

In the present study also the analysis of type 2 diabetes risk factors according to the gender of participants was performed, and the results are presented in the table 2.

Table 2 – Risk factors of type 2 diabetes mellitus among males and females

Risk factors	Males (n=54)	Females (n=56)
Increased BMI (more than 25)	23 (43%)	25 (45%)
Low intake of fruits and vegetables in meal (not daily)	22 (41%)	20 (36%)
Low physical activity (exercise <3 times in a week)	18 (33%)	27(48%)
Ever been found to have high blood glucose (during pregnancy, health examination, etc.)	4 (7%)	6 (11%)

According to the results presented in the table 2, among the examined participants 43% of males and 45% of females have increased BMI higher than normal. Also 41% of men and 36% of women don't include fruits and vegetables in diet their diet daily. The percentage of men who have ever been found to have high blood glucose is 7% and for women – 11%. Considering such risk factor as low physical activity, the percentage of females who are engaging less than 3 times in a week in physical activity is 48%, while the amount of males having this risk factor, is only 33%. Thus, such risk factor as low physical activity has the greatest difference in frequency among the groups of males and females.

Conclusion

As a result of the study, the risk factors of type 2 diabetes mellitus in different age groups of Indian population were analyzed. It was found that with age, the frequency of such risk factor as high body mass index is increased, while the percentage of people having such risk factors as low physical activity and unhealthy diet is decreased. Analyzing the gender differences, low physical activity is the predominant risk factor for the group of females, while for the group of males it is the increased body mass index.

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PREVALENCE OF DISEASES IN DIFFERENT NATIONS

Introduction

In an increasingly interconnected world, understanding the prevalence of diseases across different nations is paramount for global health initiatives. Epidemiological studies provide crucial insights into the distribution and burden of diseases, enabling policymakers and healthcare professionals to formulate targeted interventions.

Goal

The primary goal of this research is to comprehensively investigate the prevalence of diseases across different nations with the aim of advancing global health knowledge and informing evidence-based interventions.

Material and methods of research

An online survey was conducted and based on the results from various countries including Sri Lanka (81%), Maldives (6%), Nigeria (4%), India (1.4%), Belarus (1.4%), Australia, Liberia, Finland, Kuwait, United Kingdom, Italy, New Zealand, Mexico collectively (6.2%). Results were obtained from citizens from an age range of 13 years to 75 years. Major interest was taken upon the diseases Obesity, Atherosclerosis, Dengue, Diabetes and Gastritis which were predominant in many countries. Many other well known sources like WHO Foundation, ScienceDirect and NIC govt articles were also utilized.

The results of the research and their discussion

In 1990, non-communicable diseases (NCDs) contributed to less than half of overall global health loss. But since 1990, the health loss has shifted toward a growing burden from NCDs and away from communicable, maternal, neonatal, and nutritional (CMNN) diseases [1]. Through the mass survey conducted, we were able to identify Diabetes as a leading source of disease common among nations (Figure 1) [2].

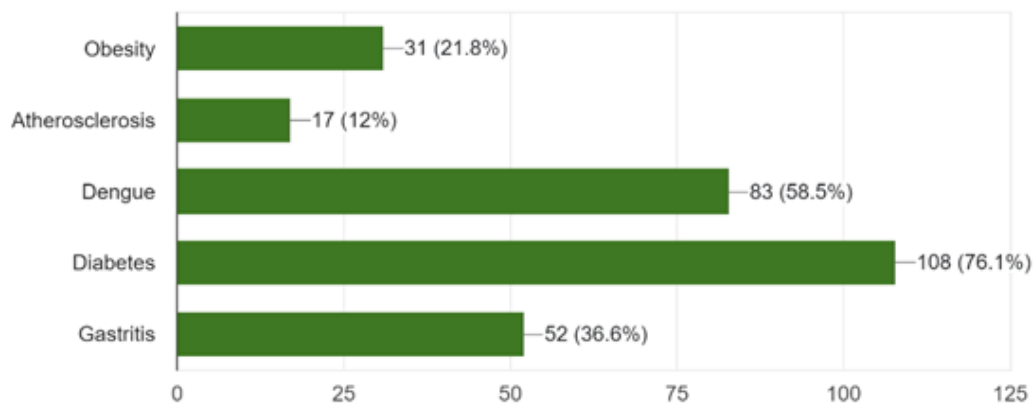


Figure 1 – Leading diseases in different nations

Across many middle-income countries such as in Eastern Europe, Central Asia, North Africa, and Latin America more than 15% of deaths were attributed to obesity in 2019. These results from both a high prevalence of obesity, as well as poorer overall health and healthcare systems compared to high-income countries with similarly high levels of obesity. In contrast, across several low-income countries especially across Sub-Saharan Africa it's estimated that obesity accounts for under 5% of deaths [4]. Findings from the World Health Organization's Monitor Trends in Cardiovascular Diseases (MONICA) project involving 21 countries showed a 4% fall in Atherosclerosis death rates. Despite consumption of rich foods, inhabitants of France and the Mediterranean region appear to have a lower incidence of Atherosclerosis [5]. In January 2024, over half a million dengue cases and over 100 dengue-related deaths were reported globally. Dengue circulation was also reported in the WHO South-East Asia and Western Pacific. According to the WHO SEARO bulletin, the number of cases reported from Bangladesh and Sri Lanka are within the expected levels [6]. The regions with the highest shares of adults suffering from the diabetes are North America and the Middle East. According to the International Diabetes Federation, 463 million people between the ages of 20 and 79 suffered

from diabetes worldwide in 2019. This represents 9.3% of the world population in this age group [7]. The incidence of gastritis in Asia is higher than that in Europe and Northern America [8]. This is due to the high volumes of spices and food patterns in Asian countries [2].

Globally, low back pain, migraine, age-related and other hearing loss, iron-deficiency anemia, and major depressive disorder were the five leading causes of YLDs (life lost due to disability). Despite mostly stagnant age-standardized rates, the absolute number of YLDs from non-communicable diseases has been growing rapidly across all quintiles, partly because of population growth, but also the ageing of populations. The largest absolute increases in total numbers of YLDs globally were between the ages of 40 and 69 years [3].

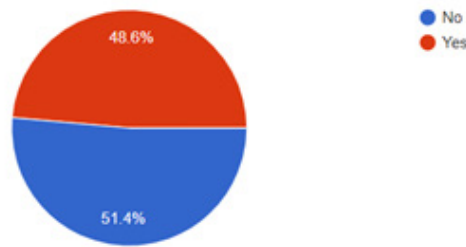


Figure 2 – Percentage of the population who have undergone vaccinations in 2023

In low-income countries, infectious diseases still account for a large proportion of deaths, highlighting health inequities largely caused by economic differences. Achievement of the Millennium Development Goal 4 (two-thirds reduction in 1990 under-5 child mortality by 2015) will be greatly advanced by, and unlikely to be achieved without, expanded and timely global access to key life-saving immunizations such as measles, Hib, rotavirus and pneumococcal vaccines. It is estimated that vaccines annually prevent almost 6 million deaths worldwide [9].

Frequent medical checkups too aim in the prevention of all these diseases even though the populations do not offer much interest in it as shown in Figure 3. Furthermore, the survey showed the volume of citizens that rated their healthcare system as follows: 41.1% – Fair, 34% – Good, 23.4% – Poor, 1.4% – Excellent. In addition to that 61.4% were not aware of any ongoing public health campaigns or initiatives in their country [2].

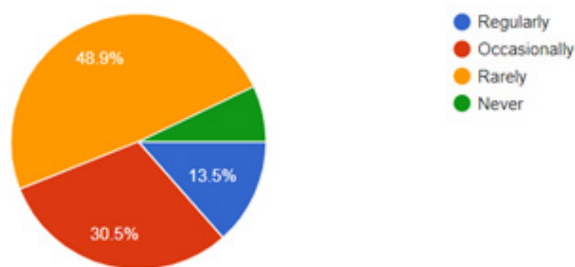


Figure 3 – Frequency of medical checkups undergone by the population

Conclusion

The prevalence of diseases varies significantly among nations, influenced by a multitude of factors including socioeconomic status, healthcare infrastructure, cultural practices, and environmental conditions. Understanding these variations is crucial for effective public health interventions, tailored healthcare policies, and global health initiatives aimed at reducing

disease burden and promoting well-being across diverse populations. Continued research and collaboration are essential to address disparities, mitigate risk factors, and strive towards equitable health outcomes worldwide. Constant medical checkups, efficient use of vaccines, adequate spread of information can help in the deduction of disease rates.

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ADDITIONAL RISK FACTORS IN PATIENTS WITH CARDIOVASCULAR DISEASES AND DIABETES MELLITUS

Introduction

Noncommunicable diseases (NCDs), such as heart disease, cancer, chronic respiratory disease, and diabetes, are the leading cause of death worldwide and represent an emerging global health threat. Deaths from Noncommunicable diseases now exceed all communicable disease deaths combined. Non-communicable diseases are those without an infectious origin. The majority have a chronic onset and persist as life-long diseases, leading to mortality, morbidity and disability. Of these, four are identified as major Noncommunicable diseases (NCDs) responsible for its burden, namely Cardiovascular Disease (CVD) comprising Coronary Heart Diseases (CHD), stroke and Peripheral Arterial Disease (PAD), Diabetes Mellitus (DM), cancer and chronic respiratory diseases. But mainly In Sri Lanka, the incidence of non-communicable diseases such as Cardiovascular Disease (CVD) and Diabetes Mellitus (DM) is high. Major Noncommunicable diseases have increased in Sri Lanka during the last few decades, on one hand due to the demographic transition towards rapid aging of the population, and on the other due to a change in the lifestyle of people from traditional active to a more sedentary lifestyle, leading to an accumulation of multiple risk factors responsible for Noncommunicable diseases.