malawi | 2004 | 13% | 9% | 7% | 13% | 3% | 26% | 21% | 4% |
| | Mozambique | 1997 | 16% | 8% | 13% | 5% | 4% | 33% | 10% | 8% |
| | Mozambique | 2003 | 15% | 9% | 9% | 6% | 3% | 34% | 12% | 7% |
| | Rwanda | 1992 | 5% | 5% | 18% | 10% | 6% | 26% | 17% | 8% |
| | Rwanda | 2000 | 8% | 4% | 8% | 9% | 4% | 26% | 26% | 7% |
| | Rwanda | 2005 | 9% | 3% | 10% | 7% | 5% | 28% | 20% | 13% |
| | Tanzania | 1991 | 7% | 5% | 16% | 5% | 3% | 42% | 7% | 9% |
| | Tanzania | 1996 | 10% | 7% | 12% | 5% | 3% | 40% | 9% | 8% |
| | Tanzania | 1999 | 7% | 4% | 10% | 5% | 2% | 52% | 8% | 5% |
| | Tanzania | 2004 | 10% | 5% | 14% | 5% | 4% | 39% | 10% | 9% |
| | Uganda | 1995 | 11% | 5% | 9% | 8% | 2% | 32% | 21% | 6% |
| | Uganda | 2000 | 13% | 8% | 10% | 8% | 2% | 28% | 22% | 5% |
| | Uganda | 2006 | 11% | 4% | 9% | 7% | 1% | 36% | 21% | 6% |
| | Zambia | 1992 | 11% | 10% | 13% | 6% | 3% | 37% | 8% | 8% |
| | Zambia | 1996 | 10% | 7% | 13% | 9% | 3% | 38% | 10% | 7% |
| | Zambia | 2001 | 11% | 7% | 13% | 7% | 3% | 36% | 12% | 7% |
| | Zambia | 2007 | 14% | 7% | 9% | 10% | 3% | 30% | 15% | 7% |
| **Western** | mean | | **8%** | **4%** | **17%** | **4%** | **3%** | **45%** | **8%** | **6%** |
| | Benin | 1996 | 9% | 4% | 18% | 4% | 3% | 44% | 8% | 6% |
| | Benin | 2001 | 11% | 4% | 14% | 3% | 3% | 40% | 11% | 8% |
| | Benin | 2006 | 14% | 4% | 12% | 5% | 3% | 37% | 12% | 8% |
| | BurkinaFaso | 1998 | 2% | 4% | 31% | 6% | 4% | 44% | 3% | 2% |
| | BurkinaFaso | 2003 | 4% | 4% | 24% | 6% | 6% | 45% | 3% | 4% |
| | CotedIvoire | 1994 | 5% | 2% | 18% | 1% | 2% | 61% | 4% | 5% |
| | CotedIvoire | 1998 | 2% | 1% | 19% | 2% | 2% | 59% | 3% | 7% |
| | Ghana | 1993 | 25% | 3% | 7% | 5% | 2% | 25% | 23% | 6% |
| | Ghana | 1998 | 22% | 3% | 8% | 4% | 2% | 29% | 18% | 9% |
| | Ghana | 2003 | 15% | 3% | 10% | 4% | 3% | 36% | 14% | 9% |
| | Ghana | 2008 | 15% | 5% | 8% | 4% | 3% | 32% | 12% | 14% |
| | Guinea | 1999 | 3% | 2% | 25% | 4% | 3% | 52% | 5% | 4% |
| | Guinea | 2005 | 6% | 3% | 24% | 4% | 4% | 44% | 7% | 5% |
| | Liberia | 2007 | 3% | 3% | 14% | 5% | 2% | 57% | 9% | 6% |
| | Mali | 1995 | 6% | 9% | 17% | 5% | 6% | 38% | 8% | 7% |
| | Mali | 2001 | 9% | 13% | 15% | 7% | 7% | 30% | 8% | 6% |
| | Mali | 2006 | 6% | 9% | 17% | 6% | 6% | 37% | 7% | 5% |

**Table 5. Living arrangements of women aged 60 and over, DHS countries (continued)**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Western** | Niger | 1992 | 7% | 3% | 21% | 5% | 2% | 51% | 6% | 3% |
| | Niger | 1998 | 6% | 3% | 19% | 8% | 2% | 45% | 10% | 4% |
| | Niger | 2006 | 4% | 3% | 22% | 8% | 3% | 45% | 10% | 3% |
| | Nigeria | 1990 | 10% | 4% | 20% | 5% | 6% | 34% | 9% | 8% |
| | Nigeria | 1999 | 10% | 4% | 13% | 4% | 5% | 38% | 7% | 12% |
| | Nigeria | 2003 | 10% | 4% | 13% | 3% | 4% | 43% | 7% | 9% |
| | Nigeria | 2008 | 16% | 6% | 12% | 5% | 6% | 28% | 10% | 12% |
| | Senegal | 1992 | 1% | 1% | 18% | 2% | 1% | 69% | 2% | 5% |
| | Senegal | 1997 | 1% | 0% | 23% | 1% | 1% | 68% | 2% | 3% |
| | Senegal | 2005 | 1% | 1% | 21% | 1% | 1% | 70% | 2% | 4% |
| | SierraLeone | 2008 | 2% | 2% | 16% | 5% | 2% | 59% | 8% | 5% |
| | Togo | 1998 | 8% | 2% | 15% | 4% | 2% | 47% | 10% | 7% |
| **Central** | mean | | **13%** | **6%** | **12%** | **3%** | **4%** | **42%** | **9%** | **9%** |
| | Central African Republic | 1994 | 14% | 8% | 13% | 3% | 5% | 37% | 10% | 9% |
| | Cameroon | 1991 | 12% | 4% | 10% | 3% | 6% | 47% | 7% | 9% |
| | Cameroon | 1998 | 7% | 4% | 13% | 2% | 4% | 50% | 6% | 10% |
| | Cameroon | 2004 | 13% | 4% | 12% | 2% | 2% | 43% | 9% | 9% |
| | Chad | 1996 | 17% | 4% | 7% | 2% | 2% | 45% | 13% | 7% |
| | Chad | 2004 | 10% | 5% | 12% | 3% | 2% | 45% | 13% | 5% |
| | Congo | 2005 | 8% | 4% | 15% | 2% | 2% | 50% | 4% | 9% |
| | Democratic Rep. of Congo | 2007 | 12% | 6% | 14% | 3% | 6% | 39% | 9% | 9% |
| | Gabon | 2000 | 9% | 9% | 13% | 3% | 6% | 38% | 3% | 11% |
| | SaoTomePrincipe | 2008 | 27% | 8% | 7% | 4% | 5% | 22% | 12% | 10% |
| **Southern** | mean | | **6%** | **4%** | **14%** | **5%** | **3%** | **43%** | **13%** | **9%** |
| | Lesotho | 2004 | 9% | 2% | 11% | 5% | 3% | 41% | 13% | 11% |
| | Lesotho | 2009 | 8% | 3% | 11% | 4% | 3% | 42% | 12% | 13% |
| | Namibia | 1992 | 3% | 4% | 20% | 4% | 2% | 48% | 9% | 6% |
| | Namibia | 2000 | 4% | 4% | 18% | 4% | 2% | 45% | 15% | 6% |
| | Namibia | 2006 | 6% | 4% | 15% | 4% | 2% | 47% | 9% | 9% |
| | SouthAfrica | 1998 | 8% | 7% | 10% | 4% | 4% | 40% | 12% | 12% |
| | Swaziland | 2006 | 6% | 3% | 11% | 4% | 2% | 53% | 13% | 8% |
| | Zimbabwe | 1994 | 4% | 5% | 16% | 6% | 3% | 42% | 10% | 8% |
| | Zimbabwe | 1999 | 8% | 6% | 14% | 6% | 3% | 37% | 15% | 7% |
| | Zimbabwe | 2005 | 6% | 3% | 13% | 9% | 2% | 38% | 18% | 6% |

Source: DHS data

**Table 6. Living arrangements of men aged 60 and over, DHS countries**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Eastern** | mean | | **6%** | **11%** | **51%** | **7%** | **14%** | **9%** | **2%** | **3%** |
| | Comoros | 1996 | 1% | 5% | 55% | 3% | 14% | 18% | 1% | 4% |
| | Ethiopia | 2000 | 1% | 5% | 62% | 6% | 12% | 11% | 1% | 2% |
| | Ethiopia | 2005 | 2% | 5% | 62% | 6% | 13% | 9% | 1% | 2% |
| | Kenya | 1993 | 9% | 11% | 49% | 5% | 14% | 7% | 2% | 3% |
| | Kenya | 1998 | 9% | 18% | 45% | 6% | 19% | 4% | 1% | 4% |
| | Kenya | 2003 | 9% | 13% | 47% | 5% | 15% | 7% | 2% | 3% |
| | Kenya | 2008 | 7% | 15% | 44% | 8% | 21% | 5% | 2% | 3% |
| | Madagascar | 1992 | 3% | 9% | 49% | 6% | 12% | 17% | 3% | 2% |
| | Madagascar | 1997 | 4% | 10% | 52% | 7% | 14% | 9% | 2% | 5% |
| | Madagascar | 2003 | 7% | 11% | 49% | 6% | 13% | 12% | 2% | 3% |
| | Madagascar | 2008 | 8% | 11% | 44% | 7% | 16% | 11% | 3% | 3% |
| | Malawi | 1992 | 7% | 14% | 47% | 10% | 14% | 6% | 2% | 3% |
| | Malawi | 2000 | 8% | 15% | 47% | 11% | 14% | 6% | 1% | 2% |
| | Malawi | 2004 | 9% | 15% | 45% | 15% | 12% | 5% | 1% | 1% |
| | Mozambique | 1997 | 10% | 17% | 47% | 4% | 18% | 9% | 2% | 2% |
| | Mozambique | 2003 | 6% | 17% | 53% | 7% | 17% | 5% | 1% | 2% |
| | Rwanda | 1992 | 2% | 5% | 56% | 9% | 10% | 9% | 3% | 3% |
| | Rwanda | 2000 | 4% | 8% | 50% | 11% | 14% | 6% | 4% | 2% |
| | Rwanda | 2005 | 5% | 7% | 51% | 11% | 13% | 6% | 2% | 4% |
| | Tanzania | 1991 | 5% | 9% | 57% | 4% | 12% | 12% | 1% | 3% |
| | Tanzania | 1996 | 6% | 12% | 54% | 4% | 14% | 8% | 2% | 3% |
| | Tanzania | 1999 | 7% | 9% | 56% | 5% | 11% | 11% | 1% | 3% |
| | Tanzania | 2004 | 6% | 11% | 54% | 5% | 14% | 10% | 1% | 2% |
| | Uganda | 1995 | 11% | 10% | 47% | 8% | 10% | 9% | 4% | 4% |
| | Uganda | 2000 | 12% | 12% | 48% | 8% | 10% | 7% | 3% | 3% |
| | Uganda | 2006 | 12% | 7% | 52% | 9% | 8% | 9% | 3% | 2% |
| | Zambia | 1992 | 4% | 14% | 56% | 4% | 13% | 11% | 0% | 3% |
| | Zambia | 1996 | 6% | 13% | 54% | 7% | 15% | 8% | 1% | 2% |
| | Zambia | 2001 | 5% | 10% | 58% | 7% | 12% | 7% | 2% | 1% |
| | Zambia | 2007 | 6% | 14% | 48% | 10% | 15% | 7% | 2% | 2% |
| **Western** | mean | | **6%** | **7%** | **63%** | **3%** | **11%** | **8%** | **2%** | **2%** |
| | Benin | 1996 | 7% | 6% | 57% | 4% | 8% | 12% | 3% | 2% |
| | Benin | 2001 | 8% | 6% | 60% | 3% | 8% | 10% | 2% | 3% |
| | Benin | 2006 | 8% | 8% | 58% | 4% | 12% | 7% | 1% | 2% |
| | BurkinaFaso | 1998 | 2% | 5% | 74% | 4% | 8% | 6% | 1% | 1% |
| | BurkinaFaso | 2003 | 4% | 6% | 69% | 4% | 11% | 5% | 1% | 1% |
| | CotedIvoire | 1994 | 5% | 4% | 63% | 1% | 6% | 18% | 1% | 3% |
| | CotedIvoire | 1998 | 5% | 3% | 64% | 2% | 7% | 16% | 2% | 2% |
| | Ghana | 1993 | 20% | 9% | 44% | 5% | 13% | 6% | 4% | 3% |
| | Ghana | 1998 | 19% | 7% | 45% | 5% | 10% | 8% | 2% | 5% |
| | Ghana | 2003 | 14% | 6% | 51% | 4% | 11% | 8% | 3% | 3% |
| | Ghana | 2008 | 14% | 11% | 41% | 5% | 16% | 6% | 3% | 6% |
| | Guinea | 1999 | 2% | 4% | 74% | 3% | 9% | 8% | 1% | 1% |
| | Guinea | 2005 | 1% | 5% | 73% | 3% | 10% | 8% | 1% | 1% |
| | Liberia | 2007 | 8% | 7% | 57% | 5% | 9% | 14% | 2% | 3% |
| | Mali | 1995 | 4% | 13% | 61% | 4% | 18% | 4% | 1% | 1% |
| | Mali | 2001 | 5% | 15% | 59% | 4% | 18% | 2% | 1% | 1% |
| | Mali | 2006 | 3% | 10% | 65% | 4% | 16% | 4% | 1% | 1% |

**Table 6. Living arrangements of men aged 60 and over, DHS countries (continued)**

| Region | Country | Year | Alone | Spouse only | Spouse and | | | No spouse and | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0-14, 20-59 | 0-14 only | 20-59 only | 0-14, 20-59 | 0-14 only | 20-59 only |
| **Western** | Niger | 1992 | 1% | 5% | 76% | 4% | 7% | 6% | 1% | 1% |
| | Niger | 1998 | 1% | 6% | 73% | 6% | 9% | 6% | 1% | 0% |
| | Niger | 2006 | 2% | 6% | 73% | 5% | 10% | 5% | 1% | 0% |
| | Nigeria | 1990 | 5% | 9% | 62% | 3% | 16% | 5% | 2% | 3% |
| | Nigeria | 1999 | 3% | 8% | 62% | 3% | 17% | 5% | 2% | 3% |
| | Nigeria | 2003 | 5% | 9% | 58% | 2% | 20% | 5% | 1% | 2% |
| | Nigeria | 2008 | 8% | 11% | 53% | 3% | 20% | 4% | 2% | 3% |
| | Senegal | 1992 | 1% | 2% | 76% | 2% | 4% | 14% | 0% | 1% |
| | Senegal | 1997 | 1% | 1% | 79% | 1% | 5% | 11% | 1% | 1% |
| | Senegal | 2005 | 1% | 2% | 75% | 1% | 5% | 16% | 0% | 1% |
| | SierraLeone | 2008 | 1% | 4% | 66% | 4% | 7% | 15% | 2% | 3% |
| | Togo | 1998 | 7% | 5% | 59% | 4% | 8% | 13% | 2% | 4% |
| **Central** | mean | | **10%** | **11%** | **50%** | **3%** | **14%** | **10%** | **2%** | **4%** |
| | Central African Republic | 1994 | 8% | 17% | 43% | 3% | 18% | 12% | 2% | 4% |
| | Cameroon | 1991 | 7% | 9% | 54% | 3% | 14% | 11% | 1% | 4% |
| | Cameroon | 1998 | 7% | 7% | 55% | 3% | 10% | 13% | 1% | 4% |
| | Cameroon | 2004 | 8% | 10% | 57% | 2% | 13% | 8% | 2% | 3% |
| | Chad | 1996 | 5% | 11% | 63% | 2% | 14% | 8% | 2% | 1% |
| | Chad | 2004 | 4% | 10% | 62% | 3% | 13% | 8% | 1% | 1% |
| | Congo | 2005 | 6% | 8% | 56% | 3% | 13% | 13% | 1% | 3% |
| | Democratic Rep. of Congo | 2007 | 5% | 9% | 55% | 3% | 15% | 11% | 1% | 3% |
| | Gabon | 2000 | 11% | 14% | 33% | 3% | 14% | 14% | 2% | 8% |
| | SaoTomePrincipe | 2008 | 36% | 13% | 23% | 5% | 13% | 3% | 3% | 3% |
| **Southern** | mean | | **7%** | **8%** | **47%** | **6%** | **10%** | **14%** | **2%** | **5%** |
| | Lesotho | 2004 | 9% | 7% | 42% | 7% | 15% | 14% | 3% | 5% |
| | Lesotho | 2009 | 8% | 6% | 42% | 7% | 13% | 13% | 4% | 7% |
| | Namibia | 1992 | 4% | 5% | 47% | 4% | 7% | 21% | 2% | 9% |
| | Namibia | 2000 | 3% | 8% | 49% | 5% | 8% | 17% | 3% | 7% |
| | Namibia | 2006 | 7% | 10% | 47% | 6% | 8% | 16% | 1% | 6% |
| | SouthAfrica | 1998 | 7% | 17% | 35% | 6% | 17% | 14% | 1% | 5% |
| | Swaziland | 2006 | 9% | 8% | 50% | 6% | 9% | 15% | 2% | 3% |
| | Zimbabwe | 1994 | 6% | 7% | 57% | 6% | 8% | 11% | 2% | 4% |
| | Zimbabwe | 1999 | 8% | 11% | 52% | 7% | 10% | 8% | 2% | 4% |
| | Zimbabwe | 2005 | 6% | 6% | 53% | 10% | 8% | 11% | 2% | 4% |

Source: DHS data

Table 7. Percentage of elderly men and women living with 0-14 year-olds, with and without prime-age adults

| Region | Country | Year | Age 60-69 | | | | Age 70-79 | | | | Age 80+ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Living with 0-14 year-olds | | Living with 0-14 year-olds but no 20-59 year-olds | | Living with 0-14 year-olds | | Living with 0-14 year-olds but no 20-59 year-olds | | Living with 0-14 year-olds | | Living with 0-14 year-olds but no 20-59 year-olds | |
| | | | M | F | M | F | M | F | M | F | M | F | M | F |
| Eastern | mean | | 69.9% | 68.0% | 7.5% | 22.3% | 63.6% | 63.8% | 14.1% | 20.0% | 58.9% | 61.2% | 14.6% | 16.3% |
| | Kenya | 1989 | 70.5% | 65.1% | 4.9% | 14.8% | 64.3% | 60.0% | 8.6% | 12.2% | 60.3% | 59.2% | 8.6% | 9.2% |
| | Kenya | 1999 | 67.1% | 63.0% | 5.2% | 16.5% | 62.2% | 59.6% | 9.8% | 14.9% | 56.2% | 54.4% | 9.0% | 10.1% |
| | Malawi | 1987 | 67.8% | 70.4% | 10.0% | 30.0% | 61.3% | 66.8% | 21.0% | 25.2% | 55.5% | 65.3% | 20.6% | 22.6% |
| | Malawi | 1998 | 67.3% | 67.4% | 9.3% | 28.2% | 59.3% | 63.9% | 19.2% | 26.1% | 53.8% | 60.9% | 20.1% | 21.9% |
| | Malawi | 2008 | 68.1% | 64.7% | 9.5% | 27.4% | 59.3% | 58.7% | 19.8% | 22.9% | 53.0% | 55.9% | 19.7% | 18.5% |
| | Rwanda | 1991 | 77.7% | 69.0% | 9.6% | 24.0% | 69.1% | 61.7% | 15.5% | 26.0% | 61.5% | 55.8% | 17.4% | 23.2% |
| | Rwanda | 2002 | 70.1% | 68.0% | 9.7% | 24.7% | 65.3% | 62.6% | 15.8% | 27.0% | 61.4% | 57.8% | 16.6% | 22.3% |
| | Tanzania | 1988 | 72.9% | 72.3% | 5.3% | 16.6% | 68.1% | 70.0% | 10.5% | 13.5% | 64.6% | 69.7% | 12.2% | 12.1% |
| | Tanzania | 2002 | 70.2% | 69.7% | 5.4% | 18.1% | 65.5% | 68.4% | 10.7% | 14.6% | 61.8% | 67.0% | 11.8% | 11.6% |
| | Uganda | 1991 | 67.6% | 69.1% | 6.2% | 19.2% | 62.7% | 65.3% | 10.3% | 16.3% | 58.1% | 63.0% | 11.9% | 12.8% |
| | Uganda | 2002 | 69.6% | 69.1% | 7.8% | 25.6% | 62.7% | 64.9% | 13.6% | 21.6% | 61.3% | 64.0% | 13.2% | 14.8% |
| Western | mean | | 80.8% | 79.8% | 2.5% | 7.7% | 75.4% | 80.7% | 4.8% | 6.2% | 72.3% | 81.3% | 5.6% | 4.9% |
| | Ghana | 2000 | 74.5% | 77.4% | 5.9% | 13.1% | 74.4% | 76.3% | 8.2% | 12.2% | 79.6% | 77.6% | 7.3% | 8.9% |
| | Guinea | 1983 | 68.3% | 67.7% | 1.9% | 7.0% | 62.0% | 69.5% | 3.8% | 5.2% | 58.1% | 71.1% | 4.4% | 2.9% |
| | Guinea | 1996 | 85.4% | 82.4% | 2.2% | 7.9% | 78.6% | 83.3% | 4.0% | 5.6% | 75.9% | 83.8% | 4.5% | 3.6% |
| | Mali | 1987 | 76.9% | 71.7% | 3.1% | 8.7% | 63.7% | 73.7% | 6.5% | 6.3% | 57.1% | 75.8% | 8.0% | 4.6% |
| | Mali | 1998 | 78.4% | 71.5% | 2.5% | 7.9% | 64.8% | 75.2% | 5.8% | 5.6% | 55.1% | 78.1% | 8.0% | 3.9% |
| | Senegal | 1988 | 90.3% | 90.8% | 1.1% | 3.5% | 88.7% | 90.9% | 2.6% | 2.7% | 85.9% | 89.3% | 3.8% | 3.8% |
| | Senegal | 2002 | 90.9% | 91.4% | 0.7% | 2.1% | 90.8% | 92.0% | 1.4% | 1.7% | 89.1% | 91.2% | 1.5% | 1.0% |
| | SierraLeone | 2004 | 81.5% | 85.8% | 2.9% | 11.6% | 80.6% | 84.8% | 5.8% | 10.8% | 77.6% | 83.8% | 7.5% | 10.3% |
| Southern | mean | | 47.8% | 59.0% | 4.4% | 9.9% | 48.2% | 56.2% | 6.2% | 8.7% | 47.5% | 52.7% | 6.3% | 6.6% |
| | SouthAfrica | 1996 | 49.2% | 60.6% | 4.6% | 10.1% | 49.9% | 55.9% | 6.5% | 8.3% | 47.4% | 49.4% | 6.2% | 6.4% |
| | SouthAfrica | 2001 | 48.8% | 60.0% | 4.3% | 9.9% | 48.7% | 57.0% | 6.1% | 8.7% | 49.0% | 53.6% | 6.2% | 6.5% |
| | SouthAfrica | 2007 | 45.4% | 56.5% | 4.3% | 9.8% | 46.0% | 55.7% | 6.0% | 9.0% | 46.1% | 55.1% | 6.5% | 6.9% |
| Others | Sudan | 2008 | 69.3% | 62.8% | 2.0% | 8.1% | 63.2% | 63.2% | 5.1% | 8.6% | 61.6% | 62.7% | 6.3% | 7.8% |

Source: Census data via IPUMS-International

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**Table 8. Living arrangements of persons aged 60 and over in Africa DHS surveys**

| Region | Country | Year | Number age 60+ in DHS | Mean household size | Percent living with | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Alone | 0-14 year-old | 20-59-year-old | 0-14 but not 20-59 |
| **Eastern** | mean | | | **5.1** | **8.8** | **67.6** | **65.9** | **15.3** |
| | Comoros | 1996 | 1,092 | 6.9 | 1.5 | 77.8 | 86.4 | 6.8 |
| | Ethiopia | 2000 | 3,778 | 5.1 | 3.8 | 75.1 | 76.1 | 13.6 |
| | Ethiopia | 2005 | 3,956 | 5.0 | 5.1 | 75.2 | 74.7 | 14.0 |
| | Kenya | 1993 | 2,352 | 4.9 | 13.1 | 60.6 | 61.9 | 12.9 |
| | Kenya | 1998 | 2,176 | 4.1 | 16.2 | 53.2 | 57.2 | 12.5 |
| | Kenya | 2003 | 1,914 | 4.6 | 12.5 | 58.3 | 62.8 | 11.7 |
| | Kenya | 2008 | 2,348 | 4.5 | 10.6 | 58.1 | 61.2 | 15.6 |
| | Madagascar | 1992 | 1,732 | 5.7 | 6.2 | 71.0 | 72.5 | 12.9 |
| | Madagascar | 1997 | 1,849 | 5.2 | 7.5 | 67.9 | 70.2 | 13.8 |
| | Madagascar | 2003 | 1,936 | 4.8 | 9.9 | 66.4 | 66.4 | 14.4 |
| | Madagascar | 2008 | 3,992 | 4.7 | 10.0 | 63.5 | 65.4 | 14.4 |
| | Malawi | 1992 | 1,401 | 4.4 | 9.0 | 64.5 | 58.5 | 19.2 |
| | Malawi | 2000 | 3,265 | 4.5 | 10.6 | 65.9 | 56.5 | 20.8 |
| | Malawi | 2004 | 3,427 | 4.2 | 10.8 | 66.1 | 49.8 | 26.2 |
| | Mozambique | 1997 | 2,615 | 5.0 | 12.7 | 61.6 | 67.3 | 10.7 |
| | Mozambique | 2003 | 3,413 | 4.8 | 10.2 | 63.4 | 63.5 | 13.6 |
| | Rwanda | 1992 | 1,789 | 5.0 | 3.6 | 73.4 | 66.8 | 19.6 |
| | Rwanda | 2000 | 2,084 | 4.3 | 6.2 | 70.1 | 56.6 | 26.6 |
| | Rwanda | 2005 | 2,170 | 4.2 | 7.6 | 67.6 | 62.8 | 21.7 |
| | Tanzania | 1991 | 2,951 | 6.5 | 6.0 | 72.2 | 76.8 | 8.8 |
| | Tanzania | 1996 | 2,644 | 5.5 | 7.9 | 67.7 | 71.6 | 10.2 |
| | Tanzania | 1999 | 1,135 | 6.2 | 6.9 | 74.2 | 75.4 | 9.6 |
| | Tanzania | 2004 | 3,032 | 5.9 | 8.1 | 69.1 | 72.1 | 11.0 |
| | Uganda | 1995 | 1,683 | 5.1 | 11.1 | 69.5 | 59.5 | 20.9 |
| | Uganda | 2000 | 1,612 | 4.9 | 12.3 | 67.2 | 55.9 | 21.1 |
| | Uganda | 2006 | 2,102 | 5.3 | 11.7 | 72.4 | 60.1 | 21.0 |
| | Zambia | 1992 | 1,604 | 5.9 | 6.7 | 67.8 | 71.8 | 9.2 |
| | Zambia | 1996 | 1,936 | 5.6 | 7.5 | 70.4 | 70.6 | 13.3 |
| | Zambia | 2001 | 1,861 | 5.4 | 8.0 | 70.6 | 67.8 | 14.0 |
| | Zambia | 2007 | 1,756 | 4.7 | 10.3 | 66.1 | 59.2 | 19.8 |
| **Western** | mean | | | **7.1** | **6.8** | **75.7** | **78.4** | **8.7** |
| | Benin | 1996 | 1,687 | 7.0 | 8.2 | 75.5 | 75.2 | 9.9 |
| | Benin | 2001 | 1,829 | 5.9 | 9.7 | 72.4 | 72.4 | 10.5 |
| | Benin | 2006 | 4,838 | 5.6 | 11.2 | 68.4 | 69.9 | 11.3 |
| | BurkinaFaso | 1998 | 1,879 | 8.1 | 2.3 | 83.8 | 84.4 | 6.7 |
| | BurkinaFaso | 2003 | 3,720 | 8.2 | 3.9 | 78.5 | 82.3 | 7.3 |

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# Table 8. Living arrangements of persons aged 60 and over in Africa DHS surveys (continued)

| Region | Country | Year | Number age 60+ in DHS | Mean household size | Percent living with | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Alone | 0-14 year-old | 20-59- year-old | 0-14 but not 20-59 |
| | CotedIvoire | 1994 | 1,726 | 10.0 | 5.0 | 83.5 | 87.8 | 3.6 |
| | CotedIvoire | 1998 | 540 | 10.6 | 3.6 | 83.7 | 88.1 | 4.3 |
| | Ghana | 1993 | 1,282 | 4.2 | 22.5 | 59.4 | 52.4 | 18.4 |
| | Ghana | 1998 | 1,585 | 4.2 | 20.8 | 59.3 | 55.6 | 16.0 |
| | Ghana | 2003 | 1,947 | 4.8 | 14.9 | 65.1 | 64.2 | 13.4 |
| | Ghana | 2008 | 3,477 | 4.3 | 14.4 | 55.7 | 62.1 | 12.5 |
| | Guinea | 1999 | 2,157 | 8.0 | 2.2 | 86.2 | 88.6 | 6.1 |
| | Guinea | 2005 | 2,735 | 7.3 | 3.1 | 82.4 | 84.6 | 7.3 |
| | Liberia | 2007 | 1,638 | 5.9 | 5.2 | 81.1 | 80.5 | 10.4 |
| | Mali | 1995 | 2,859 | 6.0 | 4.7 | 68.6 | 76.6 | 7.9 |
| | Mali | 2001 | 3,839 | 5.4 | 6.6 | 64.1 | 71.2 | 9.2 |
| | Mali | 2006 | 4,255 | 6.2 | 4.0 | 71.3 | 77.5 | 8.3 |
| | Niger | 1992 | 1,809 | 8.2 | 3.6 | 85.6 | 84.1 | 8.0 |
| | Niger | 1998 | 1,882 | 7.2 | 3.3 | 83.8 | 80.4 | 11.7 |
| | Niger | 2006 | 2,659 | 7.1 | 2.7 | 84.6 | 82.5 | 11.0 |
| | Nigeria | 1990 | 3,324 | 6.7 | 7.0 | 70.4 | 78.6 | 8.4 |
| | Nigeria | 1999 | 2,139 | 6.0 | 6.3 | 67.6 | 78.7 | 7.7 |
| | Nigeria | 2003 | 2,399 | 6.1 | 7.4 | 66.4 | 78.7 | 6.4 |
| | Nigeria | 2008 | 10,103 | 4.9 | 11.6 | 58.4 | 68.8 | 9.6 |
| | Senegal | 1992 | 2,085 | 11.4 | 1.2 | 91.6 | 94.1 | 2.9 |
| | Senegal | 1997 | 3,121 | 11.7 | 1.2 | 93.0 | 95.3 | 2.6 |
| | Senegal | 2005 | 4,573 | 12.1 | 1.1 | 92.3 | 95.7 | 1.8 |
| | SierraLeone | 2008 | 3,449 | 7.0 | 1.4 | 87.0 | 86.7 | 8.9 |
| | Togo | 1998 | 2,739 | 7.1 | 7.4 | 76.6 | 76.8 | 9.9 |
| **Central** | mean | | | **5.9** | **11.3** | **64.8** | **71.2** | **8.4** |
| | Central African Republic | 1994 | 1,351 | 5.7 | 11.0 | 61.5 | 68.3 | 10.0 |
| | Cameroon | 1991 | 1,011 | 6.9 | 9.6 | 67.8 | 77.0 | 7.2 |
| | Cameroon | 1998 | 1,674 | 7.0 | 7.4 | 71.6 | 79.1 | 6.7 |
| | Cameroon | 2004 | 3,160 | 6.0 | 10.9 | 67.8 | 73.1 | 8.4 |
| | Chad | 1996 | 1,774 | 6.0 | 10.5 | 70.7 | 73.9 | 8.9 |
| | Chad | 2004 | 1,313 | 6.1 | 7.0 | 73.6 | 74.2 | 10.1 |
| | Congo | 2005 | 1,476 | 6.6 | 7.2 | 72.3 | 79.8 | 5.4 |
| | Democratic Rep. of Congo | 2007 | 2,115 | 5.8 | 8.8 | 67.6 | 75.9 | 8.5 |
| | Gabon | 2000 | 3,103 | 6.1 | 9.9 | 54.6 | 67.9 | 5.3 |
| | SaoTomePrincipe | 2008 | 1,016 | 3.2 | 31.2 | 40.5 | 43.0 | 13.2 |
| **Southern** | mean | | | **6.2** | **6.1** | **73.2** | **73.8** | **13.0** |
| | Lesotho | 2004 | 3,529 | 5.0 | 9.1 | 68.1 | 70.0 | 14.5 |
| | Lesotho | 2009 | 3,841 | 5.2 | 8.0 | 68.0 | 70.7 | 14.6 |
| | Namibia | 1992 | 2,262 | 8.1 | 3.6 | 77.9 | 79.2 | 10.0 |
| | Namibia | 2000 | 2,339 | 6.6 | 3.5 | 78.6 | 74.3 | 15.0 |
| | Namibia | 2006 | 3,037 | 6.3 | 6.5 | 73.5 | 74.7 | 11.2 |

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**Table 8. Living arrangements of persons aged 60 and over in Africa DHS surveys (continued)**

| | | | | | | Percent living with | | |
|---|---|---|---|---|---|---|---|---|
| Region | Country | Year | Number age 60+ in DHS | Mean household size | Alone | 0-14 year-old | 20-59-year-old | 0-14 but not 20-59 |
| | SouthAfrica | 1998 | 4,821 | 4.9 | 7.9 | 62.0 | 67.5 | 12.8 |
| | Swaziland | 2006 | 1,345 | 6.5 | 7.0 | 77.8 | 74.2 | 13.7 |
| | Zimbabwe | 1994 | 1,881 | 6.1 | 5.3 | 74.5 | 73.8 | 12.3 |
| | Zimbabwe | 1999 | 1,900 | 5.2 | 8.3 | 69.9 | 65.3 | 15.7 |
| | Zimbabwe | 2005 | 2,729 | 5.3 | 6.4 | 77.5 | 66.9 | 20.7 |

**Table 9. Characteristics of Elderly Women Living in Skip-Generation Households**

| region | country | year | disability | t-statistic | rural | t-statistic | water | t-statistic | electricity | t-statistic | years of schooling | t-statistic | children ever born | t-statistic | N | R-squared | mean skip-gen | mean disability |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastern | Kenya[1] | 1989 | -0.012 | (4.98)** | 0.051 | (4.45)** |  |  | -0.089 | (5.99)** | 0.002 | (-1.02) | 0.008 | (12.65)** | 24161 | 0.03 | 0.21 | 0.18 |
|  | Kenya[1] | 1999 | -0.054 | (7.44)** | 0.027 | (4.01)** |  |  | -0.093 | (10.89)** | 0.001 | (-1.18) | 0.007 | (11.56)** | 35718 | 0.02 | 0.22 | 0.07 |
|  | Malawi | 1987 |  |  | 0.047 | (2.90)** | -0.014 | (-1.74) |  |  | -0.004 | (-1.46) | 0.014 | (16.86)** | 24457 | 0.02 | 0.37 |  |
|  | Malawi | 1998 |  |  | 0.076 | (5.58)** | -0.012 | (-1.31) | -0.146 | (6.64)** | -0.004 | (2.97)** | 0.012 | (16.41)** | 29142 | 0.02 | 0.37 |  |
|  | Malawi | 2008 | -0.064 | (10.17)** | 0.044 | (3.52)** | -0.01 | (-1.1) | -0.108 | (6.51)** | -0.009 | (9.75)** | 0.009 | (12.26)** | 36944 | 0.03 | 0.33 | 0.17 |
|  | Rwanda | 1991 |  |  |  |  | -0.02 | (2.02)* | -0.178 | (4.61)** |  |  | 0.008 | (7.20)** | 18701 | 0.01 | 0.37 |  |
|  | Rwanda | 2002 | 0.01 | (-1.14) | 0.07 | (6.16)** | 0.001 | (-0.09) | -0.139 | (6.07)** | -0.01 | (3.97)** | 0.007 | (5.89)** | 19243 | 0.01 | 0.38 | 0.18 |
|  | Tanzania[1] | 1988 | -0.074 | (15.10)** |  |  | 0.002 | (-0.38) | -0.087 | (11.26)** | 0.003 | (-1.93) | 0.006 | (15.96)** | 66849 | 0.02 | 0.22 | 0.15 |
|  | Tanzania | 2002 | -0.055 | (11.70)** | 0.04 | (14.87)** |  |  | -0.083 | (18.05)** | 0.004 | (5.57)** | 0.005 | (17.36)** | 113735 | 0.02 | 0.22 | 0.06 |
|  | Uganda | 1991 | -0.07 | (7.09)** | -0.012 | (-1.11) | -0.15 | (5.33)** | -0.042 | (2.25)* | 0.019 | (10.68)** | 0.006 | (12.24)** | 38072 | 0.02 | 0.25 | 0.04 |
|  | Uganda | 2002 | -0.017 | (3.47)** | 0.033 | (4.21)** |  |  | -0.123 | (11.46)** | 0.008 | (9.74)** |  |  | 57378 | 0.02 | 0.31 | 0.17 |
| Western | Ghana[1] | 2000 | -0.003 | (-0.25) | 0.008 | (2.11)* | -0.027 | (5.63)** | -0.011 | (2.97)** | -0.001 | (4.43)** | 0.001 | (-1.24) | 68555 | 0.01 | 0.17 | 0.02 |
|  | Guinea[1] | 1983 | -0.016 | (5.41)** | -0.031 | (3.16)** | -0.009 | (-0.86) | -0.034 | (2.46)* | -0.003 | (-0.68) |  |  | 15332 | 0.01 | 0.09 | 0.18 |
|  | Guinea | 1996 | -0.005 | (-0.68) | -0.007 | (-0.97) | -0.009 | (-0.85) | -0.048 | (4.94)** | 0.002 | (-0.68) | 0.002 | (2.54)* | 21770 | 0.01 | 0.09 | 0.08 |
|  | Mali | 1987 | -0.011 | (-1.74) |  |  |  |  | -0.042 | (4.10)** |  |  | 0.003 | (4.42)** | 20919 | 0.02 | 0.10 | 0.09 |
|  | Mali | 1998 | -0.001 | (-0.05) | 0.004 | (-0.78) |  |  | -0.06 | (8.43)** | 0.001 | (2.79)** | 0.003 | (5.00)** | 24154 | 0.02 | 0.11 | 0.04 |
|  | Senegal | 1988 | -0.017 | (3.08)** |  |  | -0.01 | (1.96)* | -0.016 | (3.64)** | 0 | (-0.14) |  |  | 16618 | 0.01 | 0.05 | 0.07 |
|  | Senegal | 2002 | 0.005 | (-0.84) | -0.016 | (4.28)** | -0.009 | (2.74)** | -0.028 | (7.35)** | 0 | (-0.49) | 0 | (-0.03) | 22025 | 0.01 | 0.03 | 0.06 |
|  | SierraLeone | 2004 | -0.026 | (2.86)** | 0.013 | (-1.85) | -0.02 | (2.58)** | -0.032 | (2.40)* | 0 | (-0.21) | 0.004 | (4.78)** | 15713 | 0.01 | 0.16 | 0.10 |
| Southern | SouthAfrica | 1996 | 0.013 | (5.19)** | 0.096 | (35.82)** | -0.029 | (11.46)** | -0.077 | (27.99)** | -0.002 | (15.87)** | 0.003 | (11.42)** | 135549 | 0.07 | 0.15 | 0.20 |
|  | SouthAfrica | 2001 | 0.001 | (-0.38) | 0.102 | (47.37)** | -0.021 | (11.01)** | -0.045 | (18.08)** | -0.006 | (30.52)** |  |  | 168184 | 0.06 | 0.15 | 0.16 |
|  | SouthAfrica | 2007 | -0.014 | (2.46)* | 0.081 | (17.76)** | -0.052 | (9.91)** | -0.036 | (6.72)** | 0 | (-0.77) |  |  | 45662 | 0.04 | 0.15 | 0.08 |
| Others | Sudan | 2008 | -0.034 | (14.90)** | 0.038 | (16.34)** |  |  | -0.122 | (58.54)** |  |  |  |  | 115194 | 0.04 | 0.14 | 0.28 |

Notes: additional controls include age, age squared, and living with spouse

[1] disability indicator here refers to employment disability rather than general disability

**Table 10. Characteristics of Elderly Men Living in Skip-Generation Households**

| region | country | year | disability | t-statistic | rural | t-statistic | water | t-statistic | electricity | t-statistic | years of schooling | t-statistic | N | R-squared | mean skip-gen | mean disability |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastern | Kenya[1] | 1989 | -0.007 | (3.44)** | 0.049 | (6.50)** | | | -0.036 | (3.59)** | 0 | (-0.31) | 24353 | 0.02 | 0.11 | 0.13 |
| | Kenya[1] | 1999 | -0.023 | (2.58)** | 0.024 | (4.55)** | | | -0.034 | (5.05)** | 0 | (-0.22) | 31056 | 0.01 | 0.11 | 0.05 |
| | Malawi | 1987 | | | 0.017 | (-1.48) | -0.016 | (2.29)* | | | -0.004 | (3.96)** | 21828 | 0.05 | 0.18 | |
| | Malawi | 1998 | | | 0.014 | (-1.4) | -0.001 | (-0.14) | -0.025 | (-1.48) | -0.003 | (4.47)** | 25706 | 0.05 | 0.19 | |
| | Malawi | 2008 | -0.021 | (3.42)** | 0.009 | (-0.91) | -0.02 | (2.62)** | -0.016 | (-1.41) | -0.004 | (7.30)** | 30224 | 0.06 | 0.18 | 0.16 |
| | Rwanda | 1991 | | | | | -0.01 | (-1.13) | -0.089 | (2.64)** | | | 17128 | 0.02 | 0.20 | |
| | Rwanda | 2002 | -0.003 | (-0.38) | 0.05 | (4.38)** | -0.009 | (-1.03) | -0.084 | (3.79)** | -0.001 | (-0.93) | 13604 | 0.01 | 0.21 | 0.19 |
| | Tanzania[1] | 1988 | -0.016 | (4.00)** | | | 0 | (0) | -0.037 | (5.66)** | 0.001 | (2.54)* | 69366 | 0.02 | 0.12 | 0.09 |
| | Tanzania | 2002 | -0.021 | (5.34)** | 0.023 | (10.29)** | | | -0.022 | (5.24)** | 0.001 | (3.74)** | 101216 | 0.02 | 0.12 | 0.07 |
| | Uganda | 1991 | 0 | (-0.02) | 0.029 | (3.68)** | -0.053 | (2.16)* | 0.032 | (-1.96) | 0.001 | (-1.68) | 37229 | 0.02 | 0.12 | 0.05 |
| | Uganda | 2002 | -0.004 | (-1.03) | 0.025 | (3.81)** | | | -0.005 | (-0.5) | 0.001 | (-1.78) | 58533 | 0.02 | 0.14 | 0.17 |
| Western | Ghana[1] | 2000 | 0.011 | (-1.18) | 0.007 | (2.26)* | -0.016 | (4.16)** | -0.012 | (3.58)** | 0 | (-0.7) | 67037 | 0.01 | 0.10 | 0.02 |
| | Guinea[1] | 1983 | -0.007 | (-1.51) | 0.001 | (-0.21) | 0.007 | (-0.82) | -0.01 | (-1.06) | -0.002 | (-1.13) | 15187 | 0.01 | 0.05 | 0.13 |
| | Guinea | 1996 | 0.008 | (-1.46) | -0.004 | (-0.83) | -0.005 | (-0.75) | -0.018 | (2.73)** | 0 | (-0.52) | 23002 | 0.01 | 0.05 | 0.08 |
| | Mali | 1987 | -0.008 | (-1.78) | | | | | -0.029 | (3.45)** | | | 23226 | 0.02 | 0.06 | 0.12 |
| | Mali | 1998 | -0.001 | (-0.1) | 0.01 | (2.62)** | | | -0.038 | (6.80)** | 0 | (2.76)** | 27961 | 0.02 | 0.07 | 0.06 |
| | Senegal | 1988 | -0.004 | (-0.78) | | | -0.007 | (-1.74) | -0.004 | (-1.1) | 0 | (-1.72) | 18141 | 0.01 | 0.03 | 0.06 |
| | Senegal | 2002 | 0.006 | (-1.6) | -0.004 | (-1.39) | -0.01 | (4.49)** | -0.01 | (4.28)** | 0.001 | (2.22)* | 26846 | 0.01 | 0.02 | 0.07 |
| | SierraLeone | 2004 | -0.007 | (-1.02) | -0.002 | (-0.31) | -0.012 | (2.02)* | 0.001 | (-0.09) | 0 | (-1.46) | 14520 | 0.02 | 0.08 | 0.11 |
| Southern | SouthAfrica | 1996 | 0.013 | (4.99)** | 0.056 | (21.98)** | -0.023 | (9.23)** | -0.043 | (16.22)** | -0.001 | (15.22)** | 90998 | 0.05 | 0.09 | 0.18 |
| | SouthAfrica | 2001 | 0.009 | (3.68)** | 0.06 | (27.27)** | -0.017 | (8.43)** | -0.018 | (6.89)** | -0.004 | (21.60)** | 101913 | 0.04 | 0.08 | 0.16 |
| | SouthAfrica | 2007 | 0.008 | (-1.63) | 0.047 | (11.37)** | -0.027 | (5.43)** | -0.021 | (3.98)** | -0.001 | (3.65)** | 28775 | 0.03 | 0.08 | 0.12 |
| Others | Sudan | 2008 | -0.017 | (10.98)** | 0.018 | (11.32)** | | | -0.053 | (36.76)** | | | 148393 | 0.03 | 0.07 | 0.27 |

Notes: additional controls include age, age squared, and living with spouse

[1] disability indicator here refers to employment disability rather than general disability

**Figure 1. Scatter plot of AIDS death rate and disability coefficient for elderly women**
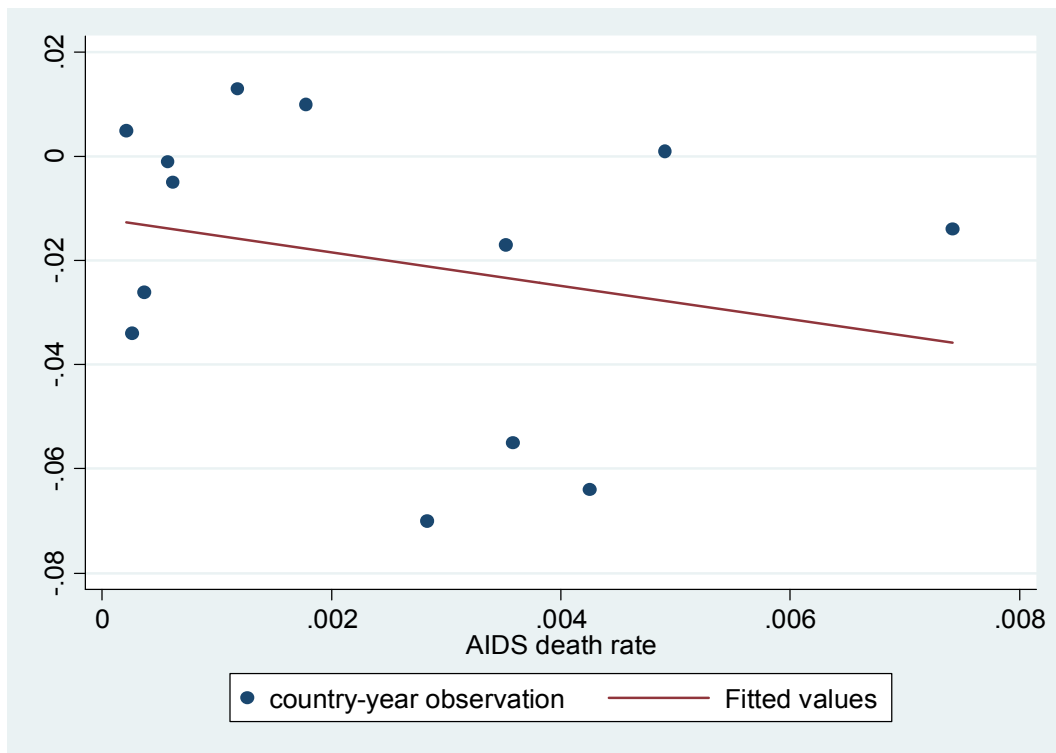


**Figure 2. Scatter plot of AIDS death rate and disability coefficients for elderly men**