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COMPARATIVE ANALYSIS OF HEART DISEASE RISK FACTORS AND MANAGEMENT STRATEGIES IN INDIA AND KYRGYZSTAN: A CROSS-COUNTRY STUDY

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Сравнительный анализ факторов риска сердечно-сосудистых заболеваний и стратегий управления в Индии и Кыргызстане: межстрановое исследование

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Abstract

Cardiovascular disease represents the number one cause of deaths in most industrialized countries. How and when a person's cardiovascular system breaks down depends upon an increasing number of known risk factors. These include family history and genetic predisposition to various CV system malfunctions, poor diet and/or obesity, inactivity, environmental pollutants, and the acute or chronic effects of various infective agents.

Keywords: Heart disease, Risk Factors of heart diseases, heart attack, diet and nutrition, cardiovascular complications.

Индия менен Кыргызстандагы жүрөк ооруларынын тобокелдик факторлорунун жана башкаруу стратегияларынын салыштырма анализи: Өлкөлөр аралык изилдөө

Аннотация

Жүрөк-кан тамыр оорулары көпчүлүк өнөр жайлуу өлкөлөрдө өлүмдүн биринчи себеби болуп саналат. Адамдын жүрөк-кан тамыр системасы кантип жана качан бузулушу белгилүү болгон тобокелдик факторлорунун санынын көбөйүшүнөн көз каранды. Аларга үй-бүлөлүк тарых жана ар кандай резюме системасынын бузулушуна генетикалык ыктуулук, туура эмес тамактануу жана/же семирүү, кыймылсыздык, айлана-чөйрөнү булгоочу заттар жана ар кандай инфекциялык агенттердин курч же өнөкөт таасирлери кирет.

Ачкыч сөздөр: Жүрөк оорулары, Жүрөк ооруларынын тобокелдик факторлору, инфаркт, диета жана тамактануу, жүрөк-кан тамыр оорулары.

Сравнительный анализ факторов риска сердечно-сосудистых заболеваний и стратегий управления в Индии и Кыргызстане: межстрановое исследование

Аннотация

Сердечно-сосудистые заболевания представляют собой причину номер один смертности в большинстве промышленно развитых стран. Как и когда сердечно-сосудистая система человека выходит из строя, зависит от растущего числа известных факторов риска. К ним относятся семейный анамнез и генетическая предрасположенность к различным нарушениям сердечно-сосудистой системы, неправильное питание и/или ожирение, малоподвижный образ жизни, загрязнители окружающей среды , острое или хроническое воздействие различных инфекционных агентов.

Ключевые слова: болезни сердца, факторы риска сердечных заболеваний, сердечный приступ, диета и питание, сердечно-сосудистые осложнения.

Introduction

This cross-country study aims to conduct a comparative analysis of heart disease risk factors and management strategies in India and Kyrgyzstan. Cardiovascular diseases are a leading cause of mortality in both countries, but the prevalence and risk factors may differ due to varying lifestyles, socioeconomic status, and healthcare infrastructure. The study utilizes a mixed-methods approach, including a systematic literature review, quantitative analysis of health surveys and clinical data, and qualitative interviews with healthcare professionals and patients. The findings will shed light on the similarities and differences in heart disease risk factors, prevention strategies, and management practices in India and Kyrgyzstan. The study also aims to identify effective interventions that can be implemented in both countries to reduce the burden of cardiovascular diseases. The results of this study can inform policymakers, healthcare professionals, and researchers in India, Kyrgyzstan, and other low- and middle-income countries facing similar challenges in the prevention and management of heart diseases.

Cardiovascular disease in Kyrgyzstan

Cardiovascular disease (CVD) is a significant public health issue in Kyrgyzstan, with a high prevalence and mortality rate. According to the World Health Organization (WHO), CVD accounts for over 60% of all deaths in the country. The age- standardized CVD mortality rate in Kyrgyzstan is 1,004 per 100,000 population, which is one of the highest rates in the world.

The prevalence of risk factors for CVD is also high in Kyrgyzstan. According to a national health survey conducted in 2016, 34% of the adult population smokes, 64% have hypertension, and 29% have high cholesterol levels. In addition, a large proportion of the population has an unhealthy diet and physical inactivity, which further increases the risk of developing CVD.

The burden of CVD is particularly high among men and older adults in Kyrgyzstan. The prevalence of CVD is higher among men than women, and the risk of CVD increases with age. The healthcare infrastructure in Kyrgyzstan faces significant challenges in addressing the burden of CVD, including inadequate resources, limited access to healthcare services, and a shortage of trained healthcare professionals.

Efforts to reduce the burden of CVD in Kyrgyzstan should focus on prevention and management strategies, including tobacco control, promotion of healthy lifestyles, early detection and treatment of hypertension and high cholesterol, and access to affordable and quality healthcare services. The use of telemedicine and digital health technologies may also be an effective approach to improving the prevention and management of CVD in Kyrgyzstan.

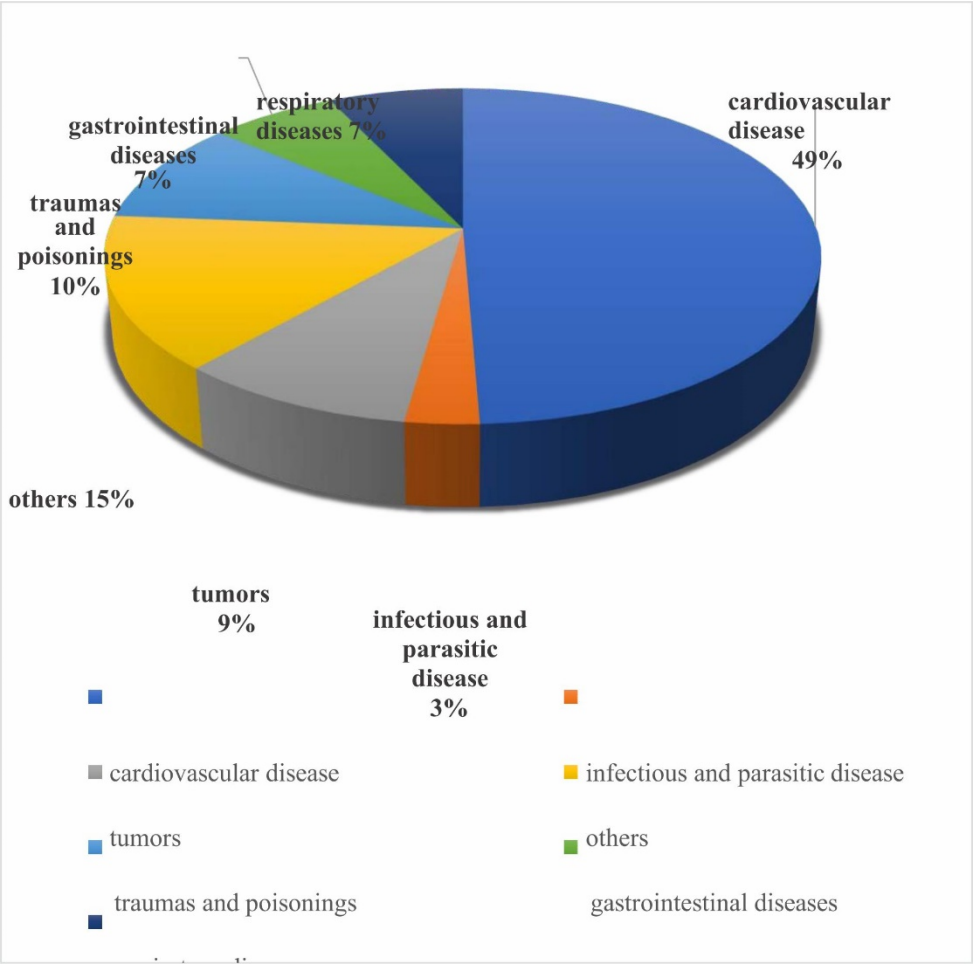

Chart 1. *Causes of Death in Kyrgyz Republic*

Cardiovascular disease Prevalence in India

Cardiovascular disease (CVD) is a significant public health problem in India, with a high burden of morbidity and mortality. According to the World Health Organization (WHO), CVD is the leading cause of death in India, accounting for 28% of all deaths in the country. The age-standardized CVD mortality rate in India is 272 per 100,000 population, which is higher than the global average of 235 per 100,000 population.

The prevalence of risk factors for CVD is also high in India. According to the India State-Level Disease Burden Initiative report published in 2017, high blood pressure, tobacco use, and unhealthy diets were the leading risk factors for CVD in the country. The report also indicated that the prevalence of hypertension in India increased from 20% in 1990 to 25% in 2016, while the prevalence of smoking and tobacco use remained high, with 11% of the adult population using smokeless tobacco and 6% smoking cigarettes.

The burden of CVD is not evenly distributed across different regions of India, with some states and populations more affected than others. According to a study published in the Lancet Global Health journal in 2018, the age-standardized prevalence of CVD in India varied from 6.9% in Bihar to 14.2% in Kerala. The study also found that the prevalence of CVD was higher among men than women and increased with age.

Efforts to reduce the burden of CVD in India should focus on prevention and

management strategies, including tobacco control, promotion of healthy diets and physical activity, early detection and treatment of hypertension and diabetes, and access to affordable and quality healthcare services. The use of technology, such as telemedicine and digital health interventions, may also be an effective approach to improving the prevention and management of CVD in India.

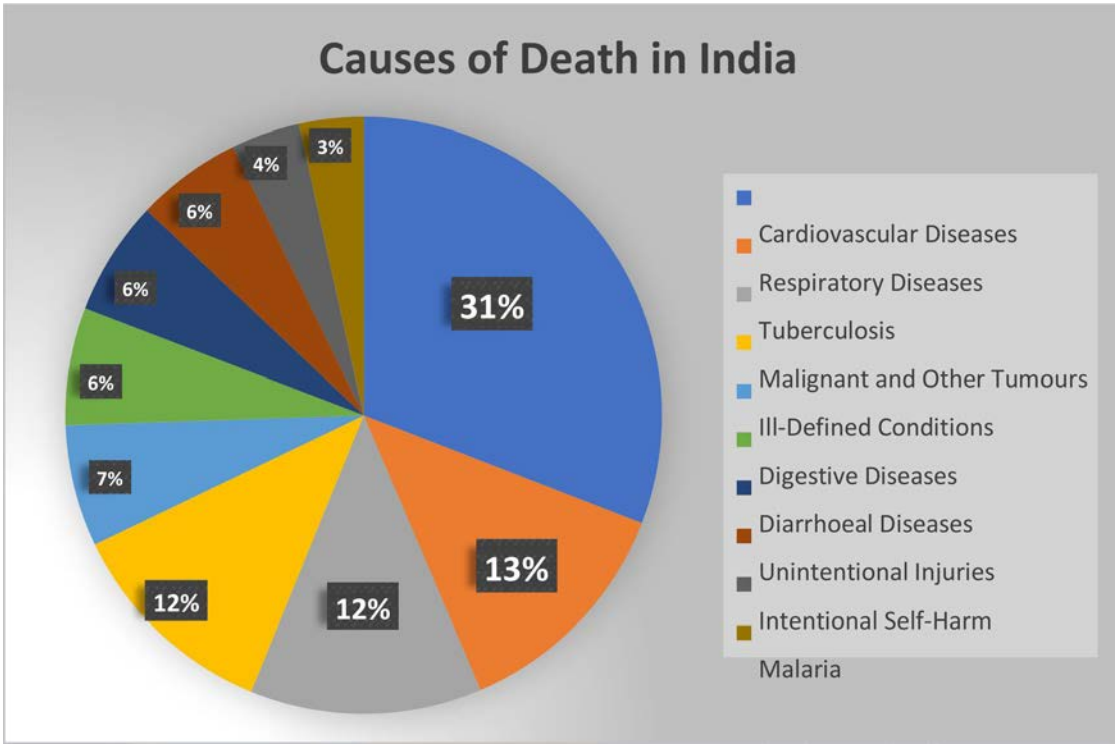

Chart 2. *Causes of Death in India*

Risk Factors for CVD in India:

In India, several risk factors contribute to the development of CVD, including high blood pressure, diabetes, smoking, physical inactivity, and unhealthy diets. The prevalence of these risk factors is high in the Indian population, particularly among those living in urban areas.

High blood pressure, also known as hypertension, is one of the leading risk factors for CVD in India. According to a study published in the Journal of Hypertension in 2019, the prevalence of hypertension in India increased from 20% in 1990 to 25% in 2016. The study also found that the prevalence of hypertension was higher among men than women and increased with age.

Diabetes is another significant risk factor for CVD in India. According to the International Diabetes Federation, India had the second-highest number of adults with diabetes in 2019, with an estimated 77 million people living with the condition. People with diabetes are at a higher risk of developing CVD, particularly if their blood glucose levels are not well controlled.

Smoking and physical inactivity are also major risk factors for CVD in India. According to the Global Adult Tobacco Survey conducted in 2017, 28.6% of adults in

India use tobacco in some form. In addition, many Indians lead sedentary lifestyles, which increases the risk of developing CVD.

Unhealthy diets, particularly those high in salt, sugar, and saturated fats, are also a significant risk factor for CVD in India. The Indian diet is often high in these components, contributing to the high prevalence of CVD in the country.

Risk Factors for CVD in Kyrgyzstan:

In Kyrgyzstan, several risk factors contribute to the development of CVD, including high blood pressure, smoking, physical inactivity, and unhealthy diets. The prevalence of these risk factors is high in the Kyrgyz population, particularly among those living in rural areas.

High blood pressure is a significant risk factor for CVD in Kyrgyzstan. According to the 2016 national health survey conducted in Kyrgyzstan, the prevalence of hypertension was highest in the Batken region (79%), followed by the Jalal-Abad region (76%). The survey also found that the prevalence of hypertension was higher among women than men.

Smoking is also a major risk factor for CVD in Kyrgyzstan. According to the Global Adult Tobacco Survey conducted in 2016, 36.6% of adults in Kyrgyzstan use tobacco in some form, with smoking prevalence higher among men than women.

Physical inactivity and unhealthy diets are also significant risk factors for CVD in Kyrgyzstan. Many Kyrgyz people lead sedentary lifestyles, and their diets are often high in salt, sugar, and saturated fats.

Conclusion

The burden of CVD is high in both India and Kyrgyzstan, with several risk factors contributing to its development. Efforts to reduce the burden of CVD in both countries should focus on prevention and management strategies, including tobacco control, promotion of healthy diets and physical activity, early detection and treatment of hypertension and diabetes, and access to affordable and quality healthcare services. Collaboration between health systems and policymakers in both countries can help to implement effective strategies to address these risk factors and reduce the burden of CVD.

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