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**SOCIOECONOMIC IMPACTS OF
NON-COMMUNICABLE DISEASES AND THE ROLE OF
HEALTH SECTOR IN SRI LANKA**

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ABSTRACT

The study of socioeconomic impact of Non-Communicable Diseases and Role of Health Sector in Sri Lanka is based on secondary data. Non-Communicable Diseases are non-transmissible and non-infectious that has recorded high in recently. Cardiovascular Diseases (CVDs) (heart attacks and strokes), Cancers, Chronic Respiratory Diseases (chronic obstructive pulmonary disease and asthma) and Diabetes are the main types of Non-Communicable Diseases. The use of tobacco, alcohol consumption, unhealthy diet and physical inactivity, weight, blood pressure, blood glucose and cholesterol levels are the main reasons for Non-Communicable Diseases. In the Sri Lankan context around 70 percent of the disease burden in Sri Lanka is due to Non-Communicable diseases which is a decline compare to the year 2014. The study emphasized on the actions taken from the government and other authorized parties to prevent Non-Communicable Diseases and the study could identify that the government has established many procedures in controlling the burden of Non-Communicable Diseases.

KEYWORDS: Health Sector, Non-Communicable Diseases, Socioeconomic Impacts

INTRODUCTION

Definitions of Non-Communicable Diseases

Chronic non-communicable diseases (CNCD) can be identified as diseases that are non-transmissible and non-infectious. Non-communicable diseases have been proven conclusively to be the main causes of adult morbidity and mortality worldwide (Oli, Vaidya, & Thapa, 2013). The World Health Organization emphasized that Non-Communicable Diseases (NCD) are diseases of long duration and generally low progression (World Health Organization, 2018).

TYPES OF NON-COMMUNICABLE DISEASES

The four main types of non-communicable diseases are cardiovascular diseases (CVDs) (heart attacks and strokes), Cancers, Chronic respiratory diseases (chronic obstructive pulmonary disease and asthma) and Diabetes (Allen & Feigl, 2017). Cardiovascular disease (CVD) refers to a group of diseases involving the heart, blood vessels, or the squeal of poor blood supply due to a diseased vascular supply. Cancer refers to the rapid growth and division of abnormal cells in a part of the body. These cells outlive normal cells and have the ability to metastasize, or invade parts of the body and spread to other organs. Chronic respiratory diseases refer to chronic diseases of the airways and other structures of the lung. Some of the most common are asthma, chronic obstructive pulmonary disease (COPD), respiratory allergies, occupational lung diseases and pulmonary hypertension. Diabetes is a metabolic disorder in which the body is unable to appropriately regulate the level of sugar, specifically glucose, in the blood. Diabetes causes poor regulation of glucose in the blood, either by poor sensitivity to the protein insulin, or due to inadequate production of insulin by the pancreas (The Global Economic Burden of Non Communicable Diseases, 2011).

REASONS FOR NON-COMMUNICABLE DISEASES

Also (World Health Organization, 2018) stated non-communicable diseases are known as chronic diseases which tend to be of long duration and are the results of a combination of genetic,

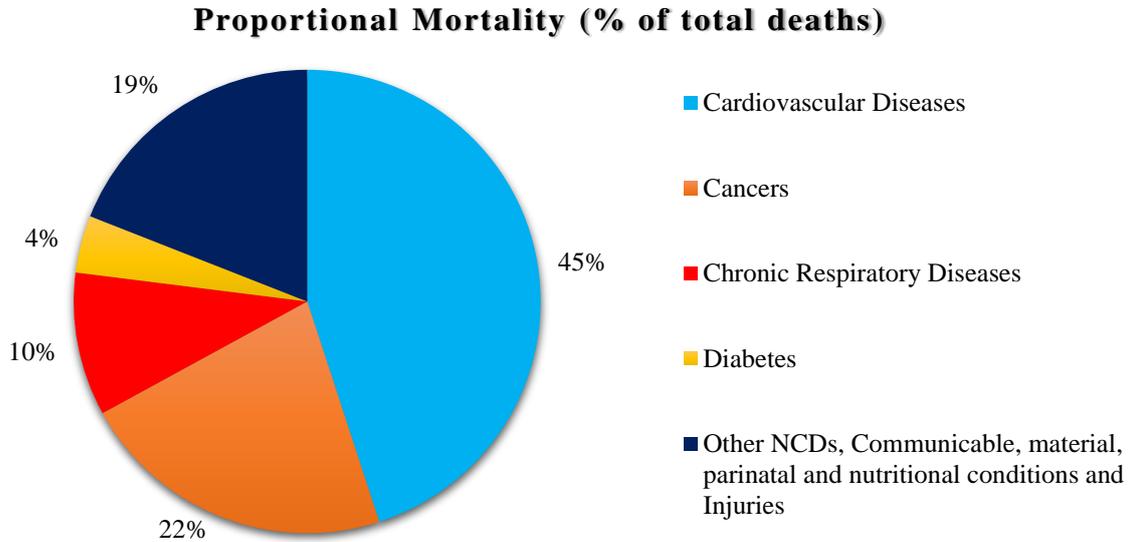
physiological, environmental and behavioural factors. Chronic non-communicable diseases which are attributable to modifiable risk factors including overweight, smoking, physical inactivity, high-fat energy-dense diets and alcohol use, hold serious consequences for national economic, socioeconomic and developmental growth (Solomons, Kruger, & Puoane, 2017). On the other hand (Ebrahamin, De Villiers, & Ahmed, 2014) have stated that possible reasons for this may be socio-cultural, environmental (space), language barriers, modes of health message dissemination or lack of knowledge. According to Ministry of Health (2015), WHO has been identified the “STEP-wise approach to NCD Surveillance” (STEPS) as the most appropriate and systematic method for identifying the prevalence of NCD risk factors. With reference to the results of the population based survey with over 5000 adults aged 18-69 years conducted by the Ministry of Health (MoH), the key risk factors for NCDs are identified as tobacco use, alcohol consumption, diet and physical activity, weight, blood pressure, blood glucose and cholesterol levels (Sri Lanka STEPS Survey 2015: Tobacco Fact Sheet, 2015).

TRENDS IN NON-COMMUNICABLE DISEASES

Non-communicable diseases are one of the leading causes of deaths in the world (Simpson & Camorlingaa, 2017). Nearly 38 million people die of non-communicable diseases (NCD) in the world each year. Over 14 million die prematurely (age 30 -70 years) from NCDs, of whom two thirds live in lower and middle income countries (LMICs) (Ministry of Health, 2015). Solomons, Kruger, & Puoane (2017) have stated that chronic non-communicable diseases (CNCD) have become the greatest contributor to the mortality rate worldwide. Despite attempts by Governments and various non-governmental organizations to prevent and control the epidemic with various intervention strategies, the number of people suffering from CNCD is increasing at an alarming rate in world-wide.

REASONS IN MACRO LEVEL

Figure 1: Proportional mortality due to NCDs and other causes in World



Source: World Health Statistics (2017)

The impact of NCDs over the global economic burden analyzed in terms of data gathered by the World Health Statistics 2017: Monitoring Health for the Sustainable Development Goals (2017) is as an estimated 38 million to 40 million deaths occurred due to NCDs, accounting for 70% of the overall total of 56 million deaths in 2015. The majority of such deaths were caused by the four main NCDs, as 17.7 million deaths which is accounting 45 percent of all NCD deaths due to cardiovascular disease, 8.8 million deaths which is accounting 22 percent of all NCD deaths due to cancer, 3.9 million deaths which is accounting 10 percent of all NCD deaths due to chronic respiratory disease and 1.6 million deaths which is accounting 4 percent of all NCD deaths due to diabetes. On the same time the risk of dying from any one of the four main NCDs between ages 30 and 70 decreased from 23% in 2000 to 19% in 2015. The World Health Statistics (2017) emphasized that age standardized cardiovascular mortality rates have declined rapidly in recent years while mortality rates from the other main NCDs have fallen at a slower pace with reference to high income countries (HIC). Although age standardized cardiovascular mortality rates and chronic respiratory mortality rates have improved substantially in low- and middle-income countries (LMIC).

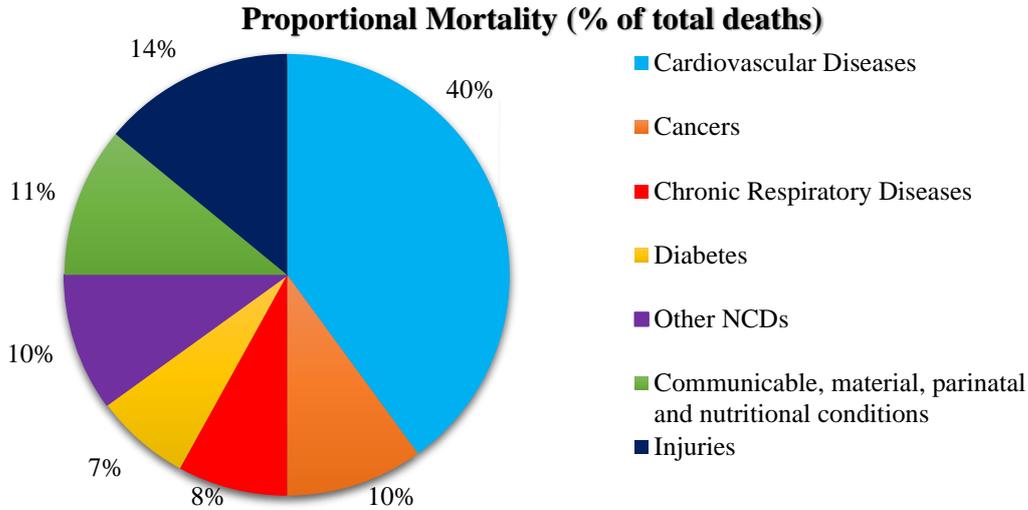
PREVALENCE OF NON-COMMUNICABLE DISEASE IN SRI LANKA

Demographic changes and epidemiological transitions have influenced the disease burden and health challenges for Sri Lanka. As stated in WHO Sri Lanka Annual Report 2016: A journey of commitment, passion and dedication (2017) an ageing population, urbanization and

lifestyle changes have resulted in a rising trend of NCDs. Currently 12.37 percent of Sri Lanka’s population is older than 65 years (Registrar General's Department, 2017). As this age category or the ageing population is more likely to be affected by illnesses the implication for the burden of diseases is high at higher percentage of ageing population in a country. These trends have particularly important inference for developing countries as they rely on rapid economic transformation to reduce poverty and improve population welfare as well. As many countries in the WHO South-East Asia Region, Sri Lanka is witnessing a shift in the disease burden from communicable diseases to non-communicable diseases (NCDs). According to (Sri Lanka Demographic and Health Survey 2016, 2017) around 70 percent of the disease burden in Sri Lanka is due to non-communicable diseases which is a decline compare to the year 2014 as according to the (National Multisectoral Action Plan For The Prevention And Control Of Noncommunicable Diseases 2016 - 2020, 2016) stated that NCDs are estimated to account for 75 percent of total deaths (nearly 103,500 deaths among total deaths of 138,000). The NCD epidemic poses a serious economic issue, as a significant proportion of the annual health budget is spent on NCD treatment. NCD prevention and control measures are a key priority for the government (WHO Sri Lanka Annual Report 2016: A journey of commitment, passion and dedication, 2017).

More specifically Cardiovascular diseases accounting for 40 percent of deaths, Cancers accounting for 10 percent deaths, Chronic respiratory diseases accounting for 8 percent of deaths and Diabetes accounting for 7 percent of deaths in Sri Lanka (National Multisectoral Action

Plan For The Prevention And Control Of Noncommunicable Diseases 2016 - 2020, 2016).
Figure 2: Proportional mortality due to NCDs and other causes in Sri Lanka



Source: World Health Organization (2014)

However the probability of dying from any of cardiovascular disease, cancer, diabetes, chronic respiratory disease between age 30 and exact age 70 in year 2015 is recorded as 17.7 percent (World Health Statistics 2017: Monitoring Health for the Sustainable Developing Goals, 2017).

SOCIOECONOMIC IMPACTS OF NON-COMMUNICABLE DISEASES

The global burden of non-communicable diseases is expected to increase as a result of two related demographic phenomena as rise in global population and growth of older generation (Bloom, 2011), (Bloom, et al.). Population ageing is not an only accelerator of the NCDs burden that rapidly growing in the developing countries but also there are many contributors to NCDs as negative effects of globalization as unfair trade, irresponsible marketing, rapid and unplanned urbanization and increasingly sedentary lives (Non-Communicable Disease Report: Chapter 2, 2017).

The report emphasized that there is strong evidence on the link between poverty and lower life expectancy. In addition to the link between poverty and NCD risk (Noncommunicable diseases: Fact Sheet, 2017), the economic consequences of NCDs are also of critical importance. Also there is an association between level of education and prevalent level of NCDs.

For the developing countries unhealthy behaviours, poor physical status, and the high cost of NCDs related health care lead to loss of household income at the household level. Especially the people in low and middle income countries often trapped in cycle of NCDs and poverty.

However in Sri Lankan context some of the cost of health care covered by the government and on the same time NCDs make social inequity as most payments for health care in low and middle income countries are private and out of pocket (Non-

Communicable Disease Report: Chapter 2, 2017). In the context of households the expenditure for the treatments of NCDs can quickly drain household resources while driving families into destitution. The excessive expenditures of NCDs that consists of lengthy and expensive treatments for NCDs can force millions of people into poverty and if the victim be the breadwinner or the main income owner of the household, the drawback will take place rapidly (Non-Communicable Disease Report: Chapter 2, 2017), (Noncommunicable diseases: Fact Sheet, 2017). The report emphasized that NDCs can force a drastic cut in spending on food and education, the liquidation of family assets and a loss of care and investment in children.

Non-Communicable Disease Report: Chapter 2 (2017) stated that the lowest income households have the highest levels of NCD risk factors with negative consequences on household income in some countries. In Sri Lanka, NCDs cause more than three quarters of all deaths and nearly 1 in 5 people die prematurely from NCDs. World Health Organization (2018) concluded that the widespread of NCDs currently become a severe economic burden as well as public health concern in Sri Lanka with reference to a mission conducted by the United Nations Interagency Taskforce on NCDs. Also they concluded that tobacco use, unhealthy diet, harmful use of alcohol and physical inactivity are the major driving forces of NCDs in Sri Lanka. Noncommunicable diseases: Fact Sheet, (2017) emphasized that Tobacco accounts for 7.2 million deaths every year (including from the effects of exposure to second hand smoke), and more than half of the 3.3 million annual deaths attributable to alcohol use are from NCDs, including Cancer, also another 4.1 million annual deaths have been attributed to excess salt/ sodium intake, and 1.6

million deaths annually have been attributed to insufficient physical activity as well.

The data regarding tobacco usage in Sri Lanka emphasized that average monthly expenditure on manufactured cigarettes was Rs. 2695.00 per person (Sri Lanka STEPS Survey 2015: Tobacco Fact Sheet, 2015). Also there is 45.7 percent of men, 5.3 percent of women, and overall 25.8 percent who are current users of tobacco in any form. More than one third of adult males in the country are tobacco users in Sri Lanka. One out of three people have raised blood pressure, and a third of women are overweight. Consumption of salt is two to three times higher than recommended (World Health Organization, 2018). As well as Sri Lanka STEPS Survey 2015: Tobacco Fact Sheet, (2015) stated that there is 29.4 percent of men, 0.1 percent of women, and overall 15.0 percent who are current smokers of tobacco and on the other hand 26.0 percent of men, 5.3 percent of women, and overall 15.8 percent who are current users of smokeless tobacco.

Estimated annual mortality from tobacco-related illness is about 20,000 deaths that is approximately 57 people die per day due to tobacco use. Cigarette is the only product, which kills one out of two consumers. Among them NCDs have become the leading cause of morbidity and mortality in Sri Lanka and tobacco use is a recognized causal factor in the genesis of NCDs (Brief Profile in Tobacco Control in Sri Lanka, 2009). Sri Lanka spend approximately Rs. 208 million on cigarettes per day (as per annual report of CTC in 2011 the income was Rs. 76,150,556,000/-) (Facts on tobacco, 2018). Non-Communicable Disease Report: Chapter 2 (2017) has stated with reference to a survey among the urban poor in Sri Lanka that 30 percent of families used alcohol and spent more than 30 percent of their income on it in Sri Lanka.

However, these consequences collectively impact on the economy of the country as a whole. The burden of NCDs can impact the economy in different ways as poor health allied with early retirement (Dwyer & Mitchell, 1999), negative expectations regarding employment (MsGarry, 2004), and reduced productivity (Lopez-Casasnovas, Rivera, & Currais, 2005). The World Economic Forum estimates the economic burden of life lost due to the four major NCDs was \$22.8 trillion in 2010 and is expected to increase to \$43.3 trillion in 2030 [2]. NCDs undermine productivity and result in the reduction of capital and economic growth (Simpson & Camorlingaa, 2017). NCDs have a large impact, undercutting productivity and boosting healthcare outlays. Moreover, the number of people affected by NCDs is expected to rise substantially in the coming decades while reflecting an ageing and increasing global population. (The Global Economic Burden of Non Communicable Diseases, 2011).

ROLE OF HEALTH SECTOR

In one of the Sustainable Development Goals (SDG) of World Health Organization stated

that their targets are on reducing premature mortality from Non Communicable Diseases (NCDs) which is specifically as “by 2030, reduce by one third premature mortality from Non Communicable Diseases through prevention and treatment and promote mental health and well-being” (World Health Statistics 2017: Monitoring Health for the Sustainable Developing Goals, 2017) and also they emphasize in order to obtain these goals a country should engage in multifaceted actions. SDG suggesting and emphasizing on such actions to improve primary health care to treat heart disease, diabetes and hypertension; promoting healthy diets and physical activity, and building healthy environments. As NCDs emerge with the transition of socio-economic, epidemiological and demographic conditions over the last few decades the government of Sri Lanka has established a prevention and control programme in order to eliminate the burden of NCDs with in country. The programme is emerged with the visionary point of building the Country that is not burdened with Chronic Non Communicable Diseases (NCDs), deaths and disabilities. Sri Lanka has planned the National Multi-sectorial Action Plan for the Prevention and Control of Non-communicable diseases for the years of 2016 to 2020.

This plan consists of four areas of interest as the first strategic area is Advocacy, Partnership and Leadership, the second strategic area is Health Promotion and Risk Reduction which emphasize on reduction of tobacco use, reduction of use of alcohol, promotion of healthy diet high in fruit and vegetables and low in saturated fat/ trans-fat free sugar and salt, promotion of physical activity and promote healthy behaviors, and reduce household air pollution. The third area is Health system strengthening for early detection and management of NCDs and their risk factors which is comprised of access to health services, health workforce, community based approaches, and the fourth strategic area is Surveillance, Monitoring, Evaluation and Research that emphasize on strengthening surveillance, improve monitoring and evaluation, as well as strengthening research. As stated in (Action Plan for the Prevention and Control of noncommunicable diseases in South-East Asia, 2013 - 2020, 2011) there is high commitment for prevention and control of NCDs in Sri Lanka as the Government of Sri Lanka has declared 2013 as the “Year for Prevention and Control of Non Communicable Diseases”. The report emphasized that the ageing population proportion in Sri Lanka will increase from 6.3 percent to 12.3 percent from year 2000 to 2025. Also Sri Lanka has taken legislative actions towards tobacco control by including graphical warnings to which covers 85% of the front and back of the cigarette packets. The Health Sector in Sri Lanka has encouraged to prevent these diseases and avoid the respective risk factors in advance.

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