BIO-SOCIAL DETERMINANTS OF CHILD AND ADULT MORTALITY IN SOUTH AFRICA


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The HIV pandemic has led to large increases in child and adult mortality in select areas. While a mother's death raises the risk of dying for young children, little is known about the precise timing of this relationship, particularly before the mother dies. Studies in historical and developing countries also suggest that household members and socioeconomic status (SES) matter for child survival, but little work has been done examining these factors in HIV-endemic areas. Finally, there is little research indicating if and how household context affects adult mortality. This dissertation used data from the Agincourt health and socio-demographic surveillance system site in South Africa from 1994 – 2009 for children aged 0 – 5 years or persons aged 5 – 100 years. Discrete time event history analysis was used to estimate children's and adult's probability of dying by timing of maternal death, household members and SES. Results showed that children experience an increased risk of dying in the two months before and up to two months after their mother's death. Short pre- and post birth intervals, the number of other children, and the timing of another child death in the household also elevated mortality risk for children. Having older, related children and adults, and being in a relatively higher SES household protected children from dying. Adult mortality increased steadily over time, particularly after 2002 for ages 30 – 59. Deaths due to HIV/TB disproportionately affected adults under age 60, while non-communicable disease became prominent in those over age 60. Smaller households had the highest and lowest mortality risk. For larger households, an age-distribution skewed towards economically productive members had lower mortality risk than households with an age-distribution skewed towards older and younger ages. There was an inverse gradient between household SES and adult mortality - this pattern was clear for those dying due to HIV/TB. A less consistent inverse gradient emerged for adults dying due to other communicable and non-communicable diseases. Adult deaths due to injuries showed a different pattern, with those in the lowest and highest SES quintiles being at the highest mortality risk.