

# Unveiling the True Scale of Africa's Orphan Crisis: Age-Specific National Estimates

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**Background:** Mortality rates remain the highest in Africa with the continent facing compounding crises including epidemics, climate hazards and conflicts. Children are disproportionately affected by mortality through losing parents and caregivers; orphanhood can have lifelong severe consequences due to economic and social consequences of parental loss. We provide reliable orphanhood estimates by ages of children and condition (maternal, paternal or double orphan) in Africa at the national level. This has long been hampered by the lack of consistent estimates of female and male age-specific fertility rates.

**Methods:** We fit a Bayesian hierarchical model to country-level fertility data obtained from 135 Demographic and Health Surveys (DHS) and 36 Multiple Cluster Indicator Surveys (MICS) to produce age-specific female and male fertility estimates for all African countries for the period 1970-2022.

We use the modelled fertility estimates and mortality data from the United Nations World Population Prospects programme and the Joint United Nations Programme on HIV/AIDS to calculate the incidence of maternal and paternal orphans due to HIV/AIDS and all causes by the ages of children for the period 1987-2021. Incidence data were further used to produce orphanhood prevalence estimates by children ages for 2004-2021. Furthermore, we use these estimates to investigate how HIV/AIDS-associated orphanhood and COVID-19-associated orphanhood have contributed to the incidence and prevalence of all-cause orphanhood in Africa across countries and time periods.

**Results:** We found out that as of 2021, around 76.1 million children aged under 18 years were orphans (either maternal, paternal or double orphans) across Africa, with more than 5.8 million children being double orphans. This represents a substantial increase compared to the estimate of 61.3 million orphans in 2004.

Of those children who were orphans as of 2021, more than two thirds were paternal orphans (70.7% of all orphans) and 51.2 million were adolescents aged 10-17 (67.3% of all orphans). This implies that around 1 in every 10 children and 1 in every 5 adolescents were orphans in Africa as of 2021 (see Table 1 for regional estimates).

This ongoing orphan crisis will only be exacerbated by compound crises of war, climate change and infectious diseases. To highlight the impact of such crises on children, our results show that, by the end of December 2021, the COVID-19 pandemic had orphaned at least 2.22 million (95%CI: 1.67-2.83 million) children in Africa, among whom 79.9% were paternally orphaned and 55.2% were adolescents. This was over a period of just two years.

**Conclusions and Recommendations:** Orphanhood affects a substantial proportion of children in Africa, with at least one in five adolescents maternally or paternally bereaved. COVID-19 has further exacerbated parental loss, adding to high levels of HIV-orphanhood. It is essential to ensure that, alongside other children experiencing severe poverty and loss of caregivers, children and adolescents experiencing orphanhood from any cause receive effective services to reduce risks of economic and sexual exploitation, stigma, and HIV infection.

Table 1. Total number of orphans by region and age group in 2021

Region	Age group	Number of orphans
Africa	0-4	6,875,206
	5-9	18,027,465
	10-17	511,82,947
	<b>0-17</b>	<b>76,085,618</b>
Central Africa	0-4	1,200,689
	5-9	2,922,530
	10-17	7,438,190
	<b>0-17</b>	<b>11,561,409</b>
Eastern Africa	0-4	1,931,924
	5-9	5,261,508
	10-17	16,806,140
	<b>0-17</b>	<b>23,999,572</b>
Northern Africa	0-4	471,961
	5-9	1,355,743
	10-17	4,092,976

	<b>0-17</b>	<b>5,920,680</b>
Southern Africa	0-4	334,196
	5-9	918,717
	10-17	2,956,653
	<b>0-17</b>	<b>4,209,566</b>
Western Africa	0-4	29,36,435
	5-9	7,568,967
	10-17	19,888,988
	<b>0-17</b>	<b>30,394,391</b>