Background

Adult mortality underscores the significance of the demographic transition, especially in developing countries. It is another indicator of the differences within and between the developing and developed countries (Graham, Brass, & Snow, 1989). The inadequate empirical data about the levels of mortality experienced by adults in the region has sustained this opinion, especially with the focus on maternal and child health, which has the highest incidence of disease and subsequent mortality (Obermeyer et al., 2010). The statistics are rapidly changing. The high mortality of adults in sub-Saharan Africa (SSA) is now being recognized more widely, and a response has begun to emerge, particularly with regard to the impact of the AIDS epidemic and high mortality due to malaria (Bradshaw & Timaeus, 2006).

The levels of adult mortality can be described as the probability of dying between age 15 and 60 years. There has been an ample decline from a global average of 354/1000 in 1955 to 207/1000 in 2002 (Adebowale & Adedini, 2014), albeit this rate has stalled especially in developing countries. Nonetheless, variations exist in the level of adult mortality among different countries in SSA. For instance, the adult mortality rate in South Africa has been shown to be 43%, compared to 27% in Kenya and in 37% Nigeria. Research has documented that this may be as a result of the HIV/AIDS pandemic which has mostly affected the Southern part of Africa.

Adequately functioning systems that produce statistics on adult mortality on a regular basis exist in only about one-third of all countries of the world (Rao, Lopez, & Hemed, 2006). In Sub-Saharan Africa, very little information has been available on adult mortality, let alone data from civil registration systems, demographic surveillance systems (DSS), census and demographic and health surveys.

Civil registrations have been described as an administrative system to document major events and their characteristics (particularly, births and deaths). Some of the uses of the civil registration are to avail persons with important documentation required to establish legal identity and family relationships, make claims of nationality, exercise civil and political rights, access services, and participate in modern societies (AbouZahr et al., 2015). In addition, records of vital events from civil registration are a key source of vital statistics for fertility and mortality. A working vital registration system can help furnish governments with reliable and up-to-date

population and mortality statistics, including causes of death, which enable them to plan, deliver, and monitor effectively health and social development programmes and to track progress towards international commitments such as the Millennium Development Goals (AbouZahr et al., 2015). Vital registration systems cover only a small fraction of deaths in most parts of sub- Saharan Africa. With the notable exceptions of South Africa and Zimbabwe, often less than 25 % of deaths are recorded (Masquelier, Reniers, & Pison, 2014). As a result, adult death rates are routinely estimated based on extrapolations from child mortality rates and model life tables (Masquelier et al., 2014). However, it is important that empirical approaches be used to study adult mortality. This is because models could be imprecise as applied to specific settings due to input data and assumptions that tend to over generalize epidemiological conditions which are very unlikely to change in the short term (Ben-Shlomo & Kuh, 2002).

We chose adult mortality because of its broad importance to population health. Estimates of adult mortality help produce life expectancies from birth which are an important indicator of overall living conditions. There is paucity of data in the literature on levels and trends in adult mortality in sub-Saharan Africa. According to (Crimmins & Beltrán-Sánchez, 2011), there has been a decline in mortality rates of most developed countries since the mid-1800s. This can be attributed to improvements in infant and childhood mortality and an increasing survival among the older adult population (Vallin & Meslé, 2009). This report concentrates on estimating adult mortality rates in selected sub-Saharan African countries because available information on levels and trends in adult mortality in sub-Saharan Africa and on age patterns of mortality in the region remains narrow.

Data and Methods

The data in this study come from the Integrated Public Use Microdata Series International (IPUMS). Ten countries were purposefully selected from sub-Saharan Africa. The selection was based on availability of recently conducted census from the year 2000 that collected information on survivorship of parents as well as nuptiality; as such the adult mortality indexes estimates may not reflect the current or true situation in SSA. In addition, indirect methods of adult mortality estimation have been used and these utilise time location reference periods that date several years in the

past. The selected census rounds for the countries are: Cameroon (2005), Kenya (2009), Liberia (2008), Mali (2009), Sierra Leone (2004), South Africa (2001), South Sudan (2008), Sudan (2008), Tanzania (2002) and Uganda (2002). The focus on census data is due to availability, large capacity, and credibility of the collection procedures when compared to other sources.

Data were analysed using STATA 12 and excel software packages. STATA 12 was used for data quality assessment and management to produce raw data tables that were then exported to Microsoft Excel for analysis with orphanhood and widowhood methods of indirect estimation of adult mortality.

Preliminary Results

Figure 1: Probability of dying between ages 15 and 60 years by Sex, South Africa, Tanzania, Uganda, Kenya, Liberia and Sierra Leone

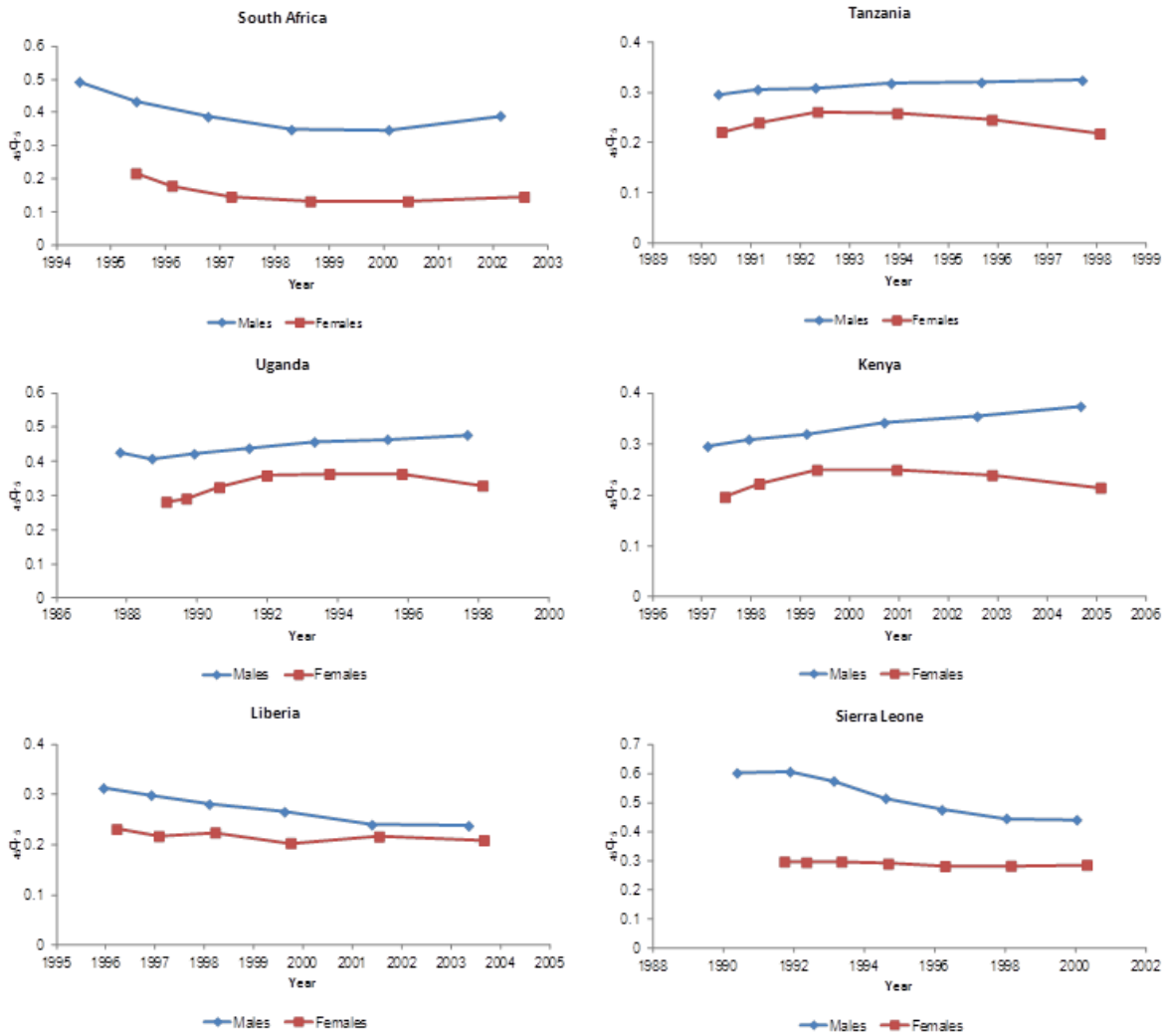

Figure 2: Probability of dying between ages 15 and 60 years by Sex, Sudan, South Sudan, Cameroon and Mali

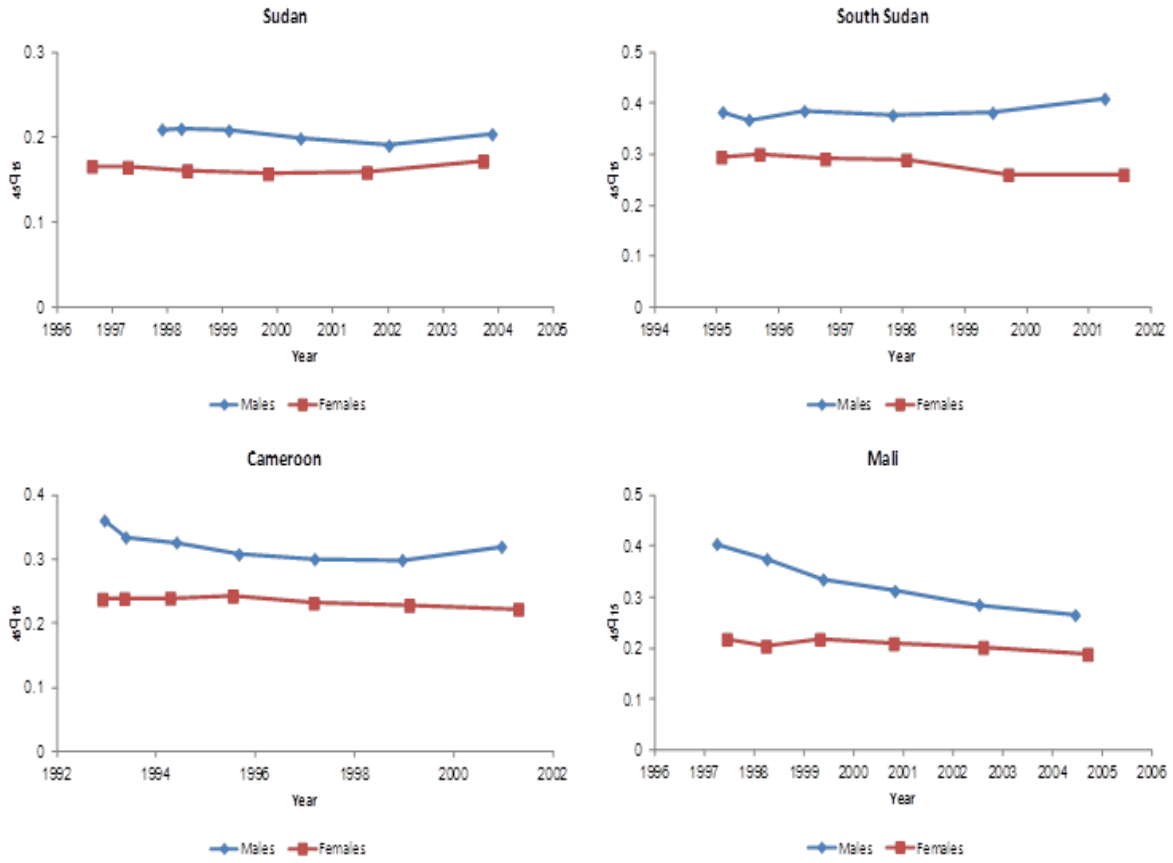

Figure 3: Probability of dying between ages 15 and 60 years by Sex, South Africa and Tanzania, Kenya, Uganda, Liberia and Sierra Leone

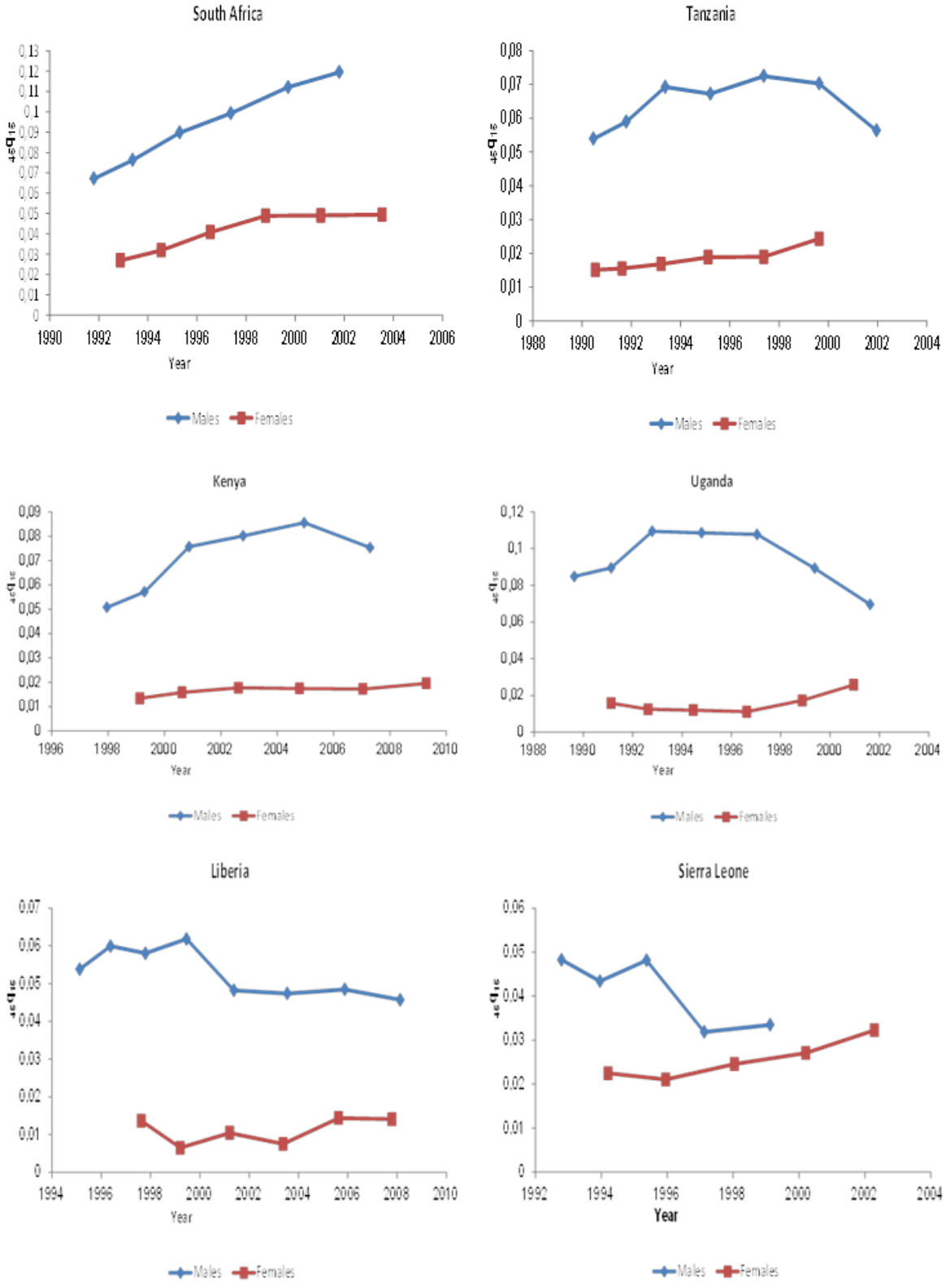

Figure 4: Probability of dying between ages 15 and 60 years by Sex, Cameroon and Mali