A Health Status Update on Women in African Countries:

Current Statistics, Critical Dilemmas and Key Correlations

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INTRODUCTION

This article provides a comprehensive and insightful overview of women's health on the African continent, bringing to light unique challenges, and key issues pertaining to the well-being of women in Africa. The issue of women's health remains of paramount importance for a number of key reasons. In view of this, it makes sense to engage in an in-depth perusal as a first step to analyzing pressing issues on women's health. To understand what is taking place with women's health in Africa, this paper looks at a number of key variables: population, age structure, median age, mother's mean age with their first born, maternal mortality, infant mortality, life expectancy, fertility rate, contraceptive rate, current health, physician density, hospital bed density, HIV rates for women, obesity rates for women and the percentage of underweight children per country. These variables are touted as critical to determining the status of women's health in society.

These key health variables play an important role in deciphering women's health and are analyzed using World Factbook data from 55 African countries from five African subregions: Northern Africa, West Africa, East Africa, Central Africa, and Southern Africa. The World Factbook provides basic intelligence data on the history, people, government, economy, energy, geography, environment, communications, transportation, military, terrorism and transnational issues for 266 world entities and countries. Overall, the goal is to construct a coherent aggregate and logical argument to understand women's health in that region of the world.

This is the first known comprehensive assessment of statistical data on the African continent and thus takes a critical step in analyzing what deficiencies exist in women's health. It harbors implications that extend beyond a mere statistical focus through a critical exploration of solid and relevant statistical data. The purpose of this paper is an important step in laying out what areas to focus on: finances, policy recommendations, and social and medical policies to alleviate or eradicate women's disadvantaged health position. An agenda that addresses these disparities can now be set forth with a vigorous and extensive analysis on women's health in Africa that derives a picture that paints women across various African countries in a precarious position. There are some disparities and some variations expected across different regions of Africa, in terms of the statistical data.

The prospective important findings from the analysis in this paper will set the stage for this rich data, which provides concrete evidence of exactly what is taking place and how this information compares across countries. The issue of women's health from a comprehensive perspective has long been considered an important issue but has never gotten due process. A logical explanation is that such an undertaking is too overwhelming and extensive, with 54 countries and five regions that are not easily or inexpensively covered. The reason for the disparity in women's health disparities across countries is based on economic, social, and political challenges and is parlayed into differences in the quality of healthcare received. Nelms et al (2006) spoke in their

article about healers that often bridge the gap between no health care and that received from formal settings.

This is a rare study that aims to provide a comprehensive analysis across all African countries regarding women's health. It represents the first main release of information in one location on certain key factors that are related to women's health in that region of the world. Yes, The focus of some studies on this topic has engaged in a discussion that has been monolithic in focus on a particular geographic area in Africa (Hyder et al, 2005; Pick et al, 1997) - these perspectives were undoubtedly important - but across Africa, encompassing all African countries has unequivocally never be done until now. The preceding discussion begs three main questions:

The present study will examine women's health across Africa and attest to the importance of a detailed discussion on the importance of women's health to a society's overall well-being. What does the projected future look like for women's health in Africa and indeed across the world? For sure, it is evident that future women's health includes women's reproductive rights and health (Hom, 2003; Coburn et al, 2015; Yaya et al, 2021), which remains a key component of what serves as an explanation for other aspects of their health (Mocumbi et al, 2012).

LITERATURE REVIEW AND STATISTICAL DATA

It is important to note two key focus in this section of the paper. First, it explores the many issues that are related to women's health on a national level. This will entail looking at variables such as infant mortality, maternal mortality,....it does capture the very essence of what is clearly a comprehensive picture or what encompasses the parameters of a sturdy health system and as such lays out a clearly defined path on what would need to be focused on to solve health deficiencies on a local, national, and international level. Second, it sorts out the key data that plays an important role in sorting out factors that promote a pattern of what are key health care variables to focus on when doing studies on women's health.

   (a) Infant Mortality

Infant mortality, its causes and its effects, has long been a source of concern for women's health in African countries (Devries, 1985). While other factors related to women's health have been dissected, most authors and researchers believe that infant mortality and the devastating statistics in parts of Africa lies at the heart of what constitutes a depravity in women's health and the health of their children. Infant mortality has been dissected from various angles and a myriad of legitimate causes have ben advanced for its very important status. Guyatt et al (2001) concluded that malaria and the lingering side effects has a negative impact on infant mortality. A more recent study by Heft-Neal et al (2018) found a robust relationship between the air quality in a region and infant mortality, finding a negative relationship, that is the higher the level of air

quality, the lower the infant mortality rates, which one could proclaim as an obvious and expected pattern. This result was also seen in a previous study by Kudamatsu et al (2012), where there was ample evidence as it relates to improved air quality and the positive impact it could have on decreased infant mortality. In a predictable fashion, Abrahams et al (2011) found that a better diet for mothers resulted in lower rates of infant mortality. Ester et al (2011) in a comprehensive study using data from WHO, World Bank, UNICEF and UNDP found important relationships with several factors. More specifically, the authors observed a direct and positive relationship with infant mortality rates and maternal mortality rate and an inverse relationship was observed with prenatal care coverage, births assisted by skilled health personnel, gross national income per capita, per capita government expenditure on health, social security expenditure, adult literacy rate, net primary school enrolment rate, population with access to safe drinking water (in urban and rural areas) and with population with access to basic sanitation in rural areas (Ester et al, 2011).

The top three countries with the highest infant mortality rates in Africa are as follow: Somalia (86.53/1,000), Central African Republic (82.97/1,000), and Equatorial Guinea (78.33/1,000). The top three countries with the lowest infant mortality rates in Africa are as follows: Tunisia (11.87/1,000), Libya (11.22/1,000), and Seychelles (10.6/1,000).

(b) Maternal Mortality

Early studies on maternal mortality rates in Africa have lamented the plight and long-term destruction of their high rates (Boerma, 1987). More recent authors have looked overall at the factors that determine the reasons for higher mortality rates (Alvarez et al, 2009; Bour et al, 2004). In the case of the former, Alvarez et al (2009) saw it as a human rights issue and a major global health challenge that needed rectifying through a consensus of two main factors - namely a strong health system and skilled delivery attendants. In the case of the latter, Bour et al (2004) found that births attended by skilled health personnel and life expectancy at birth strongly correlate with maternal mortality. Gross national product (GNP) per capita and health expenditure per capita also have strong association with maternal mortality and follows a line of argument on how intervening factors impact health care for women. A recent article presented an uplifting picture of maternal mortality rates in Africa, noting that the main reason for the decline in maternal deaths has been the success of the antiretroviral treatment programme for HIV-positive women, as well as a decline in deaths owing to obstetric hemorrhage (Moodley et al, 2018).

The top three countries with the highest maternal mortality rates in Africa are as follows: Sudan (1,150/100,000), South Sudan (1,150/100,000), and Chad (1,140/100,000). The top three countries with the lowest maternal mortality rates in Africa are as follows: Tunisia (42/100,000), Egypt (37/100,000), and Burundi (31/100,000).

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C) **Population and Age Structure**

Africa has been largely confirmed as the birth of the first human beings, the homosapiens, which has been widely credited and sorted out as the first human beings on earth (Holfelder et al, 2021). It is the continent with the greatest disparity in genetic diversity among humans, resulting in iterating population structures (Holfeder et al, 2021). In Africa, 90% of the population is concentrated within a mere 21% of the land surface, underscoring the spatial disparity. Furthermore, the average per-person travel time to settlements housing over 50,000 inhabitants stands at approximately 3.5 hours, with Central and East Africa exhibiting the most extensive and time consuming journeys. The analyses highlight large inequities in access, the isolation of many rural populations and the challenges that exist between countries and regions in providing access to services (Linard et al, 2012). The key to advancing the rural portions of Africa, which often have very sharp contrasts to urban areas is access to transportation and advanced infrastructure. These two factors are of paramount importance. Mellor (2014) reinforces this argument by emphasizing that rural areas in Africa remain a source of concern, especially as it relates to a healthy development of the overall population. The advancement in rural areas would cover key factions, namely: advanced educational opportunities for both males and females, poverty eradication, especially for women and children, access to adequate health services for women and children, and clean water and adequate housing. These factors are key to moving the disadvantaged portions of Africa across various countries in Africa. Studies have shown that the African population does not include a lot of migrants and is said to be less than 4% (Gambino et al, 2014). The population of African countries has been aging in the last decade (Pillay et al, 2013) mirroring what has been taking place on the global platform. In another longitudinal study by Nkalu et al (2019) results show that environmental hazards in terms of carbon dioxide (CO2) emission from solid fuel consumption reduce life expectancy (LEX) by 1 month and 3 weeks with a statistically significant result. Also, income, as proxied by GDP, extends LEX by 1 year 6 months with statistically insignificant result, while population growth (POPG) equally extends LEX by 5 years 5 months due to increase in human resource/manpower which enhances agricultural productivity in Africa.

The top three countries with the highest population rates in Africa are as follows: Nigeria (206,139,589), Ethiopia (114,963), and Egypt (102,334,404). The top three countries with the lowest population rates in Africa are as follows: Gambia (241,668), São Tomé & Principe (219,159), and Seychelles (98,347).

(d) **Life Expectancy**

A study by Djoumessi (2022) analyzed the impact of economic implications of malnutrition and are examined through the vicious cycle of Poverty-Malnutrition-Low productivity- further

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malnutrition•The results of the two-way fixed effect panel model demonstrate the impact of malnutrition on infant mortality, with mild or moderate malnutrition distinctly contributing to a reduction in the survival of infants. Conversely, the study reveals an association between severe malnutrition and an alarming increase in the mortality rates of children under the age of 5. Furthermore, this investigation delves into the complex relationship between malnutrition and life expectancy revealing a moderated effect on overall lifespan. Conducted across a sample of 36 African countries spanning from 2003 to 2018, this study provides insights into the implications of malnutrition on both infant mortality and life expectancy in the African context. The economic implications of malnutrition are examined through the vicious cycle of Poverty-Malnutrition-Low productivity- further malnutrition. It is hypothesized that malnutrition at infancy contributes to high mortality, and leads to lower labor productivity of adults through the reduction of life span, as more and more skilled labor leave sooner. The results of the two-way fixed effect panel demonstrate an association between mild or moderate malnutrition and a significant reduction in infant mortality. Whereas severe malnutrition leads to an increase in the death of children under 5 years. The results underscore a discernible impact of malnutrition on life expectancy. Also, the GDP growth significantly reduces the infant mortality rate but any increase in income per capita is not followed by the reduction of children's death. What is seen is that life expectancy has long been found to be positively related to health which is in turn positively related to income and gross domestic product in African countries (McCarthy et al, 2001).

The top three countries with the highest life expectancy rates in Africa are as follows: Burundi (78.38) Algeria (78.03), and Libya (77.18). The top three countries with the lowest life expectancy rates in Africa are as follows: Mozambique (57.1), Somalia (55.72), and Central Africa Republic (55.52).

(e) Fertility and Contraceptive Rates

Overall, Fertility rates in specific areas in Africa have been on the decline. Specifically, The total **fertility rate** (TFR) in the Middle East and North **Africa** has experienced a declining trend in recent years (Pourrezza et al, 2021). Teenage fertility rates in South Africa and Sub-Saharan Africa has also seen a decline (Moultrie et al, 2007). A number of factors have been said to contribute to low fertility rates including the usual suspects of improvements in sex education, increased educational levels among the female population, increased birth control usage, increased HIV rates which saw lower fertility rates among HIV infected women (Lewis et al, 2004; Ijaiya et al, 2009; Chola et al, 2015). A 2020 Family Planning Initiative Launched for 2012 at a London Summit aimed the double the number of contraceptives used across Sub-Saharan African. The results show a range of annual rates of change in modern contraceptive prevalence rates among women of reproductive age (15-49 years), with variations spanning from as low as 0.77 percentage points (95% CI -0·73 to 2·28) in Lagos, Nigeria, to 3·64 percentage

points (2·81 to 4·47) in Ghana, according to the quadratic model. Burkina Faso, Kinshasa (DR Congo), Kaduna (Nigeria), and Uganda emerged as noteworthy points, showcasing high rates of change (>1·4 percentage points) in modern contraceptive prevalence among women of reproductive age . Although contraceptive use was rising rapidly in Ethiopia during the pre-Summit period, our results suggested that the yearly growth rate stalled recently (0·92 percentage points, 95% CI -0·23 to 2·07) according to the linear model. The comprehensive meta-analysis revealed a substantial weighted average annual rate of change in modern contraceptive prevalence rates across all nine settings, standing at 1.92 percentage points (95% CI 1·14 to 2·70). Among married or cohabiting women, the annual rates of change were higher in most settings, and the overall weighted average was 2·25 percentage points (95% CI 1·37-3·13) (Ahmed et al, 2019).

The top three countries with the highest fertility rates in Africa are as follows: Niger (6.82), Angola (5.83),vand DR Congo (5.63). The top three countries with the lowest maternal fertility rates in Africa are as follows: Seychelles(1.82), Burundi (1.74), Mauritius (1.35). The top three countries with the highest contraceptive rates in Africa are as follows: Morocco (70.8%), Botswana (67.4%), and Zimbabwe (66.8%). The top three countries with the lowest contraceptive rates in Africa are as follows: Eritrea (8.4%), Chad (8.10%), Somalia (6.9%).

(f) Physician Density and HIV Rates

One key factor that contributes greatly to improvements in health is physician density, that is the number of physicians that are available to treat a certain number of people in the population. Having a shortage of physicians to provide proper healthcare for the population without being overwhelmed is key to advancing the healthcare system and the health of the population. Sub-Saharan has long faced and continue to face a significant shortage in healthcare workers (Conradie et al, 2018; Sawatsky et al, 2014). A shortage that persists in spite of strategies to combat this malady. This malady gets exacerbated when a crisis occurs, such as the ebola outbreak in recent years (McPake et al, 2019).

The HIV rates for African countries remains high and is a source of concern (Faria et al, 2019). These high rates are especially a source among women, children and young women (Karim et al, 2019; Ranjee et al, 2013). These high HIV rates are a source of concern, especially as the medical field pushes to reduce the rates of transmission from mothers to newborns (Goga et al, 2018). Changing the opinions of the high HIV rates in Africa is an abdurate process that will require solid and concrete plans to rectify and reverse the daunting HIV rates across African countries. High HIV rates have also shown to be positively correlated to other dangerous diseases (Mukadi et al, 2001. Undiagnosed cases of HIV rates in African countries also remain an issue (Johnson et al, 2015). The authors made a significant discovery, presenting a remarkable decline in the fraction of HIV-positive adults who remained undiagnosed, plummeting from over

80% in the early 2000s to a strikingly low 23.7% [95% confidence interval (95% CI) 23.1–24.3] in 2012. The proportion of undiagnosed cases in 2012 exhibited a substantial gender disparity, with men accounting for a considerably higher rate of 31.9% (95% CI 29.7–34.3) compared to women, whose undiagnosed proportion stood at 19.0%(95% CI 17.9–19.9). Projected probabilities of experiencing disease progression (CD4+ cell count <350 cells/μl) without diagnosis are more than 50% for most HIV-positive adults over the age of 40. The fraction of HIV-positive adults who are undiagnosed is projected to decline to 8.9% by 2020 if current targets (10 million tests per annum) are met (Johnson et al, 2015).

The top three countries with the highest physician density rates in Africa are as follows: Mauritius (2.6/1,000), Seychelles (2.12), and Libya (2.09). The top three countries with the physician density rates in Africa are as follows: Somalia (.02/1,000), Rwanda (.013/1,000), and Tanzania (.01/1,000). The top three countries with the highest HIV rates in Africa are as follows: South Africa (7.8 million), Mozambique (2.1 million), and Tanzania (1.7 million). The top three countries with the lowest HIV rates in Africa are as follows: Djibouti (6,800), Tunisia (4,500), and Cabo Verde (2,400).

### (g) Obesity and Underweight Children

A recent study in Africa explained that obesity was increasing on that continent (Yako et al, 2015) though the authors maintained that the true cause remains elusive. A previous study sought to explain the causes and emphasized that the high obesity rates in Africa were caused by diabetic rates and hypertension rates (Kengne et al, 2013). A look at other sorted data shows a clear gradient in the prevalence of underweight children in West Africa. Along the coast of West Africa, an intriguing pattern emerges with an intermediate prevalence of underweight children, excluding wartorn Sierra Leone. However, as one ventures further north, an alarming escalation in the prevalence of underweight children unfolds swiftly and unmistakably, with the highest prevalence in the Sahel. In other regions, nutritional conditions clearly cross national borders. In the Great Lakes area, prevalence at several locations was above 30%, and the population density of under 5-year-olds was high. This implies that there are large numbers of undernourished children on both sides of the borders between Burundi, the Democratic Republic of the Cong, Rwanda, Uganda and the Republic of Tanzania. The analysis further reveals compelling regional patterns characterized by either low or medium levels of underweight children, providing insights into the geographic distribution and prevalence of this issue. Prevalence below 20% as observed in South Africa continued into neighboring countries such as Botswana, Namibia and Zimbabwe, and also into the southern part of Mozambique. In coastal central West Africa, a spectrum of low and medium levels of underweight children emerges, coming from southeastern regions of Nigeria to the captivating lands of Gabon and neighboring territories of the Republic of the Congo.(Nube, 2005). See also Figure 1. Another very recent study reaffirmed that

underweight children in Africa have also been and continues to be a source of concern (Cypriana et al, 2022).

The top three countries with the highest obesity rates in Africa are as follow: Libya (32.%), Egypt (32%), and South Africa (28.30%). The top three countries with the lowest obesity rates in Africa are as follows: Eritrea (5%), Ethiopia (4.5%), and Seychelles (.14%).

The top three countries with the highest underweight children rates in Africa are as follows: Niger (31.3%), Djibouti (29.9%), and Chad (29.2%). The top three countries with the lowest underweight children rates in Africa are as follows: Algeria (2.7%), Morocco (2.6%), and Tunisia (1.6%).

Fig. 1. **Geographical representation of underweight in children (0–3 years) in Africa**
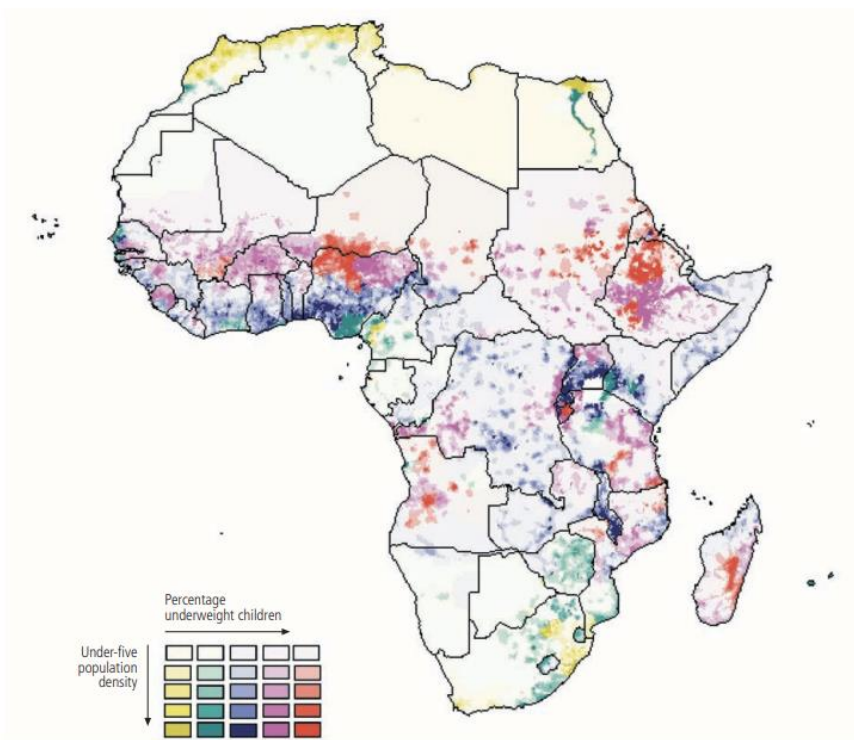
Underweight prevalence (weight-for-age below median -2sd) in 5 percentage classes (0–10%, 11–20%, 21–30%, 31–40%, > 40 %). Under-five population density in five classes, 0–1, 2–5, 6–10, 11–20, >20 persons/sq km. Sources: Deichmann, 1994 (27); DHS/MICS-UNICEF/WHO (21,22,23) ; FAQ, 2003 (26); SALB, 2004 (25).

Research Methodology

The current study looked at women's health on the African continent. It represents a first step in gaining knowledge on what is currently available in that subject area in terms of the current literature and statistics. To that end, a thorough literature review was done and the most relevant and timely articles were summarized to provide a meaningful synopsis of where the research stands in this area today, some key findings and what could next be done in terms of a follow-up research agenda or analysis. As such, this paper used secondary data analysis to review the relevant literature and statistics that is currently available on women's health on the African continent. The paper also looked at key statistics for women from the World Factbook, performing a comparative analysis across countries. The preceding serves as the best way to answer what research has been done, what are the key findings and what follow-up research could be done as next steps. Thus the research question of what information and what key statistics are saying currently exists for the countries and what additional research could be done, is clearly answered through the use of this methodology.

Statistical Data on Women's Health

Northern Africa
The six countries in Northern Africa are: Morocco, Algeria, Tunisia, Egypt, Sudan, and Libya.

Country	Population	Age Structure	Median Age	Mother's Median Age
Algeria	43,851,044	0-14 years: 29.58% (male 6,509,490/female 6,201,450) 15-24 years: 13.93% (male 3,063,972/female 2,922,368) 25-54 years: 42.91% (male 9,345,997/female 9,091,558) 55-64 years: 7.41% (male 1,599,369/female 1,585,233) 65 years and over: 6.17% (2020 est.) (male 1,252,084/female 1,401,357)	total: 28.9 years male: 28.6 years female: 29.3 years (2020 est.)	x
Egypt	102,334,404	0-14 years: 33.62% (male 18,112,550/female 16,889,155) 15-24 years: 18.01% (male 9,684,437/female 9,071,163), 25-54 years: 37.85% (male 20,032,310/female 19,376,847), 55-64 years: 6.08% (male 3,160,438/female 3,172,544), 65 years and over: 4.44% (2020 est.) (male 2,213,539/female 2,411,457)	total: 24.1 years, male: 23.8 years, female: 24.5 years (2020 est.)	22.6
Libya	6,871,292	0-14 years: 33.65% (male 1,184,755/female 1,134,084) 15-24 years: 15.21% (male 534,245/female 513,728) 25-54 years: 41.57% (male 1,491,461/female 1,373,086) 55-64 years: 5.52% (male 186,913/female 193,560) 65 years and over: 4.04% (2020 est.) (male 129,177/female 149,526)	total: 25.8 years male: 25.9 years female: 25.7 years (2020 est.)	x
Morocco	36,910,560	0-14 years: 27.04% (male 4,905,626/female 4,709,333) 15-24 years: 16.55% (male 2,953,523/female 2,930,708) 25-54 years: 40.64% (male 7,126,781/female 7,325,709) 55-64 years: 8.67% (male 1,533,771/female 1,548,315) 65 years and over: 7.11% (2020 est.) (male 1,225,307/female 1,302,581)	total: 29.1 years male: 28.7 years female: 29.6 years (2020 est.)	x
Sudan	43,849,260	0-14 years: 41.58% (male 2,238,534/female 2,152,685) 15-24 years: 21.28% (male 1,153,108/female 1,094,568) 25-54 years: 30.67% (male 1,662,409/female 1,577,062) 55-64 years: 3.93% (male 228,875/female 186,571) 65 years and over: 2.53% (2020 est.) (male 153,502/female 113,930)	total: 18.6 years male: 18.9 years female: 18.3 years (2020 est.)	x
Tunisia	11,818,619	0-14 years: 25.28% (male 1,529,834/female 1,433,357) 15-24 years: 12.9% (male 766,331/female 745,888) 25-54 years: 42.85% (male 2,445,751/female 2,576,335) 55-64 years: 10.12% (male 587,481/female 598,140) 65 years and over: 8.86% (2020 est.) (male 491,602/female 546,458)	total: 32.7 years male: 32 years female: 33.3 years (2020 est.)	x

Country	Maternal Mortality	Life Expectancy	Fertility Rate	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Algeria	112/100,000	total population: 78.03 years / male: 76.57 years / female: 79.57 years (2022 est.)	2.51	57.10%	6.20%	1.72/1000	18,000	27.40%	2.70%
Egypt	37/100,000	total population: 74.45 years, male: 73.26 years, female: 75.72 years (2022 est.)	2.88	58.5	4.70%	.45/1000	24,000	32%	7%
Libya	72/100,000	total population: 77.18 years / male: 74.94 years / female: 79.53 years (2022 est.)	3.09	27.7	NA	2.09/1000	9,500	32.5	11.7
Morocco	70/100,000	total population: 73.68 years / male: 71.98 years / female: 75.46 years (2022 est.)	2.29	70.80%	5.30%	.73/1000	22,000	26.10%	2.60%
Sudan	1,150/100,000	total population: 59.16 years / male: 57.43 years / female: 60.97 years (2022 est.)	5.32	NA	6%	x	180,000	6.60%	NA
Tunisia	43/100,000	total population: 76.82 years / male: 75.14 years / female: 78.6 years (2022 est.)	2	50.7	7	1.3/1000	4,500	26.9	1.6

Western Africa

The sixteen countries in Western Africa are: Nigeria, Ghana, Côte d'Ivoire, Niger, Burkina Faso, Mali, Sengenal, Guinea, Benin, Sierra Leone, Togo, Liberia, Mauritania, Gambia, Guinea-Bissau, and Cape Verde.

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Benin	12,123,200	0-14 years: 45.58% (male 2,955,396 female 2,908,079) / 15-24 years: 20.38% (male 1,300,453 female 1,318,880) / 25-54 years: 28.54% (male 1,735,229 female 1,935,839) total: 17 years / 55-64 years: 3.13% (male 193,548 female 211,427) male: 16.4 years / 65 years and over: 2.39% (2020 est.) (male 140,513 female 167,270) female: 17.6 years (2020 est.)	20.5	397/100,000	total population: 62.21 years / male: 60.39 years / female: 64.14 years (2022 est.)	5.43	15.5	2.4	.08/1000	75,000	9.6	16.8
Burkina Faso	20,903,273	0-14 years: 43.58% (male 4,606,350 female 4,473,951) / 15-24 years: 20.33% (male 2,121,012 female 2,114,213) / 25-54 years: 29.38% (male 2,850,621 female 3,265,926) total: 17.9 years / 55-64 years: 3.57% (male 321,417 female 423,016) male: 17 years / 65 years and over: 3.16% (2020 est.) (male 284,838 female 374,057) female: 18.7 years (2020 est.)	19.4	320/100,000	total population: 63.44 years / male: 61.63 years / female: 65.31 years (2022 est.)	4.27	30.1	5.50%	0.09/1,000	97,000	5.60%	16.40%
Côte d'Ivoire	26,378,274	0-14 years: 38.53% (male 5,311,971 female 5,276,219) / 15-24 years: 20.25% (male 2,774,374 female 2,779,012) / 25-54 years: 34.88% (male 4,866,937 female 4,719,286) total: 20.3 years / 55-64 years: 3.53% (male 484,000 female 476,060) male: 20.3 years / 65 years and over: 2.85% (2020 est.) (male 391,993 female 388,816) female: 20.3 years (2020 est.)	19.6	617/100,000	total population: 62.26 years / male: 60.07 years / female: 64.52 years (2022 est.)	3.53	23.3	3.30%	0.23/1,000	380,000	10.30%	12.80%
Gambia	241,668	0-14 years: 35.15% (male 391,993 female 388,816) / 15-24 years: 20.12% (male 221,519 female 225,414) / 25-54 years: 36.39% (male 396,261 female 412,122) total: 21.8 years / 55-64 years: 4.53% (male 48,032 female 52,538) male: 21.5 years / 65 years and over: 3.81% (2021 est.) (male 38,805 female 45,801) female: 22.2 years (2020 est.)	20.7	597/100,000	total population: 67.8 years / male: 65.83 years / female: 69.41 years (2022 est.)	3.79	16.8	3.8	.1/1000	27,000	10.3	11.6
Ghana	31,072,940	0-14 years: 37.44% (male 5,524,932 female 5,480,943) / 15-24 years: 18.64% (male 2,717,481 female 2,752,601) / 25-54 years: 34.27% (male 4,875,985 female 5,177,959) total: 21.4 years / 55-64 years: 5.21% (male 743,757 female 784,517) male: 21 years / 65 years and over: 4.44% (2020 est.) (male 598,387 female 703,686) female: 21.9 years (2020 est.)	20.7	308/100,000	total population: 69.37 years / male: 67.7 years / female: 71.09 years (2022 est.)	3.66	27.20%	3.40%	.14/1000	350,000	10.90%	12.08%

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Guinea	13,132,795	0-14 years: 41.2% (male 2,801,221 female 2,559,918) 15-24 years: 19.32% (male 1,215,654 female 1,204,366) 25-54 years: 30.85% (male 1,933,141 female 1,930,977) 55-64 years: 4.73% (male 287,448 female 305,420) 65 years and over: 3.91% (2020 est.) (male 218,303 female 270,492)	total: 19.1 years, male: 18.9 years, female: 19.4 years (2020 est.)	19.9	576/100,000	total population: 63.9 years, male: 62.04 years, female: 65.82 years (2022 est.)	4.85	10.9	4	08/1000	110,000	7.7	16.3
Guinea-Bissau	1,968,001	0-14 years: 41.2% (male 2,801,221 female 2,559,918) 15-24 years: 19.32% (male 1,215,654 female 1,204,366) 25-54 years: 30.85% (male 1,933,141 female 1,930,977) 55-64 years: 4.73% (male 287,448 female 305,420) 65 years and over: 3.91% (2020 est.) (male 218,303 female 270,492)	total: 19.1 years, male: 18.9 years, female: 19.4 years (2020 est.)	19.9	576/100,000	total population: 63.9 years, male: 62.04 years, female: 65.82 years (2022 est.)	4.85	109	4	08/1000	110,000	7.7	16.3
Liberia	5,057,681	0-14 years: 43.35% (male 1,111,479 female 1,087,871) 15-24 years: 20.35% (male 516,136 female 516,137) 25-54 years: 30.01% (male 747,983 female 774,615) 55-64 years: 3.46% (male 89,150 female 86,231) 65 years and over: 2.83% (2020 est.) (male 70,252 female 73,442)	total: 18 years, male: 17.7 years, female: 18.2 years (2020 est.)	19.1	661/100,000	total population: 65.45 years, male: 63.19 years, female: 67.78 years (2022 est.)	4.79	24.9	8.5	04/1000	35,000	9.9	10.9
Mali	20,250,833	0-14 years: 47.69% (male 4,889,121 female 4,836,683) 15-24 years: 19% (male 1,768,772 female 1,945,582) 25-54 years: 26.61% (male 2,393,386 female 2,806,830) 55-64 years: 3.68% (male 367,710 female 352,170) 65 years and over: 3.02% (2020 est.) (male 293,580 female 297,401)	total: 16 years, male: 15.3 years, female: 16.7 years (2020 est.)	19.2	562/100,000	total population: 62.41 years, male: 60.19 years, female: 64.7 years (2022 est.)	5.54	17.2	3.80%	13/1000	110,000	8.6	8.6
Mauritania	4,649,658	0-14 years: 37.56% (male 755,788 female 748,671) 15-24 years: 19.71% (male 387,140 female 402,462) 25-54 years: 33.91% (male 630,693 female 727,318) 55-64 years: 4.9% (male 88,888 female 107,201) 65 years and over: 3.92% (2020 est.) (male 68,407 female 90,707)	total: 21 years, male: 20.1 years, female: 22 years (2020 est.)	21.4	766/100,000	total population: 65.22 years, male: 62.77 years, female: 67.75 years (2022 est.)	3.53	17.8	3.3	19/1000	8,500	12.7	19.2

Country	Population	Age Structure	Median Age
Niger	24,206,644	0-14 years: 50.58% (male 5,403,102 female 5,713,915) 15-24 years: 19.99% (male 2,246,670 female 2,306,285) 25-54 years: 23.57% (male 2,582,123 female 2,784,484) 55-64 years: 3.17% (male 357,832 female 384,774) 65 years and over: 2.68% (2020 est.) (male 293,430 female 317,886)	total: 14.8 years, male: 14.5 years, female: 15.1 years (2020 est.)
Nigeria	206,139,589	0-14 years: 41.7% (male 45,571,738 female 43,674,789), 15-24 years: 20.27% (male 22,022,660 female 21,358,753), 25-54 years: 30.6% (male 32,808,913 female 32,686,474), 55-64 years: 4.13% (male 4,327,847 female 4,514,264), 65 years and over: 3.3% (2020 est.) (male 3,329,083 female 3,733,801)	Total: 18.6, male: 18.4, female: 18.9
Senegal	16,743,927	0-14 years: 40.38% (male 3,194,454 female 3,160,111) 15-24 years: 20.35% (male 1,596,896 female 1,606,084) 25-54 years: 31.95% (male 2,327,424 female 2,700,898) 55-64 years: 4.21% (male 283,480 female 378,912) 65 years and over: 3.1% (2020 est.) (male 212,332 female 273,807)	total: 19.4 years, male: 18.5 years, female: 20.3 years (2020 est.)
Sierra Leone	7,976,983	0-14 years: 41.38% (male 1,369,942 female 1,371,597) 15-24 years: 18.83% (male 610,396 female 636,880) 25-54 years: 32.21% (male 1,020,741 female 1,112,946) 55-64 years: 3.89% (male 121,733 female 335,664) 65 years and over: 3.7% (2020 est.) (male 109,712 female 144,382)	total: 19.1 years, male: 18.3 years, female: 19.7 years (2020 est.)
Togo	8,278,724	0-14 years: 39.73% (male 1,716,667 female 1,703,230) 15-24 years: 19.03% (male 817,085 female 820,971) 25-54 years: 33.26% (male 1,423,334 female 1,430,380) 55-64 years: 4.42% (male 179,778 female 200,392) 65 years and over: 3.57% (2020 est.) (male 152,304 female 175,074)	total: 20 years, male: 19.7 years, female: 20.3 years (2020 est.)

Country	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Niger	20.4	509/100,000	total population: 60.09 years male: 58.55 years female: 61.68 years (2022 est.)	6.82	11	5.70%	0.04/1,000	31,000	5.50%	31.30%
Nigeria	20.4	917/100,000	61.3 total, male: 59.51, female 63.27	4.62	16.6	3%	.38/1000	1.7 million	8.90%	18.40%
Senegal	21.9	315/100,000	total population: 69.96 years male: 68.23 years female: 71.77 years (2022 est.)	4.27	26.9	4.1	.07/1000	39,000	8.8	14.4
Sierra Leone	19.6	1,120/100,000	total population: 58.76 years male: 57.16 years female: 60.41 years (2022 est.)	3.8	21.2	8.8	.03/1000	80,000	8.7	13.5
Togo	20.9	396/100,000	total population: 71.36 years male: 68.76 years female: 74.03 years (2022 est.)	4.23	23.9	5.7	.08/1000	110,000	8.4	15.2

Central Africa

The nine countries in Central Africa are: Democratic Republic of the Congo, Angola, Cameroon, Chad, Central African Republic, Republic of the Congo, Gabon, Equatorial Guinea, and Sao Tome and Principe.

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Angola	32,866,272	0-14 years: 47.83% (male 7,758,636/female 7,797,369); 15-24 years: 18.64% (male 2,950,999/female 3,109,741); 25-54 years: 27.8% (male 4,301,618/female 4,740,483); 55-64 years: 3.43% (male 523,517/female 591,249); 65 years and over: 2.3% (2020 est.) (male 312,197/female 436,050)	total: 15.9 years; male: 15.4 years; female: 16.4 (2020 est.)	19.4	241/100,000	total population: 62.11 years; male: 60.05 years; female: 64.24 years (2022 est.)	5.83	13.70%	2.50%	.22/1000	340,000	8.20%	19%
Cameroon	26,545,863	0-14 years: 42.34% (male 5,927,640/female 5,820,226); 15-24 years: 20.04% (male 2,782,376/female 2,776,873); 25-54 years: 30.64% (male 4,391,151/female 4,309,483); 55-64 years: 3.87% (male 520,771/female 552,801); 65 years and over: 3.11% (2020 est.) (male 403,420/female 460,248)	total: 18.5 years; male: 18.2 years; female: 18.8 (2020 est.)	20.1	529/100,000	total population: 63.27 years; male: 61.49 years; female: 65.09 years (2022 est.)	4.55	19.3	3.60%	0.09/1,000	500,000	11.40%	11%
Central African	4,829,767	0-14 years: 39.49% (male 1,188,082/female 1,176,958); 15-24 years: 19.89% (male 598,587/female 593,075); 25-54 years: 32.95% (male 988,077/female 986,019); 55-64 years: 4.32% (male 123,895/female 134,828); 65 years and over: 3.35% (2020 est.) (male 78,017/female 122,736)	total: 20 years; male: 19.7 years; female: 20.3 years (2020 est.)	x	829/100,000	total population: 55.52 years; male: 54.19 years; female: 56.88 years (2022 est.)	4.04	17.8	7.8	.07/1000	88,000	7.5	20.5
Chad	16,425,864	0-14 years: 47.43% (male 4,050,505/female 3,954,413); 15-24 years: 19.77% (male 1,678,495/female 1,680,417); 25-54 years: 27.14% (male 2,208,181/female 2,371,490); 55-64 years: 3.24% (male 239,634/female 306,477); 65 years and over: 2.43% (2020 est.) (male 176,658/female 233,087)	total: 16.1 years; male: 15.6 years; female: 16.5 years (2020 est.)	18.1	1,140/100,000	total population: 59.15 years; male: 57.32 years; female: 61.06 years (2022 est.)	5.46	8.1	4.4	.04/1000	110,000	6.1	29.2
DR Congo	89,561,403	0-14 years: 46.38% (male 23,757,297/female 23,449,057); 15-24 years: 19.42% (male 9,908,686/female 9,836,841); 25-54 years: 28.38% (male 14,459,453/female 14,422,912); 55-64 years: 3.36% (male 1,647,267/female 1,789,429); 65 years and over: 2.47% (2020 est.) (male 1,085,539/female 1,423,782)	total: 16.7 years; male: 16.5 years; female: 16.8 years (2020 est.)	19.90%	473/100,000	total population: 61.83 years; male: 60.03 years; female: 63.69 years (2022 est.)	5.63	28.1	3.50%	.07/1000	510,000	6.70%	23.10%

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Congo	5,518,087	0-14 years: 41.37% (male 1,110,484/female 1,089,732); 15-24 years: 17.14% (male 454,981/female 452,204); 25-54 years: 33.3% (male 886,743/female 886,312); 55-64 years: 4.59% (male 125,207/female 117,810); 65 years and over: 3.2% (2020 est.) (male 75,921/female 93,678)	total: 19.5 years; male: 19.3 years; female: 19.7 years (2020 est.)	19.8	378/100,000	total population: 62.1 years; male: 60.65 years; female: 63.61 years (2022 est.)	4.36	30.1	2.1	.17/1000	110,000	9.6	12.3
Equatorial Guinea	1,402,985	0-14 years: 38.73% (male 164,417/female 159,400); 15-24 years: 19.94% (male 84,820/female 81,880); 25-54 years: 32.72% (male 137,632/female 135,973); 55-64 years: 4.69% (male 17,252/female 22,006); 65 years and over: 3.92% (2020 est.) (male 13,464/female 19,334)	total: 20.3 years; male: 19.9 years; female: 20.7 years (2020 est.)	x	301/100,000	total population: 63.7 years; male: 61.44 years; female: 66.03 years (2022 est.)	4.26	12.6	3.1	.4/1000	68,000	8	5.6
Sao Tome & Principe	219,159	0-14 years: 38.77% (male 42,690/female 41,277); 15-24 years: 21.59% (male 23,088/female 22,487); 25-54 years: 31.81% (male 32,990/female 33,834); 55-64 years: 4.17% (male 4,095/female 4,700); 65 years and over: 2.87% (2020 est.) (male 2,631/female 3,420)	total: 19.3 years; male: 18.9 years; female: 19.7 years (2020 est.)	19.4	130/100,000	total population: 67.06 years; male: 65.44 years; female: 68.72 years (2022 est.)	3.56	49.7	5.5	.05/1000	<1000	12.4	5.4

Eastern Africa

The eighteen countries in Eastern Africa are: Ethiopia, Tanzania, Kenya, Uganda, Mozambique, Madagascar, Malawi, Zambia, Somalia, Zimbabwe, South Sudan, Rwanda, Burundi, Eritrea, Mauritius, Djibouti, Comoros, and Seychelles.

Table 1

Country	Population	Age Structure
Burundi	11,890,784	0-14 years: 22.41% (male 53,653/female 50,446) 15-24 years: 16.14% (male 37,394/female 37,559) 25-54 years: 47.21% (male 103,991/female 115,291) 55-64 years: 8.34% (male 19,159/female 19,585) 65 years and over: 5.9% (2020 est.) (male 13,333/female 14,067)
Comoros	869,601	0-14 years: 36.68% (male 154,853/female 155,602) 15-24 years: 20.75% (male 85,208/female 90,422) 25-54 years: 33.99% (male 136,484/female 151,178) 55-64 years: 4.49% (male 17,237/female 20,781) 65 years and over: 4.08% (2020 est.) (male 15,437/female 19,079)
Djibouti	988,000	0-14 years: 29.97% (male 138,701/female 137,588) 15-24 years: 20.32% (male 88,399/female 98,955) 25-54 years: 40.73% (male 156,016/female 219,406) 55-64 years: 5.01% (male 19,868/female 26,307) 65 years and over: 3.97% (2020 est.) (male 16,245/female 20,319)
Eritrea	3,546,421	0-14 years: 38.25% (male 1,169,456/female 1,155,460) 15-24 years: 20.56% (male 622,172/female 627,858) 25-54 years: 33.42% (male 997,693/female 1,034,550) 55-64 years: 3.8% (male 105,092/female 125,735) 65 years and over: 4% (2020 est.) (male 99,231/female 143,949)
Ethiopia	114,963,588	0-14 years: 39.81% (male 21,657,152/female 21,381,628);15-24 years: 19.47% (male 10,506,144/female 10,542,128);25-54 years: 32.92% (male 17,720,540/female 17,867,298), 55-64 years: 4.42% (male 2,350,606/female 2,433,319);65 years and over: 3.38% (2020 est.) (male 1,676,478/female 1,977,857)

Table 2

Country	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Burundi	total: 31.1 years male: 30.5 years female: 31.8 years	x	31/100,000	total population: 78.38 years male: 76.01 years female: 80.86 years (2022 est.)	1.74	NA	2.2	1.61/1000	NA	14.1	NA
Comoros	total: 20.9 years male: 20.2 years female: 21.5 years	23	273/100,000	total population: 67.2 years male: 64.93 years female: 69.54 years (2022 est.)	2.78	19.4	5.2	0.27	<200	7.8	16.9
Djibouti	total: 24.9 years male: 23 years female: 26.4 years	x	248/100,000	total population: 65.3 years male: 62.72 years female: 67.96 years (2022 est.)	2.15	19	1.8	.22/1000	6,800	13.5	29.9
Eritrea	total: 20.3 years male: 19.7 years female: 20.8 years	21.3	480/100,000	total population: 66.85 years male: 64.25 years female: 69.53 years (2022 est.)	3.58	8.4	4.5	.06/1000	13,000	5	NA
Ethiopia	total: 19.8 years	19.3	401/100,000	Total-68.25, male 66.12, female 70.44	3.99	37	3.20%	.08/1000	620,000	4.50%	21.10%

Table 3

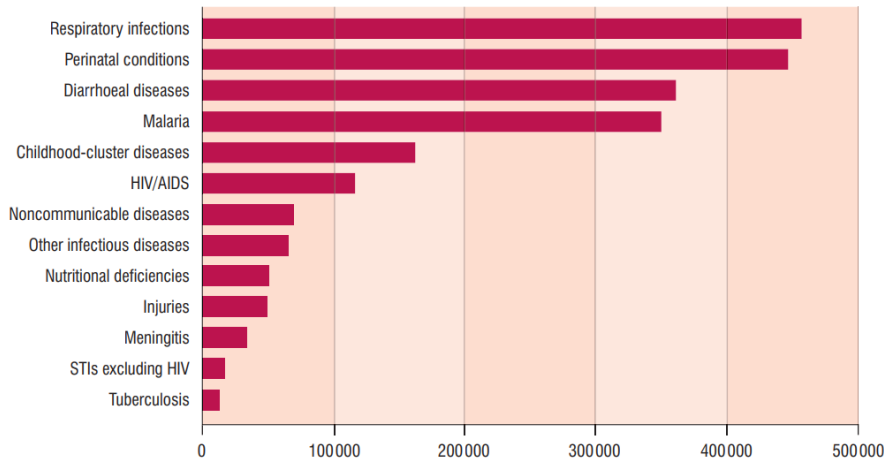| Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Kenya	53,771,296	0-14 years: 38.71% (male 10,412,321/female 10,310,908) 15-24 years: 20.45% (male 5,486,641/female 5,480,372) 25-54 years: 33.75% (male 9,046,946/female 9,021,207) 55-64 years: 4.01% (male 1,053,202/female 1,093,305) 65 years and over: 3.07% (2020 est.) (male 750,988/female 892,046)	total: 20 years male: 19.9 years female: 20.1 years (2020 est.)	20.3	342/100,000	total population: 69.69 years male: 67.98 years female: 71.43 years (2022 est.)	3.29	59.70%	4.80%	.16/1000	1.4 million	7.10%	11.20%
Madagascar	27,691,018	0-14 years: 38.86% (male 5,278,838/female 5,196,036) 15-24 years: 20.06% (male 2,717,399/female 2,689,874) 25-54 years: 33.02% (male 4,443,147/female 4,436,691) 55-64 years: 4.8% (male 611,364/female 627,315) 65 years and over: 3.47% (2020 est.) (male 425,122/female 509,951)	total: 20.3 years male: 20.1 years female: 20.5 years (2020 est.)	19.5	335/100,000	total population: 68.17 years male: 66.8 years female: 69.57 years (2022 est.)	3.62	44.40%	3.70%	.18/100,000	42,000	5.30%	26.40%
Malawi	19,129,952	0-14 years: 45.87% (male 4,843,107/female 4,878,983) 15-24 years: 20.51% (male 2,151,417/female 2,195,939) 25-54 years: 27.96% (male 2,944,936/female 2,982,195) 55-64 years: 2.98% (male 303,803/female 328,092) 65 years and over: 2.68% (2020 est.) (male 249,219/female 318,938)	total: 18.8 years male: 18.7 years female: 18.9 years (2020 est.)	19.1	349/100,000	total population: 72.44 years male: 69.33 years female: 75.59 years (2022 est.)	3.4	59.20%	7.4	.04/1000	990,000	5.8	9
Mauritius	1,271,768	0-14 years: 19.44% (male 137,010/female 131,113) 15-24 years: 14.06% (male 98,480/female 95,472) 25-54 years: 43.11% (male 297,527/female 297,158) 55-64 years: 12.31% (male 80,952/female 88,785) 65 years and over: 11.08% (2020 est.) (male 63,290/female 89,638)	total: 38.3 years male: 35 years female: 37.6 years (2020 est.)	x	61/100,000	total population: 74.86 years male: 72.04 years female: 77.88 years (2022 est.)	1.35	36.8	6.2	2.6/1000	14,000	10.8	NA
Mozambique	31,255,435	0-14 years: 43.57% (male 6,930,800/female 6,766,373) 15-24 years: 19.91% (male 2,897,529/female 2,994,927) 25-54 years: 28.28% (male 3,848,085/female 4,584,031) 55-64 years: 3.31% (male 485,454/female 509,430) 65 years and over: 2.93% (2020 est.) (male 430,797/female 449,771)	total: 17 years male: 16.3 years female: 17.6 years (2020 est.)	19.2	289/100,000	total population: 57.1 years male: 55.76 years female: 58.49 years (2022 est.)	4.81	27.10%	7.80%	.08/1000	2.1 million	7.20%	15.60%

14

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Rwanda	12,952,218	0-14 years: 39.97% (male 2,564,893 female 2,513,993) 15-24 years: 20.1% (male 1,280,948 female 1,273,853) 25-54 years: 33.06% (male 2,001,629 female 2,201,132) 55-64 years: 4.24% (male 241,482 female 298,163) 65 years and over: 2.65% (2020 est.) (male 134,648 female 201,710)	total: 19.7 years male: 18.9 years female: 20.4 years (2020 est.)	22.7	248/100,000	total population: 65.85 years male: 63.89 years female: 67.88 years (2022 est.)	3.33	53.2	6.4	.013/1000	220,000	5.8	7.7
Seychelles	98,347	0-14 years: 18.85% (male 9,297 female 8,798) 15-24 years: 12.39% (male 6,283 female 5,807) 25-54 years: 49.03% (male 25,209 female 21,851) 55-64 years: 11.46% (male 5,345 female 5,455) 65 years and over: 8.27% (2020 est.) (male 3,272 female 4,664)	total: 36.8 years male: 36.3 years female: 37.4 years (2020 est.)	x	x	total population: 76.1 years male: 71.67 years female: 80.66 years (2022 est.)	1.82	NA	5.2	2.12/1000	NA	0.14	3.6
Somalia	15,893,222	0-14 years: 42.38% (male 2,488,604 female 2,493,527) 15-24 years: 19.81% (male 1,167,807 female 1,161,040) 25-54 years: 30.93% (male 1,881,094 female 1,755,166) 55-64 years: 4.61% (male 278,132 female 264,325) 65 years and over: 2.27% (2020 est.) (male 106,187 female 161,242)	total: 18.5 years male: 18.7 years female: 18.3 years (2020 est.)	x	829/100,000	total population: 55.72 years male: 53.39 years female: 58.12 years (2022 est.)	5.31	6.9	NA	.02/1000	8,700	8.3	23
South Sudan	11,193,725	0-14 years: 41.58% (male 2,238,534 female 2,152,685) 15-24 years: 21.28% (male 1,153,108 female 1,094,568) 25-54 years: 30.67% (male 1,662,409 female 1,577,062) 55-64 years: 3.93% (male 228,875 female 186,571) 65 years and over: 2.53% (2020 est.) (male 153,582 female 113,930)	total: 18.6 years male: 18.9 years female: 18.3 years (2020 est.)	x	1,150/100,000	total population: 59.16 years male: 57.43 years female: 60.97 years (2022 est.)	5.32	NA	6	NA	180,000	6.6	NA
Tanzania	59,734,218	0-14 years: 42.7% (male 12,632,772 female 12,389,115) 15-24 years: 20.39% (male 5,988,208 female 5,948,134) 25-54 years: 30.31% (male 8,903,629 female 8,844,180) 55-64 years: 3.52% (male 954,251 female 1,107,717) 65 years and over: 3.08% (2020 est.) (male 747,934 female 1,056,905)	total: 18.2 years male: 17.9 years female: 18.4 years (2020 est.)	19.8	524/100,000	total population: 70.19 years male: 68.42 years female: 72.02 years (2022 est.)	4.39	38.4	3.80%	.01/1000	1.7 million	8.40%	14.60%
Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Uganda	45,741,007	0-14 years: 48.21% (male 10,548,913 female 10,304,876) 15-24 years: 20.25% (male 4,296,231 female 4,521,698) 25-54 years: 26.24% (male 5,202,370 female 6,347,304) 55-64 years: 2.91% (male 578,110 female 681,052) 65 years and over: 2.38% (2020 est.) (male 442,159 female 589,033)	total: 15.7 years male: 14.9 years female: 16.5 years (2020 est.)	19.4	375/100,000	total population: 68.98 years male: 66.71 years female: 71.27 years (2022 est.)	5.36	41.80%	3.80%	.17/100,000	1.4 million	5.30%	10.40%
Zambia	18,383,955	0-14 years: 45.74% (male 4,005,134 female 3,984,969) 15-24 years: 20.03% (male 1,744,843 female 1,748,561) 25-54 years: 28.98% (male 2,539,697 female 2,506,724) 55-64 years: 3.01% (male 242,993 female 280,804) 65 years and over: 2.27% (2020 est.) (male 173,582 female 221,316)	total: 16.9 years male: 16.7 years female: 17 years (2020 est.)	19.2	213/100,000	total population: 66.26 years male: 64.52 years female: 68.06 years (2022 est.)	4.56	49.6	5.3	1.19/1000	24,000	8.1	11.8
Zimbabwe	14,862,924	0-14 years: 38.32% (male 2,759,155 female 2,814,462) 15-24 years: 20.16% (male 1,436,710 female 1,495,440) 25-54 years: 32.94% (male 2,436,392 female 2,334,973) 55-64 years: 4.07% (male 227,506 female 363,824) 65 years and over: 4.52% (2020 est.) (male 261,456 female 396,396)	total: 20.5 years male: 20.3 years female: 20.6 years (2020 est.)	20.3	458/100,000	total population: 63.32 years male: 61.18 years female: 65.52 years (2022 est.)	3.89	66.8	7.7	.21/1000	1.3 million	15.5	9.7

Southern Africa

The five countries in Southern Africa are: South Africa, Namibia, Botswana, Lesotho, and Swaziland.

Country	Population	Age Structure	Median Age	Mother's Median Age	Maternal Mortality	Life Expectancy	Fertility Rate %	Contraceptive Rate	Current Health	Physician Density	People Living with HIV	Obesity	Underweight Children
Botswana	2,351,627	0-14 years: 30.54% (male 357,985 female 350,550) 15-24 years: 18.31% (male 208,824 female 215,462) 25-54 years: 39.67% (male 434,258 female 484,922) 55-64 years: 5.92% (male 39,399 female 77,886) 65 years and over: 5.56% (2020 est.) (male 53,708 female 75,159)	total: 25.7 years male: 24.5 years female: 26.7 years (2020 est.)	x	144/100,000	total population: 65.64 years male: 63.6 years female: 67.74 years (2022 est.)	2.39	67.4	6.1	.53/1000	370,000	18.9	NA
Lesotho	2,142,249	0-14 years: 31.3% (male 308,991 female 308,321) 15-24 years: 19.26% (male 181,874 female 197,452) 25-54 years: 38.98% (male 373,323 female 391,901) 55-64 years: 4.98% (male 52,441 female 45,726) 65 years and over: 5.6% (2020 est.) (male 37,030 female 53,275)	total: 24.7 years male: 24.7 years female: 24.7 years (2020 est.)	20.9	544/100,000	total population: 59.37 years male: 57.57 years female: 61.64 years (2022 est.)	2.92	64.9	11.3	.07/1000	280,000	16.6	10.5
South Africa	59,308,690	0-14 years: 27.94% (male 7,894,742 female 7,883,266) 15-24 years: 16.8% (male 4,680,587 female 4,804,337) 25-54 years: 42.37% (male 12,099,441 female 11,825,193) 55-64 years: 6.8% (male 1,782,902 female 2,056,988) 65 years and over: 6.09% (2020 est.) (male 1,443,956 female 1,992,205)		x	119/100,000	total population: 65.32 years male: 63.99 years female: 66.68 years (2022 est.)	2.18	54.6	9.10%	.91/1000	7.8 million	28.30%	5.50%

Figure 2.1 The main causes of death in the African Region, females 0–4 years in 2004

In Fugure 2.1 above, the main cause of deaths for females age 0-4 years is repiratory infections. This is followed by perinatal conditions and then diahereal diseases. Coming in fourth place is malaria, followed in fith place childhood-cluster diseases and then HIV/AIDS. Seventh, eighth and ninth places are occupied by noncommunicable diseases, other infectious diseases and nutritional deficiencies. The Thirteen top diseases are rounded out by injuries, meningitis, STs and tuberculosis respectively.

In looking at Table 2.2 it shows that the African countries had the lowest clinic attendance by women during antenal care coverage. These results are mimiced in having a skilled health attendant at the birth of a child, as well as having baby delivery at a health institution, where Africa for the most shows the lowest rates, except for South Asia.

**Table 3.2 Antenatal and delivery care coverage**

Region/subregions	Antenatal care coverage (%) 2000–2007		Delivery care coverage (%) 2000–2007	
	Attended clinic at least once	*Attended clinic at least four times*	*Skilled attendant present at birth*	*Delivered at health institution*
Sub-Saharan Africa	72	42	47	40
Eastern and Southern Africa	72	40	40	33
West and Central Africa	71	44	49	46
Middle East and North Africa	72	–	81	71
South Asia	68	34	41	35
East Asia and the Pacific	89	66	87	73
Latin America and the Caribbean	94	83	85	86
CEE/CIS*	90	–	94	89

* Central and Eastern Europe and the Commonwealth of Independent States

Source: UNICEF. *Progress for Children,* New York; 2007.

Figure 3.4 details data on causes of maternal deaths in athe African region, which remains an area of major concern in that health care sector. Outside of other areas, maternal haermorhage for maternal deaths remain significant ar 24%. This is followed by maternal deaths by abortions at 14% and them maternal deaths by maternal sepsis at 12%. Hypertensive disorders, related to high blood pressure for materal deaths stads at 8%, ending with onstructed labor for maternal deaths coming at 5% which remains almost criminal in nature.

Figure 3.4 Causes of maternal death in the African Region
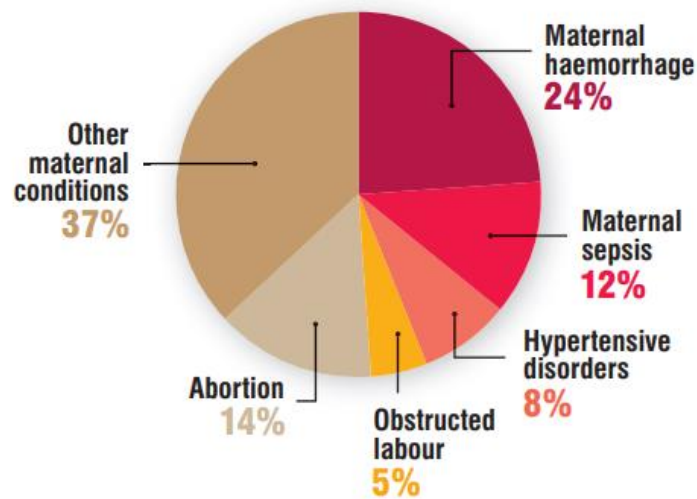
Source: World Health Organization, Geneva; 2008.

Table 3.4 details the obstetric care facilities in th African region. The table shows that Rwanda has the most emergency obstetric care facilities of the total number required at 86%. This is followed by Niger at 68% and then closely with Benin at 67%. The next top three countries with the most emergency obstetric care facilities of the total number required are: Uganda at 40%, Chad at 40% and then Senegal at 39%. The next three countries with the most emergency obstetric care facilities of the total number required are Mali at 38%, Malawi at 36% and Mozambique at 34%. The table is rounded out by Mauritania at 31% and Cameroon at 29% for countries with the most emergency obstetric care facilities of the total number required.
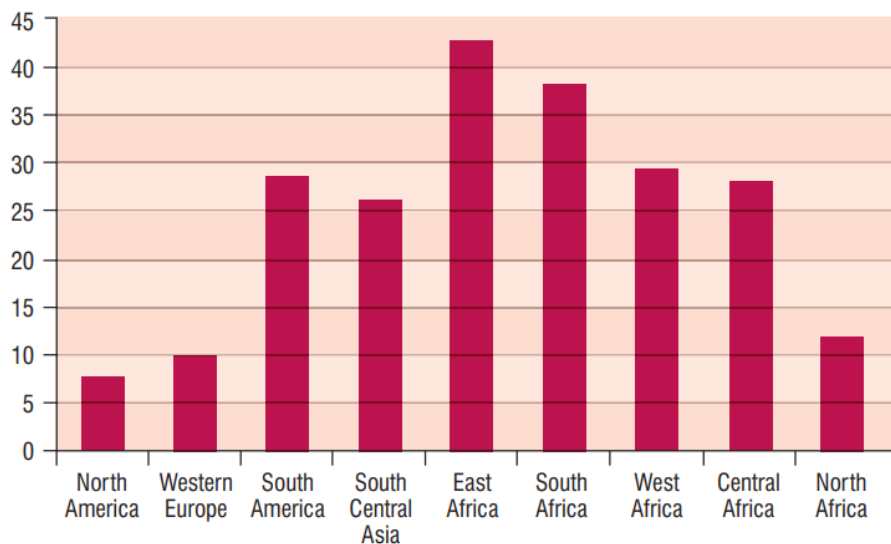
Table 3.4 Emergency obstetric care facilities in selected countries in the African Region

Country and year	Five emergency obstetric care facilities per 500 000 population as a percentage (%) of the total number required
Cameroon (2000)	29
Mauritania (2000)	31
Mozambique (1999)	34
Malawi (2000)	36
Mali (2002)	38
Senegal (2002)	39
Chad (2002)	40
Uganda (2002)	44
Benin (2002)	67
Niger (2002)	68
Rwanda (2003)	86

Source: Shah IH, Say L. Maternal Mortality and Maternity Care from 1990 to 2005: Uneven but Important Gains. *Reprod Health Matters* 2007;15(30):17–27.

Figure 3.7 shows heartbreaking statistics on age-standardized incidents of cervical cancer across the world. The results show astronimical high rates in regions such as East Africa, followed by South Africa and then West and Central Africa. Suprising figures are shown fro North Africa with very low rates and regions of South America and South Central Asia with somewhat disturbing high rates.

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Figure 3.7 Age-standardized incidence of cancer of the cervix per 100 000 population of women by world region

Table 5.2 depicts the per capita productivity loss due to maternal deaths in the African Region. The data shows that the top ten countries with the highest total productivity loss in international dollars are: South Africa, Angola, Tanzania, Ethiopia and Kenya, Cameroon and Nigeria, Algeria, Chad and Uganda. Ten countries with the lowest total productivity loss in international dollars are: Swaziland, Liberia, Eritrea, Gambia, Zimbabwe, Lesotho, Guinea-Bissau, Comoros, Mauritius and Cape Verde

Table 5.2 Per capita productivity loss due to maternal deaths in the WHO African Region, International Dollars, 2008

Country	(A) Population in 2008	(B) Total productivity loss in International Dollars (PPP)	(C=B/A) Productivity loss per capita (Int$)
Algeria	34 800 000	138 114 369	3.97
Angola	16 808 000	427 031 289	25.41
Benin	8 107 000	52 763 225	6.51
Botswana	1 546 000	33 374 887	21.59
Burkina Faso	14 042 000	80 580 567	5.74
Burundi	7 949 000	16 276 373	2.05
Cameroon	19 383 000	154 233 972	7.96
Cape Verde	504 000	928 584	1.84
Central African Republic	4 355 000	13 542 844	3.11
Chad	9 730 000	130 473 086	13.41
Comoros	652 000	1 691 898	2.59
Congo, Republic of	3 650 000	50 875 450	13.94
Côte d'Ivoire	19 031 000	109 666 830	5.76
Democratic Republic of Congo	62 885 000	96 565 663	1.54
Equatorial Guinea	1 240 000	20 705 511	16.70
Eritrea	5 006 000	8 636 556	1.73
Ethiopia	79 179 000	239 658 186	3.03
Gabon	1 454 000	30 135 783	20.73
Gambia	1 630 000	6 940 738	4.26
Ghana	22 532 000	83 155 341	3.69
Guinea	10 279 000	47 533 534	4.62
Guinea-Bissau	1 717 000	4 997 113	2.91
Kenya	35 265 000	239 590 136	6.79
Lesotho	2 451 000	6 060 570	2.47
Liberia	3 942 000	9 235 673	2.34
Madagascar	20 215 000	59 859 205	2.96
Malawi	13 656 000	43 384 564	3.18
Mali	13 360 000	73 158 411	5.48
Mauritania	3 032 000	24 437 451	8.06
Mauritius	1 272 000	1 648 778	1.30
Mozambique	20 747 000	90 772 756	4.38
Namibia	2 045 000	12 092 537	5.91
Niger	13 765 000	74 108 291	5.38
Nigeria	147 810 000	1 541 708 626	10.43
Rwanda	9 591 000	41 235 267	4.30
Sao Tome & Principe	160 000	–	0.00
Senegal	12 519 000	67 141 257	5.36
Seychelles	82 000	–	0.00
Sierra Leone	5 887 000	23 925 759	4.06
South Africa	48 687 000	800 816 164	16.45
Swaziland	1 022 000	11 711 729	11.46
Tanzania	39 743 000	312 536 495	7.86
Togo	6 625 000	12 260 758	1.85
Uganda	32 042 000	119 274 121	3.72
Zambia	12 450 000	52 300 391	4.20
Zimbabwe	11 732 000	6 375 405	0.54
Totals	**784 579 000**	**5 371 516 143**	**6.85**

Source: Commission's calculations.

Notes: (i) Population estimates are from Source of population data: International Monetary Fund, World Economic Outlook Database, October 2008; (ii) Total productivity loss in International Dollars (PPP) and productivity loss per person in population (Int$) are estimates of the Commision on Women's Health in the African Region; (iii) Estimates for Sao Tome and Principe and Seychelles are missing because the maternal mortality statistics were missing in the WHO/UNICEF/UNFPA/World Bank latest estimates. Estimates of the indirect costs of maternal deaths for the same year also show the burden carried by Nigeria in **Figure 5.1**.

Table 5.3 below depicts the cost of services and pregnancy outcomes, according to the use of family planning and maternal and newborn health services in sub-Saharan Africa. In terms of the cost of the current level of services, the data shows that family planning services stood at 290 million and maternal and newborn care stood at 1,460 million. The intended births and miscarriages, with the number in thousands show that intended births and miscarriages stand at 26,950,000 unintended births births and miscarriages stand at 11,730,000 and induced abortions stand at 5,310,000. In terms of number of deaths , the numbers stand at 290,000 for maternal deaths and 1,220,000 in newborn deaths in Sub-Saharan Africa. These figures show the plight of women and their children in Africa and speaks to a need for a fundamental call to address these issues.

Table 5.3 Cost of services, and pregnancy outcomes, according to use of family planning and maternal and newborn health services in sub-Saharan Africa, 2008

Cost and health outcome categories	Cost of current level of services	Cost of 100% of met needs for services
Services	**US$ million**	**US$ million**
Family planning services	290	2380
Maternal and newborn care	1460	8100
Total	**1750**	**10480**
Pregnancy outcomes	**Number in thousands**	**Number in thousands**
Intended births and miscarriages*	26950	26950
Unintended births and miscarriages	11730	2750
Induced abortions	5310	1240
Total	**43990**	**30940**
	Number of deaths	**Number of deaths**
Maternal	290000	90000
Newborn	1220000	670000
Total	**1510000**	**760000**

Source: Guttmacher Institute and UNFPA (United Nations Population Fund). New York: UNFPA; 2009.
*Number of current intended births and miscarriages are unaffected by the scaling up of family planning services.

DISCUSSION

There is no doubt that women's health in Africa remains a critical issue. The World Health Organization (WHO) indicates that On the African continent, one of the biggest health challenges facing women is the need to improve maternal health (2022). The WHO (2022) states the following about women in Africa "Women in the African Region are more likely to die from communicable diseases including, but not limited to: HIV, tuberculosis and malaria, maternal and perinatal conditions, and nutritional deficiencies, compared to women in other regions. Globally, about 468 million women aged 15–49 years (30% of all women) are thought to be anemic. A majority of this is assumed to be due to iron deficiency for women living in Africa (48–57%)." The World Health Organization (2022) also found the following in Africa: Women account for a slightly smaller proportion of COVID-19 infections and deaths compared with men, by an analysis done by the World Health Organization (WHO), proving this theory, finding 28 African countries. The analysis based on COVID-19 gender specific epidemiological data provided by countries found that although women account for around 41% of COVID-19 cases, this ranges from 31% in Niger to over 57% in South Africa.

With the pandemic accentuating challenges to accessing essential health services, a WHO preliminary analysis in 22 countries found 10 reported a rise in maternal deaths, with the highest increases reported in Comoros, Mali, Senegal and South Africa between February and July 2020, compared with the same period in 2019. Nine of the 22 countries reported a decline in births in health facilities and an increase in complications due to abortions. Based on observation, it's evident that in most countries, women exhibit a lower mortality rate due to COVID-19 compared to men. For instance, the case fatality ratio is 0.4% for women compared to 0.5% in men, while in the Democratic Republic of the Congo it is 2.2% versus 2.7% and 0.1% versus 0.5% in Seychelles.

This comes despite women accounting for a large part of the health workforce which puts them at higher risk of infection. In Africa, more than 95 000 health workers have been infected with COVID-19. In Seychelles, a staggering 71% of health worker infections are borne by women, highlighting the disproportionately high impact on the workforce. Similarly, in Eswatini, women account for 64% of health worker infections, followed by 55% in Cote d'Ivoire and 54% in Senegal (WHO, 2022b), displaying the prevalence of infections among female workers. .

While women in Africa experienced lower COVID positive rates, Studies have also found that violence against women, and particularly domestic violence, increased in several countries as security, health, and financial worries created tensions and strains which were worsened by the confined living conditions of lockdown. The impact of the COVID-19 pandemic has led to a profound economic fallout, weighing heavily on women. Informal workers, most of whom are women, account for more than 90% of the labor force in sub-Saharan Africa, according to the

World Bank. The pandemic targeted informal sector jobs, inflicting a tragedy on a vulnerable segment of the workforce (WHO, 2022b).

The World Health Organization (WHO) is actively collaborating with nations worldwide, undertaking measures to mitigate the repercussions of the pandemic on women's health. Several countries have implemented initiatives to ensure services for sexual, reproductive, maternal, newborn, adolescent and older people's health are maintained. The initiatives encompass a multifaceted approach, including the restructuring of antenatal care services, the provision of PPE to mitigate COVID-19 transmission risks, the implementation of mobile-based family planning services, and the facilitation of self-care alternatives for oral injectable contraceptives. These endeavors strive to safeguard women's health and empower them with accessible and innovative solutions as public private partnerships to deliver contraceptives and other family planning commodities (WHO, 2022).g

Mikayla Collins (2022) indicates that "Sixty percent of Africa's HIV positive people are women," The Covid-19 pandemic has exacerbated a dire situation. "There has been an alarming increase in teen pregnancies and child marriages, especially in West and Central Africa during the pandemic" (Collins, 2022). The introduction of localized development programs tailored towards the advancement of women and girls holds the potential for higher standards of health and well-being, leading to an effect extending beyond individual lives,which can in turn benefit the communities in which these women and girls live (Collins, 2022). According to Sanders, access to education is a pivotal factor of success. She goes on to state that, "Less than fifty percent of African women have completed education above the elementary level, emphasizing an urgent need to bridge the educational gap. One way to address this problem, Sanders maintains, would be to register births more accurately in sub-Saharan Africa to enable complete documentation of the number of girls who will need to attend school. The educational programs need to focus heavily on health, in particular women's unique health issues. In order to effectively channel development effort towards women and girls, developpement personnel and policymakers must seek out support from faith leaders, community leaders, and elders, as they all hold a strong emphasis on decisions. This is necessary across all regions of the continent, in rural and urban areas (Collins, 2022).

Women in Africa face massive barriers stemming from the cultural impositions of household or community to the public and governmental policies that restrict their access to education and jobs. These challenges impose constraints on women causing gender inequality across the continent.

One argument that has been made is that having women as leaders has resulted in a positive effect on women's health and other services in a country (Batson, 2021). More specifically, the author states that In comparison to men, women in leadership positions are more likely to

directly respond to the concerns of the community, to allocate funds toward education, health, and nutrition, to prioritize the needs of women, children, and marginalized groups, and to increase research on women's health issues (Batson, 2021).

Correlations between women's access to health and education

There are inequalities between women and men in their access to education. Research shows that "limited access to education for women suggests that women are less likely than men to have information about these diseases and their presentation" (Manderson et al., 1996: 8). This correlation shows women are less informed on medical education about diseases which affects their knowledge about the causes of disease and steps in preventing disease (Manderson et al., 1996). This reveals there is a negative correlation between health and education in women, signifying the less education women have about health, the less awareness they have when diseases appear (Manderson et al., 1996). More research should be done to determine the possible positive correlation between women's education and health.

Main foci on women's health services

What are the main health services geared towards women in health? In SouthAfrica, "women's health services consisted mainly of maternal and child health services,3,4 with an emphasis on contraceptive services aimed at limiting population growth" (Cooper et al., 2004: 71). This shows women in health receive services that aid their reproductive systems and offspring (Cooper et al., 2004).

CONCLUSION

The calls to improve the health care system across African countries is deafening. There is a desperate need to see a movement forward and a definitive improvement in the health and well being of the citizens across the region. These sentiments echo a loud call by Fathalla (1997) twenty-five years ago that the world health sector needed to focus on women's health and in particular health related to women's reproductive and sexual diseases. The author predicted that as these improvements were made, women would come to have more power over their bodies and their health (Fathalla, 1997). Uncomfortable issues such as female circumcision need to be addressed and there needs to be conscious effort to move beyond previous social norms that are patriarchal but detrimental to women's health. Benson (2022) supplied that the following African countries are said to have the best health care system based on the health care index:

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South Africa has a health care index score of 63.97; Kenya has a health care index score of 63.40; Tunisia has a health care index score of 56.54; Algeria has a health care index score of 52.88; Nigeria has a health care index score of 48.49; Egypt: Has a health care index score of 47.01; Morocco: Has a health care index score of 46.69. These systems should be analyzed, especially across gender lines. A key question to answer is how can these systems be mimicked in other African countries?

The changes being recommended are not superficial or easy changes to make if they are to sustain each country's health care system. This was highlighted twenty-seven years ago at the Beijing Declaration and Platform For Action. There have been several advances in women's health made worldwide since then, but more needs to be done. The rectification needed must start with each country's infrastructure, especially to rural areas, allowing those areas an easier link to more urban sectors in each country. Those infrastructure changes must also focus on gaining clean water and improved sanitation systems. Increased educational programs that focus on informing citizens on how they can contribute to their own health care improvement must also be addressed, particularly in areas such as prenatal care, STD prevention and general health such as diabetes and hypertension. Finally a thorough tracking system that promotes accountability and documents quantitative improvements needs to be enforced in every African country. The issues must be reevaluated on a regular basis to assess effective and ineffective policies.

Based on the above discussion, more direct health care help is also needed in the form of additional doctors, more health related resources, more food and more nutritious food and more contact between the population and health care providers, especially prenatal care for women. Once babies are born, early efforts should promote more contact between parents, children and health care professionals, as well as more invasive health care provisions related to food, medication and preventative vaccines. This follows a line of argument that encompasses a more direct and purposeful focus that will alleviate the devastating effects of poor health care systems for women and thus children. This may or may not be a new approach, but it is one that should take precedence and one that could have implications that extend beyond the continent of Africa and the individual countries in Africa to other parts of the world with similar circumstances. Most health care advocates agree that the current scenario needs major restructuring and one that is inevitable, desirable and beneficial.

The preceding arguments require not only a reliance on singularly focusing on the key features highlighted above is not enough to eradicate the critical issues related to women's health in Africa. What is needed instead is a process by which a comprehensive focus is given. This will require careful consideration of how the various factors impact and are in turn impacted by improvements in each individual area, as well as the impact of this on other health areas. This

paper served to present an accurate and up to date picture of the statistics related to women's health on the African continent and strong recommendations to address any deficiencies in the healthcare system. What beckons is a set of solid and feasible recommendations that can result in sustainable policies and programs to address these deficiencies.

REFERENCES

Abrahams, Z., Mchiza, Z., & Steyn, N. P. (2011). Diet and mortality rates in Sub-Saharan Africa: stages in the nutrition transition. *BMC public health*, *11*(1), 1-12.

Ahmed, Saifuddin et al. "Trends in Contraceptive Prevalence Rates in Sub-Saharan Africa Since the 2012 London Summit on Family Planning: Results from Repeated Cross-Sectional Surveys." *The Lancet global health* 7.7 (2019): e904–e911.

Alvarez, J. L., Gil, R., Hernández, V., & Gil, A. (2009). Factors associated with maternal mortality in Sub-Saharan Africa: an ecological study. *BMC public health*, *9*(1), 1-8.

Batson A, Gupta GR, Barry M. More Women Must Lead in Global Health: A Focus on Strategies to Empower Women Leaders and Advance Gender Equality. Ann Glob Health. 2021 Jul 12;87(1):67.

Benson, G., Achanso, S. A., & Mohammed, A. R. (2022). Promoting the Welfare Needs of Ghanaian Children through Policy Interventions and Programs-Reflections of UNCRC Provisions. *International Journal of Childhood Education*, *3*(2), 9-34.

Boerma, T. (1987). The magnitude of the maternal mortality problem in sub-Saharan Africa. *Social Science & Medicine*, *24*(6), 551-558.

Buor, D., & Bream, K. (2004). An analysis of the determinants of maternal mortality in sub-Saharan Africa. *Journal of Women's Health*, *13*(8), 926-938.

Chola, Lumbwe et al. "Scaling Up Family Planning to Reduce Maternal and Child Mortality: The Potential Costs and Benefits of Modern Contraceptive Use in South Africa." *PLoS ONE* 10.6 (2015): e0130077–e013007

Coburn, C., Restivo, M., & Shandra, J. M. (2015). The African Development Bank and women's health: A cross-national analysis of structural adjustment and maternal mortality. *Social science research*, *51*, 307-321.

Collins, M. 2022. Education and Health Issues Affecting Women and Girls in Africa
https://www.fpri.org/article/2022/04/educational-and-health-issues-affecting-women-and-girls-in-africa/

Conradie, A., Duys, R., Forget, P., & Biccard, B. M. (2018). Barriers to clinical research in Africa: a quantitative and qualitative survey of clinical researchers in 27 African countries. *British Journal of Anaesthesia*, *121*(4), 813-821.

Cooper, D., Morroni, C., Orner, P., Moodley, J., Harries, J., Cullingworth, L., & Hoffman, M. (2004). Ten years of democracy in South Africa: Documenting transformation in reproductive health policy and status. *Reproductive health matters*, *12*(24), 70-85..

Cypriana, C. M., Sebastian, P. J., Devotha, G. M., Kaunara, A. A., Wessy, P. M., Malimi, E. K., & Kasankala, L. M. (2022). Determinants of underweight among children aged 0–23 months in tanzania. *Food Science & Nutrition, 10*(4), 1167-1174. doi:https://doi.org/10.1002/fsn3.2748

DeVries, M. W. (1985). Temperament and infant mortality among the Masai of East Africa. *Annual Progress in Child Psychiatry & Child Development*.

Djoumessi, Yannick Fosso. "The Impact of Malnutrition on Infant Mortality and Life Expectancy in Africa." *Nutrition (Burbank, Los Angeles County, Calif.)* (2022): 111760

Ester, P. V., Torres, A., Freire, J. M., Hernández, V., & Gil, Á. (2011). Factors associated to infant mortality in Sub-Saharan Africa. *Journal of Public Health in Africa*, *2*(2).

Faria, N. R., Vidal, N., Lourenco, J., Raghwani, J., Sigaloff, K. C., Tatem, A. J., ... & Dellicour, S. (2019). Distinct rates and patterns of spread of the major HIV-1 subtypes in Central and East Africa. *PLoS pathogens*, *15*(12), e1007976.

Fathalla MF. Global trends in women's health. Int J Gynaecol Obstet. 1997 Jul;58(1):5-11.

Gambino, C., Trevelyan, E. N., & Fitzwater, J. T. (2014). *Foreign-born population from Africa, 2008-2012*. US Department of Commerce, Economic and Statistics Administration, US Census Bureau.

Global Health and Development. The Center For Global Health and Development.
https://www.cghd.org/index.php/publication/global-health-challenges/investing-in-women-and-girls/144-the-global-challenges-of-health-for-women-in-africa

Goga, A., Chirinda, W., Ngandu, N. K., Ngoma, K., Bhardwaj, S., Feucht, U., ... & Sherman, G. (2018). Closing the gaps to eliminate mother-to-child transmission of HIV (MTCT) in South Africa: understanding MTCT case rates, factors that hinder the monitoring and attainment of targets, and potential game changers. *South African Medical Journal*, *108*(3 Supplement 1), S17-S24.

Guyatt, H. L., & Snow, R. W. (2001). Malaria in pregnancy as an indirect cause of infant mortality in sub-Saharan Africa. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, *95*(6), 569-576.

Heft-Neal, S., Burney, J., Bendavid, E., & Burke, M. (2018). Robust relationship between air quality and infant mortality in Africa. *Nature*, *559*(7713), 254-258.

Hollfelder, N., Breton, G., Sjödin, P., & Jakobsson, M. (2021). The deep population history in Africa. *Human Molecular Genetics*, *30*(R1), R2-R10.

Horn, J. (2003). AMANITARE and African women's sexual and reproductive health and rights. *Feminist Africa*, *2*, 73-79.

Hyder, A. A., Maman, S., Nyoni, J. E., Khasiani, S. A., Teoh, N., Premji, Z., & Sohani, S. (2005). The pervasive triad of food security, gender inequity and women's health: exploratory research from sub-Saharan Africa. *African health sciences*, *5*(4), 328-334.

Ijaiya, Gafar T et al. "Estimating the Impact of Birth Control on Fertility Rate in Sub-Saharan Africa." *African journal of reproductive health* 13.4 (2009): 137–146

Johnson, L. F., Rehle, T. M., Jooste, S., & Bekker, L. G. (2015). Rates of HIV testing and diagnosis in South Africa: successes and challenges. *Aids*, *29*(11), 1401-1409.

Karim, S. S. A., & Baxter, C. (2019). HIV incidence rates in adolescent girls and young women in sub-Saharan Africa. *The Lancet Global health*, *7*(11), e1470-e1471.

Kengne, Andre Pascal et al. "New Insights on Diabetes Mellitus and Obesity in Africa–Part 1: Prevalence, Pathogenesis and Comorbidities." *Heart* 99.14 (2013): 979–983.

Kudamatsu, M., Persson, T., & Strömberg, D. (2012). Weather and infant mortality in Africa. *Available at SSRN 2210191*.

Lewis, James JCa; Ronsmans, Carineb; Ezeh, Alexc; Gregson, Simona. The population impact of HIV on fertility in sub-Saharan Africa. AIDS: June 2004 - Volume 18 - Issue - p S35-S43

Linard, C., Gilbert, M., Snow, R. W., Noor, A. M., & Tatem, A. J. (2012). Population distribution, settlement patterns and accessibility across Africa in 2010. *PloS one*, *7*(2), e31743.

Manderson, L., Mark, T., Woelz, N., & World Health Organization. (1996). *Women's participation in health and development projects* (No. WHO/TDR/GTD/RP/96.1). World Health Organization.

McCarthy, F. D., & Wolf, H. C. (2001). Comparative life expectancy in Africa. *Available at SSRN 632736*.

McPake, Barbara, Prarthna Dayal, and Christopher H Herbst. "Never Again? Challenges in Transforming the Health Workforce Landscape in Post-Ebola West Africa." *Human Resources for Health* 17.1 (2019): 19–19.

Mellor, J. W. (2014). High rural population density Africa–What are the growth requirements and who participates?. *Food Policy*, *48*, 66-75.

Mocumbi, A. O., & Sliwa, K. (2012). Women's cardiovascular health in Africa. *Heart*, *98*(6), 450-455.

Moodley, J., Fawcus, S., & Pattinson, R. (2018). Improvements in maternal mortality in South Africa. *South African Medical Journal*, *108*(3), 4-8.

Moultrie, Tom A, and Nuala McGrath. "Teenage Fertility Rates Falling in South Africa." *South African medical journal* 97.6 (2007): 442–443. Print.

Mukadi, Y. D., Maher, D., & Harries, A. (2001). Tuberculosis case fatality rates in high HIV prevalence populations in sub-Saharan Africa. *Aids*, *15*(2), 143-152.

Nelms, L. W., & Gorski, J. (2006). The role of the African traditional healer in women's health. *Journal of Transcultural Nursing*, *17*(2), 184-189.

Nkalu, Chigozie Nelson, and Richardson Kojo Edeme. "Environmental Hazards and Life Expectancy in Africa: Evidence From GARCH Model." *SAGE Open* 9.1 (2019):

The geographical distribution of underweight children in Africa
Nube, M ; Sonneveld, B.G.J.S
Bulletin of the World Health Organization, 2005, Vol.83 (10), p.764-770

Pick, W., & Cooper, D. (1997). Urbanisation and women's health in South Africa. *African Journal of Reproductive Health*, 45-55.

Pillay, N. K., & Maharaj, P. (2013). Population aging in Africa. In *Aging and health in Africa* (pp. 11-51). Springer, Boston, MA.

Pourreza, A., Sadeghi, A., Amini-Rarani, M., Khodayari-Zarnaq, R., & Jafari, H. (2021). Contributing factors to the total fertility rate declining trend in the Middle East and North Africa: a systemic review. *Journal of Health, Population and Nutrition*, *40*(1), 1-7.

Ramjee, G., & Daniels, B. (2013). Women and HIV in sub-Saharan Africa. *AIDS research and therapy*, *10*(1), 1-9.

Sawatsky, Adam P et al. "Specialization Training in Malawi: a Qualitative Study on the Perspectives of Medical Students Graduating from the University of Malawi College of Medicine." *BMC Medical Education* 14.1 (2014): 2–2.

Yako, Y. Y., Echouffo-Tcheugui, J. B., Balti, E. V., Matsha, T. E., Sobngwi, E., Erasmus, R. T., & Kengne, A. P. (2015). Genetic association studies of obesity in A frica: A systematic review. *obesity reviews*, *16*(3), 259-272.

Yaya, S., Idriss-Wheeler, D., Uthman, O. A., & Bishwajit, G. (2021). Determinants of unmet need for family planning in Gambia & Mozambique: implications for women's health. *BMC women's health*, *21*(1), 1-8.

World Health Organization (2022a). Women's Heath. https://www.afro.who.int/health-topics/womens-health

World Health Organization (2022b). Fewer COVID-19 cases among women in Africa: WHO analysis. https://www.afro.who.int/news/fewer-covid-19-cases-among-women-africa-who-analysis