

Analysis of Non-Communicable Disease Mortality and Risk Factors, and Death from Injuries and Violence in the World: An Analysis

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Abstract: Here I have examined the trend of communicable and non-communicable disease mortality in the world especially in low income and middle income countries and in with women violence and about traffic injuries and Tobacco related disease and traffic injuries here all issues have mentions. As a result and I did found that, the numbers of non-communicable disease patients is day by day increases especially in lower and middle income countries. Methodology and data has used in different several of world level because research article is based on and related Public health in all the country. This article is exclusively based on secondary sources of data, which are collected from different government report, such as WHO working project, World Bank report, Human development report, World health static report (2020) and World Bank data so on. In the existing literature, several partial indicators communicable and non-communicable disease. And lastly I have given conclusion and recommendation for Disease control improvement.

Key Words: Communicable disease, Non-Communicable disease, mortality rate, WHO, public health, cancer, heart disease.

1. Introduction

Communicable Disease: A communicable disease is a disease that spreads from one person or animal to another. Pathogens such as viruses, bacteria, and fungi cause these diseases. Communicable diseases can transmit through contact with bodily fluids, insect bites, contaminated surfaces, water, and foods, or through the air. With malnutrition as a common contributor, the six biggest infectious killers are HIV/AIDS, malaria, TB, acute respiratory infections, diarrhoeal disease and vaccine-preventable diseases, claiming altogether more than 14 million people per year (Brundtland, 2002). Non-communicable Disease means non-communicable diseases (NCDs) are mostly chronic diseases such as cardiovascular diseases, cancers, and diabetes. "Non-communicable diseases" is the umbrella term for diseases that are not passed from person to person. They are responsible for almost 70% of deaths globally and have four major risk factors: tobacco, physical inactivity, alcohol and diet (World Health Organisation, 2020). According to the WHO Annual Report (WHO, 2002), it has been estimated that, in 2001, approximately 60% of the 56.5 million total reported deaths in the world and approximately 46% of the global burden of disease were attributable to chronic diseases and cardiovascular diseases (CVD) in particular (WHO, 2002). Now, at the dawn of the third millennium, non-communicable diseases are sweeping the entire globe. There is an increasing trend in developing countries, where the demographic and socio-economic transition imposes more constraints on dealing with the double burden of infectious and non-infectious diseases in a poor environment, characterized by ill-health systems. It is predicted that, by 2020, non-communicable diseases will cause seven out of every ten deaths in developing countries (Boutayeb 2005:1-9). Among non-communicable diseases, special attention is devoted to cardiovascular disease, diabetes, cancer and chronic pulmonary disease. The burden of these conditions affects countries worldwide but with a growing trend in developing countries. Preventative strategies must take into account the growing trend of risk factors correlated to these diseases. In parallel, despite the success of vaccination programmes for polio and some childhood diseases, other diseases like AIDS, tuberculosis, malaria and dengue are still out of control in many regions of the globe. This paper is a brief review of recent literature dealing with communicable and non-communicable diseases in developing countries. It gives a global view of the main diseases and their impact on populations living in low- and middle-income nations.

2. Analysis of Result

Non-communicable Disease Mortality: Compared with the advances against communicable diseases there have been inadequate progress in preventing and controlling death from non-communicable disease (NCDs). However, countries need comprehensive strategies to reduce these causes of death more effectively in order to achieve global targets by 2030. An estimated 41 million people worldwide died of NCDs in 2016, equivalent to 71% of all deaths. Four NCDs caused most of those deaths cardiovascular diseases (17.9 million deaths), cancer (9.0 million deaths), chronic respiratory diseases (3.8 million deaths), and diabetes (1.6 million deaths) (1). The probability of dying from any one of the four main NCDs between the ages of 30 and 70 decreased by 18% globally between 200 and 2016. The most rapid decline in the age standardized premature mortality rate—defined as mortality rate between ages 30 and 70—is seen for chronic respiratory diseases (40% lower), followed by cardiovascular diseases and cancer (both 19% lower). Diabetes however is showing 5% increase in premature mortality. In high income countries, cancer has become the leading cause of premature death. In other country income groups, particularly low- and lower-middle-income countries, cardiovascular diseases continue to be the main NCD cause that claims the largest number of lives among people in the age group, yet the progress of mortality reduction is slowest among all country-income groups.

Despite the considerable progress made in the first decade of the 21st century, the momentum of change has dwindled since 2010, with annual reductions in the age-standardized premature mortality rates slowing for the main NCDs. Disaggregating the data by World Bank country income groups (Figure 3.1), in high-income countries the premature mortality rate due to diabetes and chronic respiratory diseases decreased from 2000 to 2010 but then increased in 2010–2016. In lower-middle-income countries, the premature mortality rate due to diabetes increased across both periods. In contrast to the overall decline in age-standardized mortality rates, the demographic transition (towards older populations) and the rapid epidemiological transition from communicable diseases to NCDs appear to have not only slowed the decline in the crude premature mortality rate from NCDs since 2000, but also contributed to an observed increase since 2010, particularly in lower- and upper-middle-income countries.

NCD risk factors

The underlying causes of the main NCD are complex. They include genetic predispositions as well as modifiable risk behaviours (such as tobacco use harmful of alcohol, physical inactivity and unhealthy diets) and environmental risks (such as air pollution), the prevalence of which varies geographically, by income group and by sex.

Modifiable risk Factors

The rising mortality rates from diabetes are associated with among other factors- the increasing prevalence of obesity, a major risk factor for diabetes. Since 2000, the age standardized prevalence of obesity among adults (18 years and older) globally has increased 1.5 times and the crude prevalence in children (5-19 years) has more than double (from 2.9% to 6.8%) in 2016). In addition to obesity, overweight among children has shown a concerning upward trend. Worldwide an estimated 5.6-38.3 million children under 5 years of age- were overweight in 2019, compared with approximately 30.3 million in 2000. In the WHO African region the proportion of children under 5 who were overweight decreased from 4.6% in 2000 to 3.1 in 2019. Although their number increased from 5.1 million to 5.3 million. The prevalence of children under 5 years of age who are overweight has increased across almost all country income groups since 2000, and it was highest in the upper-middle income group (8.8%) in 2019.

Although not listed as official SDG indicators, the modifiable risk factors of unhealthy diets (e.g. insufficient consumption of fruits and vegetables, high salt intake and inadequate fat intake) and insufficient physical activity are also monitored as part of the NCD agenda for which global targets were adopted by the 2013 world health assembly. In 2016, the global age standardized prevalence of physical inactivity for adult aged 18+ years was 27.5%. Prevalence of overweight in children under 5 years of age by country income group, 200 and 2019 women had higher levels of insufficient physical activity (31.7%) than men (23.4%). Over four out of five school- going adolescents aged 11-17 years (81.0%) did not meet the WHO recommendations of doing at least one hour of physical activity daily in 2016 and as with adults, levels were higher among girls (84.7%) as compared to boys (77.6%). Raised blood pressure (hypertension) is considered a major risk factor for the development of several NCDs, including heart and brain diseases.

Global prevalence of hypertension decreased by 11% from 2000 to 2015. Disaggregation by World Bank country income groups shows that the prevalence of hypertension was highest in low-income countries (28.4) and lowest in high-income countries (17.7%) in 2015.

Tobacco use, other major risk factors, has decreased steadily among both adult men and women globally and across all income groups, a trend that projected to continue. A little under one quarter (23.6%) of adults (15 years and older) globally used tobacco in some form in 2018. Down from one third (33.3%) in 2000. The average prevalence of tobacco use among men globally declined from 50.0% in 2000 to 38.6% in 2018. However, that rate is expected to remain above 35% until at least 2025 unless tobacco control policies are tightened immediately. Among women globally, tobacco use declined from 16.7% in 2000 to 8.5% in 2018. The total number of adult tobacco users remains very high, however approximately 1.3 billion in 2018. Government can protect citizens from tobacco related harms by strengthening implementation of evidence based measure set out in the WHO framework convention on tobacco control (WHO FCTC) and relatedly, its protocol to eliminate illicit trade in tobacco products. In the 181 parties to the WHO FCTC, covering more than 90% of the world's population. The status of implementation has consistently improved since the convention entry into force in 2005. However, more efforts are needed to swiftly and effectively reduce prevalence and deaths by 2030. Harmful use of alcohol resulted in more than 3 million deaths worldwide in 2016 (5.3% of all deaths) Men made up more than three quarters of alcohol related deaths (Global status report on alcohol and health, 2018). Worldwide alcohol consumption, measured in liters of pure alcohol per person of 15 years or orders, has been relatively stable since 2010 and was estimated at 6.2 liters in 2018. However, current trends and projections point to an anticipated increase in global per capita by 2025, largely driven by increases in the Americas, south- East Asia and the Western Pacific regions. The WHO European Region continues to have the highest per capita consumption in the world (9.7 liters per capita in 2018), even though consumption has decreased by more than 10% since 2010. Across all regions, women are less likely than men to drink alcohol and those who do drink alcohol tend to drink less. Effective control measure can reduce alcohol consumption. Those include increasing taxes on alcoholic beverages, bans or comprehensive restrictions on alcohol advertising, restricting the physical availability of alcohol, enacting and enforcing drink driving laws, and providing brief psychosocial interventions. Substantial reduction in NCD mortality require a strengthened health system in countries to deliver equitable and high- quality management of NCDs beginning with hypertension control, and policies that drastically reduce tobacco and alcohol use, prevent and control hypertension and promote and facilitate healthier diets and physical activity.

Environmental risk factors

Air pollution is a major environmental risk to health. The combined effects of ambient and household air pollution caused about 7 million deaths in 2016, largely as a result of stroke, heart disease, chronic obstructive pulmonary disease, lung cancer and acute respiratory infections. In 2016, nine out of ten people breathed air that did not meet the WHO air quality guidelines and more than

half of the world's population was exposed to air pollution levels at least 2.5 times above the safety standard set by WHO. People in low- and middle-income countries are disproportionately at risk and accounted for more than 90% of deaths attributable to air pollution in 2016. In addition to ambient or outdoor air pollution, household air pollution threatens the health of the estimated 2.8 billion people who relied primarily on polluting cooking systems. Although the proportion of the global population with access to clean cooking fuels and technologies has increased steadily since 2000 and reached 63% in 2018, the actual number of people without clean cooking has remained relatively constant over the past three decades. The regional disparities are stark: Only 18% of the population in the WHO African Region mainly uses clean fuels and technologies for cooking, compared with more than 90% in the WHO European Region and the Region of the Americas. Policies and investments promoting cleaner industries, power generation, transport and energy-efficient homes would reduce key sources of outdoor air pollution as well as mitigate the impact of climate change. Wider and more equitable availability of affordable, reliable and convenient clean cooking fuels and technologies would help reduce both household and outdoor air pollution.

Homicides, violence against women, suicides, road traffic injuries and unintentional poisoning

Homicides: An estimated 478000 people were killed in homicides globally in 2017, four fifths of them boys men. Threat of homicide deaths was highest in the WHO Region of the Americas, at 19.6 per 100000 population—over three times the global average of 6.3 per 100000 population.

Violence against women: Violence against women (VAW) is common worldwide and is associated with numerous, serious health problems for women and their children. The collection, analysis and reporting of data on intimate partner violence and other forms of VAW are important for developing effective and sustainable interventions to reduce such violence.

Suicide: There was almost 800000 suicide death globally in 2016, equivalent to an annual suicide mortality rate of 10.6 per 100000 populations. Suicide mortality rates decreased by 16% in women globally between 2000 and 2016. Men were nearly twice as likely to die of suicide a woman (13.5 and 7.7 deaths per 100000 populations, respectively in 2016). Across country income groups suicide mortality rates were highest among men in high income countries (21.0 per 100000 populations). Despite some progress made, the reduction of the global suicide rate at the current pace (8% reduction from 2010-2016) would not be sufficient to reach global targets by 2030. Preventing homicides, suicide and non-fatal violence requires comprehensive multispectral approaches that cover not only health and mental services but also go beyond the health sector and deal with the underlying causes, such as gender and socioeconomic inequalities, social norms that allow violence, access to highly hazardous pesticides, and irresponsible reporting by the media.

Road Traffic Injuries: The overall mortality rate due to road traffic injuries has stayed fairly constant between 2000 and 2016, at around 18 deaths per 100000 populations in 2016. Despite the increasing numbers of motor vehicles in use. The mortality rate was more than three times higher in low income countries (27.5 deaths per 100000 populations) than in high income countries (8.3 deaths per 100000 populations). Globally, road traffic crashes killed 1.35 million people worldwide in 2016- nearly 3700 deaths per day and injured 50 million more people. More than half of global road traffic deaths are among pedestrians, cyclists and motorcyclists who still tend to be neglected in road traffic system design and safety strategies in many countries.

Unintentional poisoning

More than 106 000 people worldwide died due to unintentional poisoning in 2016. Across the WHO regions, the mortality rate was highest in the WHO African Region (2.7 per 100 000 population) and lowest in the Region of the Americas (0.6 per 100 000 population). Low- income countries had the greatest mortality burden (2.8 per 100 000 population), with death rates almost six times those of high-income countries (0.5 per 100 000 population). Countries need to put in place the proven measures that exist to improve road safety and reduce unintentional poisoning.

3. Conclusion

Here is an urgent need to develop efficient preventative strategies to halt the growing trend of CDs and NCDs through the control of risk factors like smoking, alcohol, obesity, diet and inactivity, sexual contacts and environmental factors in general. Considering the level of poverty and the cost of prevention and management of chronic diseases, the most affected countries are unable to cope with the burden of disease. For health strategies to be successful, international solidarity and public-private partnerships are needed to tackle the problems of shortage and lack of treatments, resistance, and the need for new drugs, vaccines and diagnostic procedures. After analysis all the disease communicable and non-communicable is day by day rising and number of patient is highly increasing in the world. Male and female both are suffer from the disease like hyper tension, heart attack, cancer, diabetes, and etc. an estimated 41 million people worldwide died of NCD in 2016, in 2016, equivalent to 71% of all deaths. Four NCDs caused, most of those deaths cardiovascular disease (17.9 million deaths), cancer (9.0 million deaths), chronic respiratory diseases (3.8 million deaths), and diabetes (1.6 million deaths) (1). The probability of dying from any one of the four main NCDs between the ages of 30 and 70 decreased by 18% globally between 2000 and 2016. The most rapid decline in age-standardized 'premature' mortality rate defined as mortality rate between ages 30 and 70— is seen for chronic respiratory diseases (40% lower), followed by cardiovascular diseases and cancer (both 19% lower). Diabetes, however is showing a 5% increase in premature mortality. In high-income countries, cancer has become the leading cause of premature death. Finally maximum death is found in poor income countries. Included all middle and lowest income countries.

4. Recommendations

I am recommending some suggestions for all the developed, underdeveloped and lower middle income countries.

1. Reduce the major modifiable risk factors such as tobacco use, harmful use of alcohol, unhealthy diets and physical inactivity.
2. Awareness programmes should be started related to communicable and non-communicable disease.

3. A special focus on human resources such as health infrastructure system
4. At least 4% share of GDP expenditure should be expensed on health by every country.
5. A special emphasis on social capital specially on health education
6. Developed countries should take step towards the granting the aid to low and middle income countries for upgrading the level of health infrastructure.

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