



## ADULT MEN'S HEALTH NEEDS AND ACCESS TO HEALTHCARE SERVICES IN SIERRA LEONE: TIME TO CONSIDER PRIORITISING MEN'S HEALTH TO IMPROVE OUTCOMES IN A CHALLENGING HEALTHCARE SYSTEM

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**ABSTRACT:** *Introduction:* Men's health matters in sub-Saharan Africa have remained a complex multifaceted issue and is crying out for statutory attention to address the disproportionate morbidity and mortality rates amongst the male population as currently reported in many official health statistics. Sub-Saharan countries face significant challenges arising from inadequate healthcare service/facilities, socio-economic factors and rigid cultural norms that have resulted in the apparent oversight of men's health needs in national discourses. It is time to consider changing this situation. **Methodology:** A descriptive analysis of various publicly available secondary data is used to discuss a case to consider prioritising men's health in Sierra Leone in an equitable drive to improve men's health outcomes. **Results:** There is an abundance of statistical evidence from many credible sources showing a disproportionately higher representation of men in negative health measure parameters, including lower life expectancy, high morbidity/mortality rates, and higher disability adjusted life years (DALYs) representing a significant loss of healthy life years due to premature death or living with a disability. The comparatively poor health outcomes for men are consistently highlighted in these collected statistics. **Conclusion:** Men's health matters should no longer be neglected even in countries like Sierra Leone where healthcare resources are limited. Saving men from premature death and improving their ability to lead healthy fulfilling lives is an ethical imperative that benefits not only men but also women and the wider community. A men's health strategy will be a vital instrument to accelerate change for better men's health outcomes.

**KEYWORDS:** Men's health, equality, equity, sub-Saharan Africa, Sierra Leone.



## INTRODUCTION

Men's health matters in sub-Saharan Africa have remained a complex multifaceted issue and this is crying out for statutory attention to address the disproportionately high morbidity and mortality rates amongst the male population as observed and reported in many official national/international health statistics. Sub-Saharan countries, many classed as low-middle-income countries (LMIC), face significant challenges arising from inadequate healthcare service/facilities, socio-economic and rigid cultural norms that have resulted in the apparent oversight of men's health needs in the national discourse. Evidence from national and international sources of information including Statistics, Sierra Leone; Ministry of Health, Sierra Leone; Africa Centre for Disease Control; World Health Organisation; and The Global Burden of Diseases consistently record high rates of communicable and non-communicable disease burden in this region of the world. Population and health related statistics on Sierra Leone for example, points to a significant public health situation with illness and death rates disproportionately higher in the male population. For decades, men's health has remained on a lower priority consideration at national level in Sierra Leone. This, coupled with traditional socially constructed norms and perceptions of harmful masculinity which negatively impact men's health seeking behaviours, leads to apathy in engaging with healthcare services, and/or following advised treatment plans. All these issues contribute to poor health outcomes for men.

There is a paucity of research on men's health matters and the use of healthcare services by men, especially research aimed at adult men in sub-Saharan Africa. Sierra Leone, with one of the least developed healthcare services in the region, currently has no specific strategy for men's health even though statistics show that the life expectancy, burden of disease, death rates and other key health indicators remain high in both men and women. There are fewer dedicated programmes addressing men's health issues at both the Peripheral Healthcare Units (PHU) level where community healthcare services/programmes are accessed by people in the rural areas and the secondary care level at district general or referral hospital levels in bigger towns or cities. Adult men's usage of the available health services in the country remains low (Caviglia *et al.*, 2021).

Globally, there are few countries known to have developed men's health strategies, the exceptions being Australia, Brazil, Iran, Ireland, Malaysia, Mongolia, and South Africa. In most sub-Saharan African countries, a specific men's health strategy is yet to be developed but men's health is combined with other generic health strategies for the population. Some of these generic strategies may not even mention men in them, but make reference to men by grouping them in all inclusive special categories like adolescents, the elderly, refugees or internally displaced persons. When it comes to implementing these generic strategies, there is a tendency for women and girls' health issues to be prioritised especially in countries where foreign donor financing makes up a larger share of their Ministries of Health operational budget, which drives the implementation process.

West African LMICs like Sierra Leone are not unique in lacking a specific men's health strategy. The United Kingdom (UK), a high-income country, does not currently have one though there is the World Health Organisation European Region's strategy on the health and well-being of men adopted in 2018. Following many years of intense lobbying by men's health advocacy groups, charities and academics, His Majesty's Government recently announced that they plan to publish a men's health strategy for England in 2025 (GOV.UK, 2024). This will be a bold step in the right direction and will provide an opportunity to focus on men and boys'



health issues, and identify areas for improvement, solutions and hopefully agreed funding streams to improve men's health outcomes. By contrast, there has been a UK Parliament approved women's health strategy, published in July 2022 which details the government's 10-year ambitions, and the actions plans to be implemented for improving the health and wellbeing of women and girls in England (GOV.UK, 2022). The experiences learnt in developing and implementing the women's strategy will indubitably inform the government/practitioners in drawing up, implementing and monitoring a similar health promotion and health enhancing strategy for men and boys.

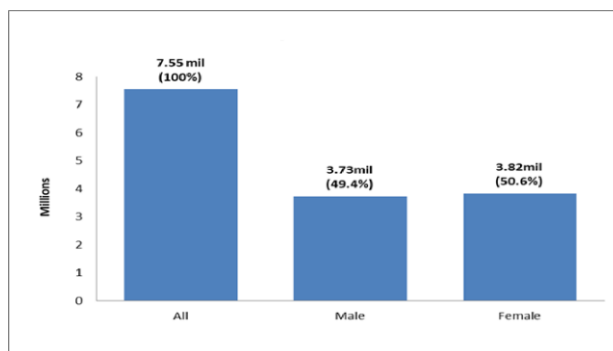
## METHODOLOGY

In this paper, a descriptive analysis of publicly available secondary data was undertaken using Sierra Leone specific country statistics data to discuss a case to consider prioritising men's health in Sierra Leone in an equitable drive, to improve men and boys' health outcomes. Information from various sources was used to formulate the research question, determine the scope of the investigation and identify key variables and concepts explored in the paper.

An initial search was carried out on CINAHL and PubMed with the main aim of identifying national men's health strategies in sub-Saharan countries. This showed that only one sub-Saharan country, South Africa, currently has such a strategy (South Africa National Department of Health, 2021). This discovery helped to frame the title of this paper. Secondly, it helped to point the author to publicly available country data on the Government of Sierra Leone official online outlets (Ministry of Health and Statistics Sierra Leone), credible international organisations including the United Nations' agencies like the World Health Organisation (WHO), United Nations International Children Emergency Fund (UNICEF) and United Nation Population Fund (UNPF), as well as the World Bank, Global Burden of Disease, Statista, Africa Centre for Disease Control, ICF International and other online databases. Data from these various sources were collected, collated, and summarised. The results were used as a basis for this paper.

## Sierra Leone: Geographical Location and Demographics

The Republic of Sierra Leone is a country on the West Coast of Africa. The Latitude/Longitude position of Sierra Leone is Latitude 8.50000000 and Longitude -11.50000000 with a GPS mapped coordinate of N 8° 30' 0"; E -11° 30' 0" (Latlong.info, 2025). Sierra Leone is located in the Greenwich Mean Time (GMT) time zone. It has a North-South distance of 331 kilometres (km) and an East-West distance of 326 km. It is bounded on the West by the Atlantic Ocean, on the North and Northeast by Republic of Guinea, Conakry, and on the Southeast by Republic of Liberia. With a land area of approximately 72,000 square kilometres, Sierra Leone has a population of 7.55 million people (2021 midterm census) with females making 50.6% and males 49.4% of the population (Statistics Sierra Leone, 2021) (**Fig. 1**). The country's population is projected to grow to about 12.9 million by 2050 (World Population Review, 2024).



**Fig. 1:** Sierra Leone population by sex, 2021 midterm census.

### Historical Factors Impacting on Healthcare Provision in Sierra Leone

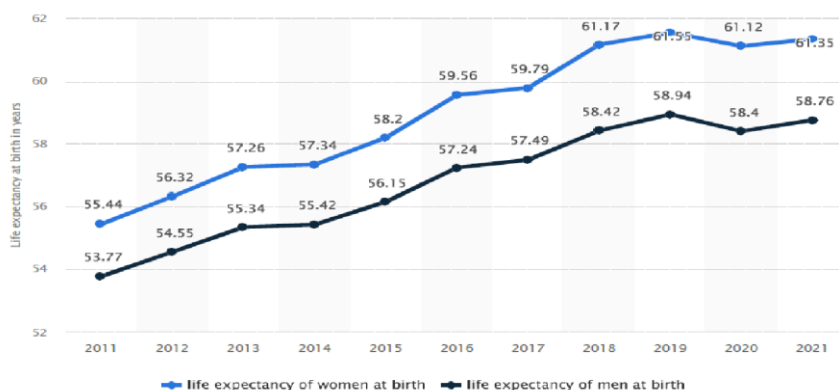
Sierra Leone has a potted history of numerous human-caused and natural disasters; these have had devastating consequences on individual and population health. The Sierra Leone government's ability to provide appropriate and adequate healthcare services nationally has been a challenge. The debilitating 11-year long civil war (1991–2002) was followed by the Ebola haemorrhagic viral disease outbreak (2014–2018). These coupled with a chronic under-investment in the healthcare sector have all contributed to the country's persistently high mortality and morbidity with men faring worse in reported statistics.

The civil war which ended in 2002 left Sierra Leone's infrastructure including the healthcare system in ruins (Wurie *et al.*, 2016; MOHS, 2019). The trauma of that war left the population, particularly those residing in rural communities, with physical and psychological health problems (Amnesty International, 2021; M'Cormack-Hale *et al.*, 2018). In 2014, Sierra Leone was one of three neighbouring countries severely affected by the contagious Ebola virus outbreak with a total number of 14,124 people infected resulting in 3,956 reported Ebola deaths (Jalloh *et al.*, 2020; Africa CDC, 2019). Many healthcare personnel were infected with over ninety (90), including doctors, nurses, and ambulance drivers/crew, losing their lives in the fight to curtail the Ebola epidemic while working with poor isolation facilities and minimal supplies of personal protective equipment supplies. The deleterious effects of that Ebola outbreak are still felt today.

When the current government came into power, for the period, 2018–2023, it prioritised education over all other expenditures. For example, in the 2022 financial year, 22% of the total government budget was allocated to the Ministry of Education (Sierra Leone Ministry of Finance, 2022) in a drive to improve human capital development. Effectively, this meant that comparatively less resources were available for the necessary expansion of a very underdeveloped healthcare sector even though the population's need for healthcare services had grown exponentially and continues to grow.

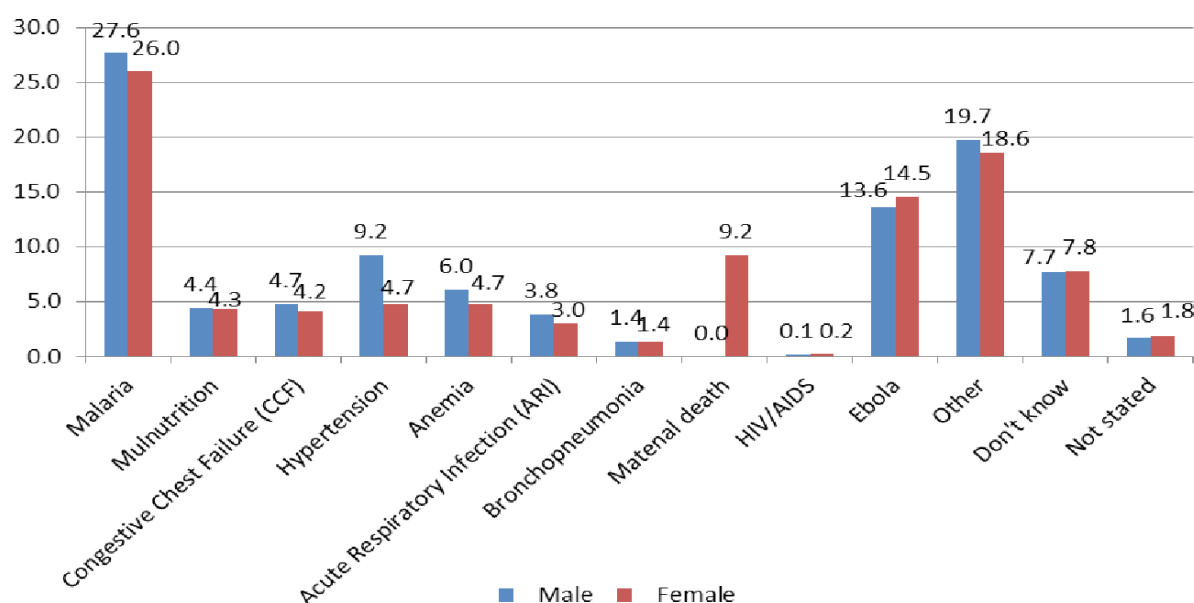
## RESULTS: KEY SIERRA LEONE SPECIFIC HEALTH INDICATORS

Sierra Leone has one of the lowest life expectancy and health indicators globally. Disaggregated statistics reveal that for many of the key health indicators, the numbers/percentages for the men are worse when compared to those for women. O'Neal (2024 on Statista) charted the life expectancy figures for Sierra Leone for the period 2011–2021, revealing that the life expectancy for men has remained consistently lower than that for women year after year for the whole decade. The results are displayed in **Fig. 2**.



**Fig. 2:** Sierra Leone: Life expectancy at birth, 2011–2021.

Life expectancy at birth is defined as the average number of years that a newborn could be expected to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevalent at the time of his or her birth, for a specific year, in a given country, territory, or geographic area (WHO, 2024). In Sierra Leone, the reported life expectancy at birth for 2021 was estimated as 61.35 years for women and 58.76 for men. The gap in life expectancy at birth between females and males has progressively widened from 1.67 years in 2011 to 2.59 years in 2021 (O'Neil, 2024).



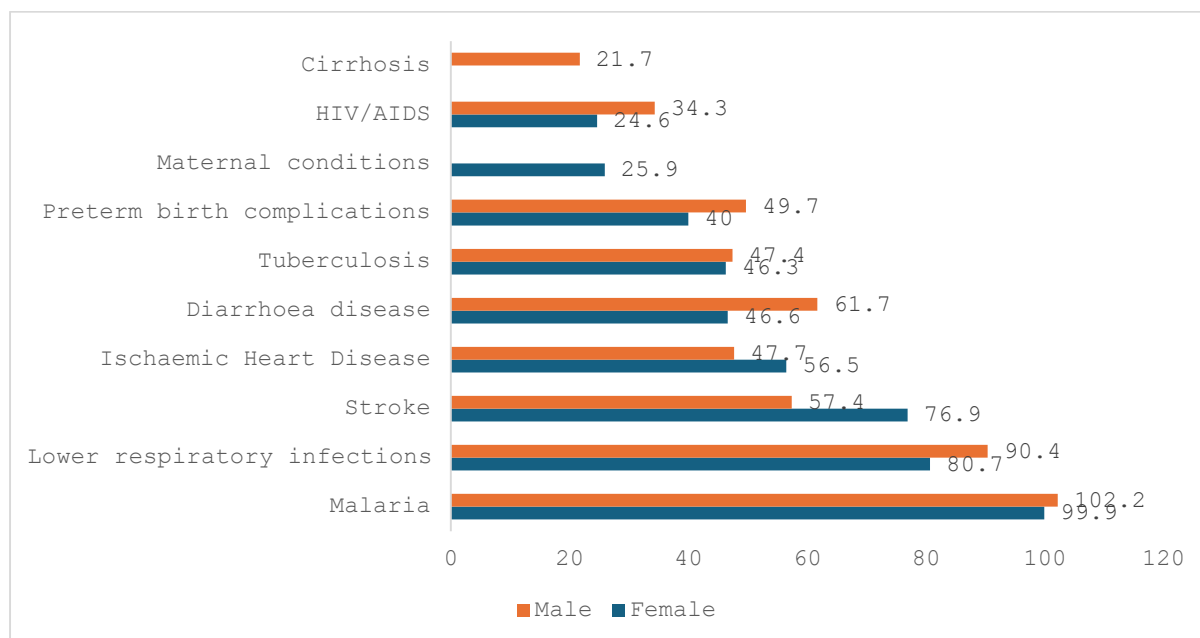
**Fig. 3:** Percentage distribution of causes of death by sex in Sierra Leone, 2015 census.





According to the 2015 census, the percentage distribution of the twelve (12) leading causes of death in Sierra Leone are displayed in **Fig. 3**. The total reported deaths in the country were 104,019 of which there were 53,634 (52%) male and 50,385 (48%) female deaths, respectively. Of this total number of recorded deaths, the percentages for sex disaggregated deaths for malaria was 27.6% men vs 26.0% women; hypertension was 9.2% men and 4.7% women; anaemia was 6.0% for men and 4.7% women; malnutrition was 4.4% for men and 4.3% for women; congestive chest failure was 4.7% in men and 4.2% in women; acute respiratory infection was 3.8% in men and 3.0% for women; and others (including deaths from suicide, accidents, trauma, liver cirrhosis, cancers and diabetes) was 19.7% in men vs 18.6% in women. However, in two specific categories, significantly more women's death numbers were recorded than in men – maternal death (which by nature only affects women) of 9.2%, and Ebola was 14.5% women vs 13.6% women. Also, for HIV/AIDS, Don't Know or Not Stated categories, the reported percentage causes of death were slightly more for women. (Statistics Sierra Leone, 2016).

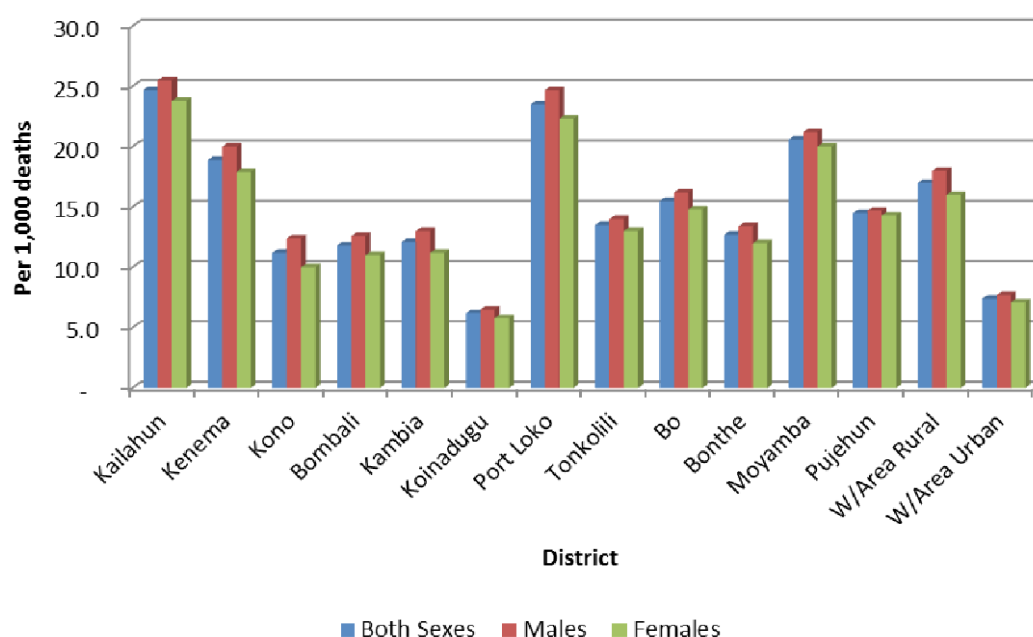
A more recent (2021) estimation of the mortality rates recorded was 266.65 deaths per 1,000 adult males while that for women was 229.63 per 1,000 adult females (O'Neill, Statista, 2024). Using updated WHO data, **Fig. 4** shows a graphic representation of twelve leading causes of death per 100,000 of the Sierra Leone population in 2021. Though there has been a welcomed reduction in Sierra Leone's morbidity and mortality rates, both measures remain among the highest in the sub-Saharan region or globally. More female deaths were reported for ischaemic heart disease and stroke than in men (a reversal of the state of play as previously more men were affected or died of these two conditions). The overall picture of health outcomes (deaths) however remains higher for men with 7 out of 10 these leading causes of death in 2021 in Sierra Leone.



**Fig. 4:** Leading causes of deaths per 100,000 in Sierra Leone, 2021 (WHO, 2024).

Access to quality healthcare services is vital for promoting and maintaining health; preventing and managing diseases, reducing unnecessary suffering, disability, and premature death; and achieving health equity for all the population. The stated goal of the government is expanding access to quality healthcare and the equitable provision of health services which is central to achieving universal health coverage (Ministry of Health and Sanitation, 2021). In reality, too many people still cannot access the care they require due to economic, geographic, epidemiological, or cultural barriers (Osborne *et al.*, 2025; Higgins *et al.*, 2023).

The key barriers for accessing quality healthcare services in Sierra Leone are ability to pay for healthcare services, the limited availability of good hospitals (public or private), the chronic shortage of trained healthcare workers (HCWs) including doctors and nurses particularly at rural healthcare facilities, and inadequate pharmacy services, including lack of medications. With an estimated 63% of Sierra Leone's population residing in the rural areas of the country, only 33% of the healthcare professionals are currently working at rural healthcare postings (Pieterse & Saracini 2023; Statistics Sierra Leone, 2018). Many HCWs that are posted to rural PHUs either refuse to go, leave after a short stay at the rural post, or remain in rural areas but deliver sub-optimal services due to low motivation, poor remuneration, poorly maintained infrastructures, and chronic shortage of medical supplies (Elston *et al.*, 2020). In addition, there is a chronic shortage of vital medical supplies in government and private pharmacies. Where these are available, they are sold at cost recovery prices which many people cannot afford. Healthcare services are under-utilised or avoided for cheaper ineffective traditional alternatives like herbalists, particularly by poor adult men with lower educational attainment, many with significant health needs or challenges that require qualified/registered public healthcare professionals' input to address their health challenges (Sulukku *et al.*, 2023). There is a free healthcare initiative in operation, commenced on Independence Day (27<sup>th</sup> April 2010). However, this service is restricted to pregnant women, breastfeeding mothers, and under-five children (Edoka, 2016; Witter *et al.*, 2018). Adult men, including the sick retired elderly, are excluded from this well-intentioned initiative.



**Fig. 5:** Crude death rates at district level (Statistics Sierra Leone).



The restricted access to or the lack of availability of quality healthcare services results in unnecessary premature deaths. Looking at the 2015 Sierra Leone census, at district level, there were higher reported crude death rates (CDR) in men, in all of the then 14 administrative districts or regions of the country than in females (**Fig. 5**). Kailahun District in the Eastern Region, which is the farthest from Freetown, the country's capital city, though densely populated, has the worst underdeveloped healthcare service provision in the country. It is not surprising that Kailahun District recorded the highest numbers of crude death rates in the country for men, women, or combination of the two categories. Koinadugu District and Western Area Urban recorded the lowest CDRs. While Koinadugu District is a comparatively less populated district, international NGOs like Doctors Without Borders/Médecins Sans Frontières (MSF) and the International Organization for Migration (IOM) have been consistently providing robust free healthcare services in the district particularly during the time of the 2015 census. In addition, Koinadugu District with a population of 409,372 had 74 healthcare facilities compared to Kailahun District with a population of 526,379 with 77 healthcare facilities (MOH-Sierra Leone, 2019). The Western Area Urban is the most populated part of Sierra Leone, where Freetown, the country's capital, is located, including the best specialist hospitals, doctors, nurses, and pharmacies.

As more data continue to be collected and reported on Sierra Leone's key health indicators, the outcome statistics continue to show similar trends for men. For example, the Sierra Leone National Civil Registration Authority (NCRA, 2024) statistics for the period 1<sup>st</sup> January – 31<sup>st</sup> December 2024, documented 10,962 deaths, comprising 6,128 males (56%) and 4,834 females (44%). Of the total deaths, 3,223 deaths (29%) occurred among individuals aged 60+ years; infant mortality remained significantly high, with 2,355 deaths (21%) recorded among children aged 0–4 years. In these age categories, the male mortality figures were high. Statistics Sierra Leone is preparing for the 2025 decennial national census later this year. It will be curious to know how the country's population health indicator data has changed over the past 10 years as compared to those of the 2015 census.

Patwardhan *et al.* (2024) re-analysed the Global Burden of Disease data and calculated disability adjusted life years (DALYs) per 100,000 population for the twenty top causes of disease burden in various regions of the world. DALY is a measure of health loss due to both fatal and non-fatal disease burden and it enables comparison across diseases and injuries. For the sub-Saharan Africa region, they observed that in 13 out of the 20 conditions, higher DALY scores were observed among males than in females. Also, for females, DALYs were more associated with morbidity-driven causes while for males, they were more associated with mortality-driven causes. This showed that men were more likely to experience premature deaths while women survived longer, but they lived with ill health or with disabilities that affect their quality of life.

Men are known to have comparatively fewer engagement with healthcare services not only in situations where these services have to be paid for by out-of-pocket expenses like in Sierra Leone or other LMICs, but also where these services are generally free at the point of access for the population, as in the UK National Health Service (Baker, 2024; Mursa *et al.*, 2022) or in countries with affordable healthcare insurance cover like USA (Griffiths, 2024; Tiruneh *et al.*, 2024). The reduced engagement consequently develops into selected avoidance of particular facility/healthcare professionals or non-use of healthcare services by men. This significantly impacts on their health and contributes to the poor health outcomes.



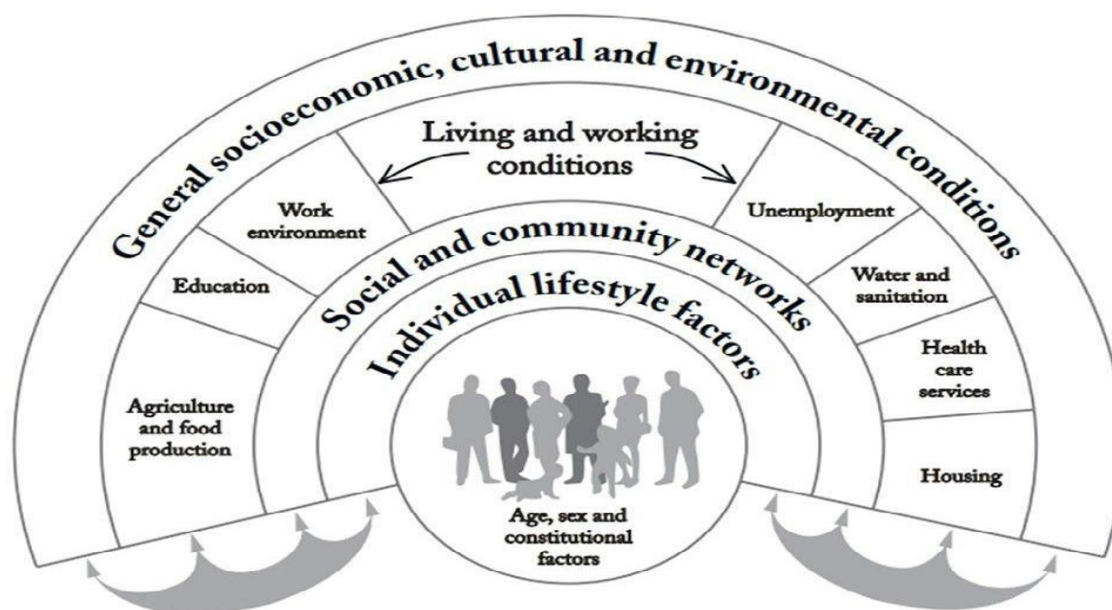


## DISCUSSION

The determinants of health are those factors that affect a person's or populations' health (WHO, 2024; US Office of Disease Prevention and Health Promotion, 2024). Many factors are known to affect the health of individuals and communities either singularly or collectively. In general, these determinants include biological factors such as genetic and physical characteristics; behavioural factors such as lifestyle and health beliefs; environmental factors such as built and physical environment; and socio-economic factors such as education, income, social norms and working conditions.

The various determinants of health were succinctly captured in the Dahlgren and Whitehead model, developed in 1991 (**Fig. 6**). A review of this model by the authors 30 years later found that it remains the most popular model and still useful, with modern applications. In this rainbow-like model, age, sex, and constitutional factors occupy a key position around which revolves a host of other determinant factors all of which can negatively or positively impact on the health and/or health outcomes of the individual or population. The model is a good tool that can be used to analyse or explain men's and women's health/health outcomes as the determinants of health in the rainbow can be health promoting (salutogenic), health protective (e.g., a vaccine) or health-damaging risks factors (Dahlgren & Whitehead, 2021).

Salutogenesis, which means "the creation of health," was introduced by the sociologist Aaron Antonovsky in 1979. Antonovsky was interested in exploring the origins of health rather than looking for the causes of disease, which is pathogenesis. He believed that investment in developing a relationship over time will create a contextualised understanding in which specific wellness needs of an individual or population are discovered and supported (Mittelmark *et al.*, 2017). Engaging men about their health when they are in a good state of health as well as when they seek help when ill will enhance the development of a mutually beneficial relationship between them and healthcare professionals that promotes healthy living choices at an early age, helps break down the barriers associated with hegemonic and toxic masculinity, facilitates the adoption of health enhancing behaviours and reduces poor health outcomes (Siedler *et al.*, 2024). Hegemonic masculinity relates to the social pressures exerted on individuals/groups due to their maleness while toxic masculinity describes the harmful behaviours arising from those social pressures.



**Fig. 6:** The Dahlgren and Whitehead model of the main determinants of health.

Utilising a model like the Dahlgren and Whitehead's provides an opportunity for holistic health needs assessment to enable tailored support that is most appropriate, beneficial, and acceptable to be targeted at the individual or community. Two key determinants of health are sex and gender. Though these two terms are sometimes mistakenly used interchangeably, they are different.

On the one hand, sex refers to the different biological and physiological characteristics of males and females, such as reproductive organs, chromosomes, or hormones (Office of National Statistics, 2019). In binary terms, a person is born either as a male or female though there are other sex categories including intersex. The sex of an individual is biologically determined at conception and can affect the individual's health in various ways. Certain health conditions are specific to the individual's sex. For example, conditions like maternal death, pregnancy complications, preeclampsia, post-partum haemorrhage, cervical cancer, endometriosis, and female infertility exclusively affect women while prostate cancer, testicular cancer, erectile dysfunction, hydrocele, and male infertility affect only men. How other health conditions including malaria, HIV/AIDS, tuberculosis (TB), breast cancer, diabetes, hypertension, heart disease, kidney failure, liver cirrhosis, pulmonary disease, stroke, or suicide, for example, are acquired/experienced by individuals is influenced by one's biological make up (being male or female).

Gender, on the other hand, is defined as the socially constructed characteristics of women and men, such as cultural norms, roles, and relationships of and between groups of women and men. Gender varies from society to society and can be changed. The concept of gender includes five important elements: it is relational, hierarchical, historical, contextual, and institutional. While most people are born either male or female, they are taught appropriate (and inappropriate) norms and behaviours, including how they should interact with other members of the same or opposite sex within households, communities, and workplaces. When individuals or groups do not meet or observe the established gender norms, they are often



ostracised, stigmatised, or discriminated against. This results in social exclusion which adversely affects the individual or groups' health (Office of National Statistics, 2019). To protect individual rights, prevent discrimination or unfair treatment and to promote equality/equity of access to services, governments have enacted gender equality laws, including creating protected characteristics.

### **The Impact of Socio-economic and Cultural Factors on Men's Health**

In sub-Saharan Africa, strong cultural beliefs, norms, attitudes, and behaviours have been found to be critical determinants of men's health as these profoundly influence men's behaviour, health literacy and health seeking patterns (Olanrewaju *et al.*, 2019). Behaviours such as tobacco smoking, experimenting, or using harmful addictive recreational drugs like cannabis or kush, excessive alcohol intake and unhealthy nutrition are known health hazards that negatively impact on men's health. In Sierra Leone, available data suggests that more men engage in these health harming activities than women. The morbidity rates due to communicable diseases (including respiratory tract infections, heart or circulatory conditions, lung cancer, liver cirrhosis or other liver conditions, and mental health problems) and associated mortality rates data with these conditions remain high in men (Ministry of Health - GoSL, 2020).

Men who adhere to toxic masculinity norms are known to take unnecessary risks, including avoiding healthcare services, ignoring engaging with medical services, refusing to follow treatment plans, engaging in unsafe sexual activities which predispose these men to HIV/AIDS and hepatitis infections, and exhibiting violent tendencies including men-on-women as well as men-on-men violence fuelled by alcohol, drugs and machismo tendencies which can be injurious or fatal (Wisner, 2024). There is evidence suggesting that aggressively treating male violence problems as public health concerns in addition to criminal justice considerations bears better results in saving lives (Nonomura *et al.*, 2024; Decker *et al.*, 2018) rather than solely addressing them as antisocial criminal matters punishable by law. In Sierra Leone, more men than women are engaged in occupations considered as having higher risks of injury or death. Occupations like manual farm work, building or road construction work, mineral or sand mining, commercial vehicle driving, and motorbike (Okada) riding predominantly involve young men. These occupations carry significantly high risks for injuries and deaths annually. Sierra Leone ranked 21<sup>st</sup> out of 185 countries globally in 2020 for road traffic accident-related deaths, with an age-adjusted death rate of 41.6 per 100,000 population (World Health Rankings, 2024).

Between January 2020 and December 2022, Kamara *et al.* (2024) reported a total of 4,839 road traffic accident (RTA) cases within the Western Area, resulting in 1,539 (32%) hospitalisations at Connaught Hospital. Of those hospitalised, 1,211 (79%) were young males. They further noted that the vehicles involved in the accidents were motorbikes (Okada), making up 747 of the cases (49%) while cars made up 586 (39%) of the cases. The wearing of protection head helmets on Okada rides is voluntary and often ignored especially by the passenger riders, resulting in severe head injuries and deaths when accidents occur (Sahr *et al.*, 2020). The statistics on men with mental health issues and those who commit suicide are disproportionately higher in men (Statistics Sierra Leone, 2018). With one adult psychiatric hospital in the country that is located in Freetown, the outlook for mental health support in the rural areas is inadequate and suicide prevention work is either non-existent or grossly underfunded. Mental health services remain highly centralised. There are presently no mental



health in-patient beds outside of the Sierra Leone Psychiatric Hospital (previously known as Kissi Mental Home) in Freetown. At the secondary care level, mental health treatment is delivered by mental health nurses who operate out-patient clinics at district hospitals, as well as a National Child and Adolescent Mental Health Service at the Ola During Children's Hospital that is also located in Freetown (Harris *et al.*, 2020).

### **The Impact of Health Literacy and Poverty on Men's Health**

WHO (2024) defines health literacy as representing the personal knowledge and competencies that accumulate through daily activities, social interactions and across generations. Personal knowledge and competencies are mediated by the organisational structures and availability of resources that enable people to access, understand, appraise, and use information and services in ways that promote and maintain good health and well-being for themselves and those around them. Health literacy refers to how people access, understand, appraise, and use health information to inform their health and healthcare (Liu *et al.*, 2020). It comprises both the individuals' skills in finding, understanding, and using relevant health information to make decisions about health and healthcare, and the health literacy environment, including how infrastructure, policy and practice impact engagement and service use (Amoah & Phillips, 2023). Health literacy provides the means to empower individuals and communities to increase control over their health and enhance health outcomes. An individual's health-related decisions and subsequent actions are closely related to their level of education or literacy and there are strong correlations between health literacy, health behaviours and subsequent health outcomes (Coughlin *et al.*, 2020; Sørensen *et al.*, 2024).

It is known that persons with low incomes often experience limited access to essential healthcare services, significantly impacting their overall health. Those with higher disposable incomes are able to source better healthcare services including engaging in health tourism. Bello *et al.* (2019) demonstrated that men with incomes above the poverty line are significantly more aware of prostate cancer screening opportunities, with awareness significantly increasing further for those with health insurance. This suggests that economic status directly influences health literacy and engagement with preventive health measures. Educational disparities exacerbate the problem, as lower educational attainment is associated with poorer health outcomes in both men and women (Balaj *et al.*, 2024; Lee & Sion, 2019). Addressing the interconnected issues of health poverty and health literacy is crucial for improving men's health in LMICs as fostering economic stability and enhancing health promotion/education activities could lead to more access to health resources, leading to better health outcomes for men.

Men's health issues should no longer be neglected as this will have profoundly negative consequences not only on the wellbeing and the life of the individual man, but also on community health outcomes and economic productivity for the family unit, locally (chiefdom/district/region), nationally and globally, especially now that there is a very high mobility of young men migrating from rural communities and travelling within and across national boundaries in search of better opportunities of education, training and work. These industries carry high occupational risk factors including predisposing men to engage in health damaging activities like smoking, experimenting with addictive/harmful recreational drugs, excessive alcohol consumption, unsafe sex, poor nutritional intake, and neglecting health warning signs.

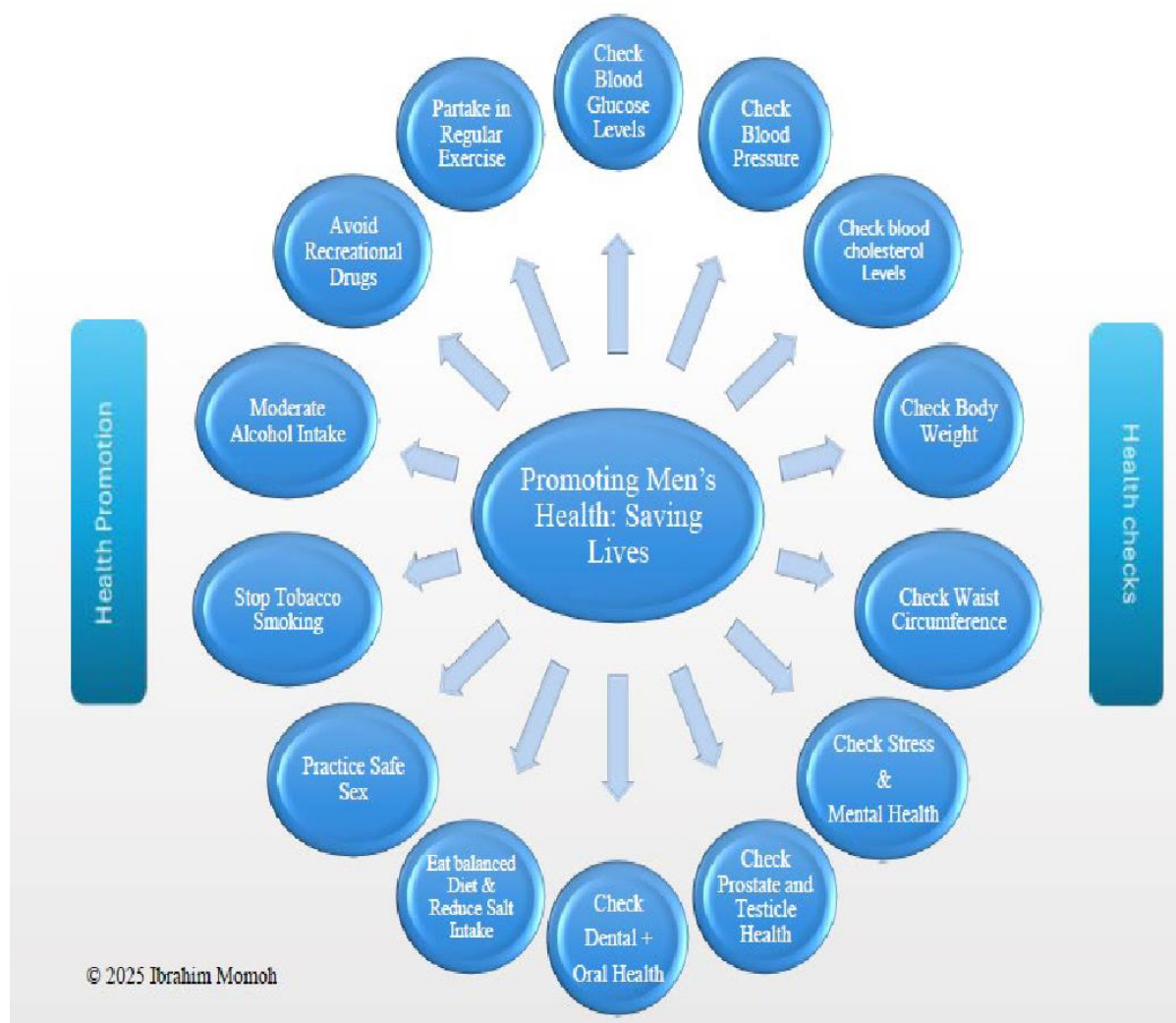


## CONCLUSION

Improving men's health and their ability to lead healthy and fulfilling lives is an ethical imperative which is in line with the United Nations principles of equality/equity and the Sustainable Development Goals, especially Goal #3 (Ensure Health and Well-being for All) and Goal #5 (Gender Equality). Achieving better men's health has many advantages. Baker and Shand (2017) report that improving men's health would not benefit just men, but also women and society at large. For example, by improving the sexual health for men, this would have immediate and obvious benefits for women through lowering the transmission of deadly sexually acquired diseases like HIV/AIDS, hepatitis, or gonorrhoea. Also, involving men in reproductive health and family planning programmes has been found to have a greater impact than when solely directed at women (Gottert *et al.*, 2025; Sowah *et al.*, 2024) and results in better family planning outcomes with reduced unwanted pregnancies. Lowering the male morbidity and mortality rates would reduce the burden on women and families especially those who depend on healthy men's incomes. The burden of caring for sick and disabled men is normally on women who take on the caring role, providing sustenance for these men in challenging environment. Improving men's mental health and achieving moderate or zero levels of male alcohol consumption would help to reduce male violence toward their partners, children, and other members of society. Drug and alcohol fuelled men-on-men violence and fights can have fatal consequences. A country with a healthier men population would benefit from high economic output due to larger active workforce, and lower male health treatments expenditure.

A specific men and boys' health strategy would be useful in addressing men/boys health issues. Such a strategy would serve as a roadmap that outlines the goals, priorities, and actions needed to improve the health of male members in the population. Also, it will define policy directions, provide allocated resources, and the coordination of the efforts across different departments to prevent ill health/disease, reduce health inequalities, and address men and boys' specific public health challenges effectively.





**Fig. 7:** Proposed men's health checks and health promotion plan to save lives.

A men's health improvement plan built around regular health checks (screening), and targeted health promotion, as outlined in **Fig. 7**, is proposed. Screening, which is the process of testing and identifying healthy people who may have an increased chance of having a disease or condition, enables the commencement of earlier treatment or corrective measures which improves survivorship and quality of life. Screening has a lot of benefits and a few challenges relating to identifying false negatives (a test result which wrongly indicates that a particular condition or attribute does not exist in a person when it does) and false positives (a test result which wrongly indicates that a particular condition or attribute is present in a person, when it does not). Both have implications with causing unnecessary stress, treatment delays, unnecessary treatments and resources implications. It must be noted though that no screening method/tool is 100% accurately sensitive.

Notwithstanding the above challenges, where population screening is implemented for conditions such as breast cancer, cervical cancer, prediabetes/diabetes, cholesterol, hypertension, colorectal cancer, prostate cancer, ophthalmic conditions (such as cataract, glaucoma or retinopathy), and auditory conditions such as impaired hearing loss, the screening



programmes can lead to early detection, commencement of early treatment or corrective action, improved health, prevent disability and save thousands of lives annually (Cancer Research UK, 2024; UK National Screening Committee, 2023). Most of these health checks proposed can be carried out by trained and competent, signed nurses at hospital nurse-led clinics and PHUs where nurses can engage men in positive behavioural change work. A good example of such a clinic is the diabetes nurse-led clinic at Bo Government Hospital established through a collaboration between The Organisation of Sierra Leonean Healthcare Professionals Abroad (TOSHPA) and the Ministry of Health, Sierra Leone (Momoh & Rogers *et al.*, 2024). The clinic has the potential to be further developed and expanded by integrating a men's health check and health promotion day into its present diabetes operations.

## SUGGESTIONS FOR CHANGE

Gender equity in healthcare is the process of being fair to women and men according to their individual needs. Universally, it is advocated for steps to be taken to remove barriers and disadvantages that prevent women and men from having their health needs addressed on an equal basis. All necessary steps need to be implemented to reduce the high morbidity and mortality rates among men with the aim of improving men's life expectancy and other health outcomes in Sierra Leone. The author would like to suggest that:

- Government and development partner agencies should collaboratively work and develop a national men/boys' health strategy which will identify areas for improvement, solutions, and hopefully agreed funding streams to improve men's health outcomes.
- Expand current health enhancing publicity on smoking cessation, moderation of alcohol consumption, harmful drugs avoidance, healthy nutrition, salt intake reduction and safe sexual/reproductive practices targeted at men as well as women.
- Highlight specific men/boys' health conditions/issues such as mental health, suicide prevention, prostate cancer, erectile dysfunction, lung/pulmonary disease for regular screening and intensive public health promotion campaigns, especially in areas where men congregate like schools, football stadiums, mosques, churches, or dance halls.
- Develop programmes that encourage adult men to engage with and appropriately utilise the available healthcare services in the country to manage various acute and chronic conditions that are contributing to such high mortality rates and low male life expectancy in Sierra Leone.
- Government and/or partner agencies should consider setting up men's nurse-led clinics or dedicated clinic days for men in hospitals, PHUs and within the community where screening together with health promotion work can be carried out. Non-communicable diseases like cardiovascular diseases, hypertension, and diabetes conditions are preventable, manageable, and treatable (MOH, 2020). Nurses, who are best placed with their skills in health education/promotion work and their knowledge of the local population, can easily reach and support a larger number of men in the community.



- Government should ensure that development partners promote and monitor equitable practice by paying attention to men/boys as well as women/girls health issues in programmes being implemented in the country.

## **LIMITATIONS OF USING SECONDARY DATA IN RESEARCH**

Using secondary data research methods to answer a new research question has its limitations (Pederson, 2020). Some of these limitations include:

- The biases of the original data collectors are difficult to account for.
- The way data variables are ascribed and measured in the original work may have changed over time with different meanings or values attached to the original indicators measured.
- The authenticity or ownership of the documents cannot be guaranteed or easily verified.
- The data may lack completeness or representativeness of the wider population.

## **IMPLICATIONS**

The author has attempted to discuss and present a plausible case for developing strategies for improving men and boys' health outcomes based on the comparatively poor statistics related to men and boys' health and the disproportionate number of male morbidity and mortality indicators reported by many sources. This work would serve as an initial finding to promote further research into men and boys' health and gender disparities for equitable healthcare services provision in sub-Saharan Africa and particularly in Sierra Leone.

## **Informed Consent Statement**

There are no human subjects in this article, and informed consent is not applicable.

## **Declaration of Interest**

The author declares no competing financial or personal relationships that would appear to influence the work reported in this article.

The views expressed in this article are those of the author only and do not in any way reflect those of the author's employer or anyone else.

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## REFERENCES

- Africa Centre for Disease Control, CDC. (2019). Ebola Virus Disease: Recent outbreaks. Accessed online on 19/03/2025 at <https://africacdc.org/disease/ebola-virus-disease/>.
- Amnesty International. (2021). Sierra Leone: “They are forgetting about us”: The Long-term mental health impact of war and Ebola in Sierra Leone. Accessed online on 19/03/2025 at <https://www.amnesty.org/en/documents/afr51/4095/2021/en/>.
- Amoah P.A. and David R. Phillips D.A. (2018). Health literacy and health: rethinking the strategies for universal health coverage in Ghana. *Public Health*, Vol 159, pp 40-49. <https://doi.org/10.1016/j.puhe.2018.03.002>.
- Baker P., (2024). Missing person? Men’s use of primary care services. *Trends in Urology and Men’s Health*. <https://onlinelibrary.wiley.com/doi/10.1002/tre.950>.
- Baker, P., & Shand, T. (2017). Men's health: time for a new approach to policy and practice? *Journal of global health*, 7(1), 010306. <https://doi.org/10.7189/jogh.07.010306>.
- Balaj, Mirza *et al.* (2024). Effects of education on adult mortality: A global systematic review and meta-analysis. *The Lancet Public Health*, Volume 9, Issue 3, e155 - e165. <https://www.thelancet.com/action/showPdf?pii=S2468-2667%2823%2900306-7>.
- Bello, J. O., Buhari, T., Mohammed, T. O., Olanipekun, H. B., Egbuniwe, A. M., Fasiku, O. K., & Wasiu, R. (2019). Determinants of prostate specific antigen screening test uptake in an urban community in North-Central Nigeria. *African health sciences*, 19(1), 1665–1670. <https://doi.org/10.4314/ahs.v19i1.42>.
- Cancer Research UK. (2022). What is cancer screening? Accessed online on 19/03/2025 at <https://www.cancerresearchuk.org/about-cancer/cancer-symptoms/spot-cancer-early/screening/what-is-cancer-screening>.
- Caviglia, M., Dell’Arima, M., Putoto, G., Buson, R., Pini, S., Youkee, D., Jambai, A., Vandy, M. J., Rosi, P., Hubloue, I., Della Corte, F., Ragazzoni, L., & Barone-Adesi, F. (2021). Improving Access to Healthcare in Sierra Leone: The Role of the Newly Developed National Emergency Medical Service. *International journal of environmental research and public health*, 18(18), 9546. <https://doi.org/10.3390/ijerph18189546>.
- Coughlin, S. S., Vernon, M., Hatzigeorgiou, C., and George, V. (2020). Health Literacy, Social Determinants of Health, and Disease Prevention and Control. *Journal of environment and health sciences*, 6(1), 3061. <https://pmc.ncbi.nlm.nih.gov/articles/PMC7889072/pdf/nihms-1668987.pdf>.
- Decker M.R., Wilcox H.C., Holliday C.N. and Webster D.W. (2018). An Integrated Public Health Approach to Interpersonal Violence and Suicide Prevention and Response. *Public Health Reports*. 2018;133(1\_suppl):65S-79S. <https://journals.sagepub.com/doi/epub/10.1177/0033354918800019>.
- Dahlgren, G., and Whitehead, M. (2021). The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows. *Public health*, 199, 20–24. <https://doi.org/10.1016/j.puhe.2021.08.009>.
- Edoka, I., Ensor, T., McPake, B. *et al.* (2016) Free health care for under-fives, expectant and recent mothers? Evaluating the impact of Sierra Leone’s free health care initiative. *Health Econ Rev* 6, 19. <https://doi.org/10.1186/s13561-016-0096-4>.
- Elston, J. W. T., Danis, K., Gray, N., West, K., Lokuge, K., Black, B., Stringer, B., Jimmisa, A. S., Biankoe, A., Sanko, M. O., Kazungu, D. S., Sang, S., Loof, A., Stephan, C., & Caleo, G. (2020). Maternal health after Ebola: unmet needs and barriers to healthcare in rural Sierra Leone. *Health policy and planning*, 35(1), 78–90. <https://doi.org/10.1093/heapol/czz102>.



- Griffiths D. M., (2024). Gender health equity: The case for including men's health. *Social Science & Medicine*, Volume 351, Supplement 1, <https://doi.org/10.1016/j.socscimed.2024.116863>.
- Gottert A, Pulerwitz J, Weiner R, et al. (2025). Systematic review of reviews on interventions to engage men and boys as clients, partners and agents of change for improved sexual and reproductive health and rights. *BMJ Open* 15: e083950. <https://bmjopen.bmj.com/content/bmjopen/15/1/e083950.full.pdf>.
- GOV.UK (2024). Press release: Secretary of State commits to first ever men's health strategy. Accessed online on 19/03/2025 at <https://www.gov.uk/government/news/secretary-of-state-commits-to-first-ever-mens-health-strategy#:~:text=The%20strategy%20will%20consider%20how,Plan%20to%20fix%20the%20NHS>.
- GOV.UK (2022). Policy paper Women's Health Strategy for England. Accessed online on 19/03/2025 at <https://www.gov.uk/government/publications/womens-health-strategy-for-england/womens-health-strategy-for-england>.
- Harris, D., Endale, T., Lind, U. H., Sevalie, S., Bah, A. J., Jalloh, A., & Baingana, F. (2020). Mental health in Sierra Leone. *British Journal of Psychiatry International*, 17(1), 14–16. <https://doi.org/10.1192/bji.2019.17>.
- Higgins J, Jerome JG, Boima F, Dally E, Krangar L, Boley EJ, et al. (2023) Community and facility-level barriers to achieving UHC in Kono District, Sierra Leone and Maryland County, Liberia. *PLOS Global Public Health* 3(6): e0002045. <https://doi.org/10.1371/journal.pgph.0002045>.
- Jalloh, M. F., Kaiser, R., Diop, M., Jambai, A., Redd, J. T., Bunnell, R. E., Castle, E., Alpren, C., Hersey, S., Ekström, A. M., & Nordenstedt, H. (2020). National reporting of deaths after enhanced Ebola surveillance in Sierra Leone. *PLoS Neglected Tropical Diseases*, 14(8), e0008624. <https://doi.org/10.1371/journal.pntd.0008624>.
- Kamara I.T., Jammeh A., Umaru S., et al. (2024). Epidemiological and clinical characteristics of road traffic accident cases admitted at the Connaught Teaching Hospital Freetown, 2020 -2022. *Journal of Interventional Epidemiology and Public Health*. Vol.7(4):5. <https://www.afenet-journal.net/content/series/7/4/5/full/>.
- Latlong.info (2025). Accessed online on 19/03/2025 at <https://latlong.info/sierra-leone>.
- Lee, J., and Seon, J. (2019). Educational Attainment and Health Behaviors Among Young Adult Men: Racial/Ethnic Disparities. *American Journal of Men's Health*, 13(6), 1557988319894488. <https://doi.org/10.1177/1557988319894488>.
- Liu C., Wang D., Liu C., Jiang J., Wang X., Chen H., Ju X., and Zhang X.(2020). What is the meaning of health literacy? A systematic review and qualitative synthesis: *Family Medicine and Community Health* 8:e000351. <https://fmch.bmj.com/content/fmch/8/2/e000351.full.pdf>.
- M'Cormack-Hale, F., Hale, A. and Laval, A. (2018), Old Wine in New Bottles? The State of Health Care in Sierra Leone Institute for Governance Reform for OSIWA. *Proceedings of the African Futures Conference*, 2: 50-87. <https://doi.org/10.1002/j.2573-508X.2018.tb00009.x>.
- Ministry of Finance, GoSL (2022). Government of Sierra Leone Fiscal Report January – December Financial Year 2022. Accessed online on 19/03/2025 at <https://mof.gov.sl/wp-content/uploads/2023/04/Final-FY2022-Budget-Outturn-Report-1.pdf>.
- Ministry of Health & Sanitation, GoSL (2021). Republic of Sierra Leone National health sector strategic plan 2021-2025. Accessed online on 19/03/2025 at





- <https://extranet.who.int/countryplanningcycles/planning-cycle-files/national-health-sector-strategic-plan-2021-2025>
- Ministry of Health and Sanitation, GoSL (2020). Republic of Sierra Leone Ministry of Health and Sanitation Non-Communicable Diseases (NCDs) Policy. MOHS Freetown. Accessed online on 19/03/2025 at <https://mohs.gov.sl/policy-documents/>.
- Mittelmark, M. B., Sagy, S., Eriksson, M., Bauer, G. F., Pelikan, J. M., Lindström, B., & Espnes, G. A. (Eds.). (2017). The Handbook of Salutogenesis. Springer. <https://doi.org/10.1007/978-3-319-04600-6>.
- Momoh I.S., Rogers M. K. K., Kassay M. L., and Faley E. M. J. (2024), Innovative Management of Non-Communicable Disease in a Low-Income Country: Supporting Nurses and Midwives to Set Up and Manage a Nurse-Led Diabetes Clinic at Bo Government Hospital in Sierra Leone. African Journal of Health, Nursing and Midwifery 7(2), 47 - 63. <https://doi.org/10.52589/AJHNM-ZVWNCWY>.
- Mursa, R., Patterson, C., & Halcomb, E. (2022). Men's help-seeking and engagement with general practice: An integrative review. Journal of Advanced Nursing, 78(7), 1938–1953. <https://doi.org/10.1111/jan.15240>.
- Nonomura, R., Zamfir, D., Scott, K., Jaffe, P., Bukhari, S., & Heslop, L. (2024). Engaging fathers who commit family violence: Issues and challenges for family courts. Family Court Review, 62(1), 97–111. <https://doi.org/10.1111/fcre>.
- Office of National Statistics (2019). What is the difference between sex and gender?: Exploring the difference between sex and gender, looking at concepts that are important to the Sustainable Development Goals. Accessed online on 19/03/2025 at [https://backup.ons.gov.uk/wp-content/uploads/sites/3/2019/02/What-is-the-difference-between-sex-and-gender\\_-1.pdf](https://backup.ons.gov.uk/wp-content/uploads/sites/3/2019/02/What-is-the-difference-between-sex-and-gender_-1.pdf)
- O'Neal (2024). Life expectancy at birth in Sierra Leone by gender. Statista online. Accessed online on 19/03/2025 at <https://www.statista.com/statistics/971209/life-expectancy-at-birth-in-sierra-leone-by-gender/>.
- Olanrewaju, F. O., Ajayi, L. A., Loromeke, E., Olanrewaju, A., Allo, T., & Nwannebuife, O. (2019). Masculinity and men's health-seeking behaviour in Nigerian academia. Cogent Social Sciences, 5(1). <https://doi.org/10.1080/23311886.2019.1682111>.
- Osborne, A., James, P.B. and Bangura, C. (2025). Determinants of poor access to health care among women of reproductive age in Sierra Leone: a cross-sectional study. BMC Health Serv Res 25, 211. <https://doi.org/10.1186/s12913-025-12363-y>.
- Patwardhan, V., Gil, G. F., Arrieta, A., Cagney, J., DeGraw, E., Herbert, M. E., Khalil, M., Mullany, E. C., O'Connell, E. M., Spencer, C. N., Stein, C., Valikhanova, A., Gakidou, E., & Flor, L. S. (2024). Differences across the lifespan between females and males in the top 20 causes of disease burden globally: A systematic analysis of the Global Burden of Disease Study 2021. The Lancet. Public health, 9(5), e282–e294. [https://doi.org/10.1016/S2468-2667\(24\)00053-7](https://doi.org/10.1016/S2468-2667(24)00053-7)
- Pieterse, P., and Saracini, F. (2023). Unsalaries health workers in Sierra Leone: a scoping review of the literature to establish their impact on healthcare delivery. International Journal of Equity Health 22, 255. <https://doi.org/10.1186/s12939-023-02066-3>.
- Pederson LL, Vingilis E, Wickens CM, Koval J, Mann RE (2020). Use of secondary data analyses in research: Pros and Cons. J Addict Med Ther Sci 6(1): 058-060. <https://dx.doi.org/10.17352/2455-3484.000039>.
- Sahr N.E, Lawrence S.B and James S (2020) The Factors Associated with the Occurrence of Road Traffic Accidents among Commercial Motorcycle Riders in Kenema City, Eastern Sierra Leone. J Public Health Dis Prev 2: 207. <https://article.scholarena.com/The->



Factors-Associated-with-the-Occurrence%20-of-Road-Traffic-Accidents-among-Commercial-Motorcycle-Riders-in-Kenema-City-Eastern-Sierra-Leone.pdf.

- Seidler, Z. E., Benakovic, R., Wilson, M. J., McGee, M. A., Fisher, K., Smith, J. A., Oliffe, J. L., and Sheldrake, M. (2024). Approaches to Engaging Men During Primary Healthcare Encounters: A scoping review. *American Journal of Men's Health*, 18(2), 15579883241241090. <https://doi.org/10.1177/15579883241241090>.
- Sierra Leone Ministry of Health and Sanitation (2020). Non-communicable diseases (NCDs) Strategic Plan 2020-2024. Accessed online on 19/03/2025 at [file:///C:/Users/momoh/Downloads/Sierra-Leone-NCD-strategic-plan-2020-2024-Feb2020%20\(2\).pdf](file:///C:/Users/momoh/Downloads/Sierra-Leone-NCD-strategic-plan-2020-2024-Feb2020%20(2).pdf).
- Sierra Leone National Civil Registration Authority, NCRA (2025). Provisional annual report on vital events for the year ending 31st December 2024. Accessed online on 19/03/2025 at <https://www.facebook.com/share/p/15QnspGL9L/>.
- Sørensen, Kristine, Verena Knoll, Neida Ramos, Millicent Boateng, Guda Alemayehu, Laura Schamberger, and Stefanie Harsch. (2024). "Health Literacy in Africa—A Scoping Review of Scientific Publications" *International Journal of Environmental Research and Public Health* 21, no. 11: 1456. <https://doi.org/10.3390/ijerph21111456>.
- South Africa National Department of Health (2021). The South African National Integrated Men's Health Strategy 2020-2025 (The Strategy). Accessed online on 19/03/2025 at <https://knowledgehub.health.gov.za/system/files/elibdownloads/2023-04/Men%2526%2523039%253Bs%2520Health%2520Strategy.pdf>.
- Sowah, L. R., Biney, A. A. E., Atiglo, D. Y., Badasu, D., Boateng, A. A., Sarfoh, K. O., & Ankomah, A. (2024). What emerging adults say about the appropriateness of sexual and reproductive health programmes: evidence from a suburb in Accra, Ghana. *Frontiers in Reproductive Health*, 6, 1459825. <https://doi.org/10.3389/frph.2024.1459825>.
- Suluk, R., Macavoray, A., Nelpenson Kallon, M., & A. Buntin-Graden, J. (2023). Perspective Chapter: Health Facilities and Services in Rural Sierra Leone – Implication for Longevity and Well Being of Her Citizenry. *IntechOpen*. doi: 10.5772/intechopen.111717. <http://dx.doi.org/10.5772/intechopen.111717>.
- Statistics Sierra Leone (2016). Census 2015. Accessed online on 19/03/2025 at <https://www.statistics.sl/index.php/census/census-2015.html>.
- Statistics Sierra Leone. (2018). Sierra Leone Integrated Household Survey (SLIHS). Accessed online on 19/03/2025 at [https://www.statistics.sl/images/StatisticsSL/Documents/SLIHS2018/SLIHS\\_2018\\_New/sierra\\_leone\\_integrated\\_household\\_survey2018\\_report.pdf](https://www.statistics.sl/images/StatisticsSL/Documents/SLIHS2018/SLIHS_2018_New/sierra_leone_integrated_household_survey2018_report.pdf).
- Statistics Sierra Leone (2021). Mid-Term Population and Housing Census. Accessed online on 19/03/2025 at <https://www.statistics.sl/index.php/census/mid-term-population-census.html>.
- Tiruneh, Y. M., Anwoju, O., Harrison, A. C., Garcia, M. T., & Elbers, S. K. (2024). Examining Health-Seeking Behavior among Diverse Ethnic Subgroups within Black Populations in the United States and Canada: A Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 21(3), 368. <https://doi.org/10.3390/ijerph21030368>.
- UK National Screening Committee (2023). Population screening explained. Accessed online on 19/03/2025 at <https://www.gov.uk/guidance/population-screening-explained>.
- US Office of Disease Prevention and Health Promotion. (2024). Social Determinants of Health. Healthy People 2030. U.S. Department of Health and Human Services. Accessed on



- online on 19/03/2025 at <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>
- Wisner W., (2024). How Toxic Masculinity Affects People and What Can Be Done About It. Accessed on online on 19/03/2025 at <https://www.health.com/toxic-masculinity-8673022>.
- Witter, S., Brikci, N., Harris, T., Williams, R., Keen, S., Mujica, A., Jones, A., Murray-Zmijewski, A., Bale, B., Leigh, B., & Renner, A. (2018). The free healthcare initiative in Sierra Leone: Evaluating a health system reform, 2010-2015. *The International journal of Health Planning and Management*, 33(2), 434–448. <https://doi.org/10.1002/hpm.2484>.
- WHO (2024). Determinants of Health. Accessed online on 19/03/2025 at <https://www.who.int/news-room/questions-and-answers/item/determinants-of-health>.
- WHO (2024). Health literacy. Accessed online on 19/03/2025 at <https://www.who.int/news-room/fact-sheets/detail/health-literacy>.
- World Health Organisation (2024) Leading causes of death Sierra Leone. Accessed online at <https://data.who.int/countries/694>.
- World Health Organisation (2024). Life expectancy at birth (years). Access on line at <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/65#:~:text=Definition:,%2C%20territory%2C%20or%20geographic%20area>.
- World Health Rankings (2024). Sierra Leone: Road traffic accidents. Accessed online on 19/03/2025 at <https://www.worldlifeexpectancy.com/sierra-leone-liver-disease>.
- World Health Organization (2018). Strategy on the health and well-being of men in the WHO European Region. WHO Regional Office for Europe, Denmark. Accessed online on 19/03/2025 at <https://www.mhfi.org/WHO-Europe2018.pdf>.
- World Population Review (2024). Sierra Leone population 2024. Accessed online on 19/03/2025 at <https://worldpopulationreview.com/countries/sierra-leone>.
- Wurie, H.R., Samai, M. and Witter, S. (2016). Retention of health workers in rural Sierra Leone: Findings from life histories. *Human Resources for Health*, 14, pp.1-15. <https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-016-0099-6>.