

CHAPTER- 14

A STUDY ON RISK ASSESSMENT OF CARDIOVASCULAR DISEASE AMONG CORPORATE EMPLOYEES

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INTRODUCTION

Globally, cardiovascular diseases (CVDs) stand as the primary cause of mortality, contributing to an estimated 17.9 million deaths in 2019, constituting 32% of all recorded deaths. Of these, heart attacks and strokes accounted for approximately 85%. Developing countries bear the brunt of fatal CVD cases. In 2019, non-communicable diseases caused 17 million premature deaths, with 38% linked to CVDs, occurring before the age of 70. The World Health Organization (WHO) suggests that 86% of cardiovascular deaths could have been prevented or mitigated through therapy and prevention measures. A study conducted by Dr. Richard Milani and Dr. Carl Lavie focused on cardiac intervention for employees revealed that, following a six-month cardiac program, 57% of high-risk individuals successfully

transitioned to low-risk status. Moreover, the average annual medical claim costs for participants decreased by \$1,421 [1].

Non-modifiable risk factors for cardiovascular disease encompass elements beyond an individual's control, such as age, ethnicity, and family history, with genetics being immutable. While these factors remain unchangeable, the risk of cardiovascular disease can be mitigated through behavioural modifications. Individuals can alter lifestyle components like diet, alcohol consumption, and smoking to diminish their susceptibility to cardiovascular disease. Pertinent facts from the World Health Organization (WHO) underscore the prevalence and impact of cardiovascular diseases, emphasizing that heart attacks and strokes contribute to more than four-fifths of CVD deaths, with a significant proportion occurring before the age of 70 [2]. Behavioural risk factors, including an unhealthy diet, physical inactivity, tobacco use, and excessive alcohol consumption, play a pivotal role in heart disease and stroke. A substantial portion of premature deaths under the age of 70, accounting for 38%, is attributed to CVDs. Furthermore, over three-quarters of CVD deaths are reported in low- and middle-income countries. Timely detection of cardiovascular disease is crucial, facilitating early management through counselling and medications [3].

RESEARCH OBJECTIVES

1. To identify the causative elements behind cardiovascular disease.
2. To create personalized risk profiles for individuals.

3. To take a proactive approach to handle risk factors, encourage heart-healthy habits, and enhance the overall cardiovascular well-being of the workforce.

RESEARCH METHODOLOGY

The study spanned 60 days, from March 19, 2023, to May 17, 2023. Seva at Home organized health checkup camps during this period. Data collection took place at these camps held in several Corporate Offices across cities, including Delhi, Delhi NCR, and Gurgaon, on different dates. The survey focused on specific objectives and utilized a Heart risk assessment tool comprising 21 questions. The questionnaire incorporated inquiries related to family history and mental health.

RESULTS AND DISCUSSION

In this study, it was determined that cardiovascular risk factors were prevalent among 180 participants, with a predominant 87% being male. The most frequently observed risk factors included hypertension (25%) and smoking (21%). Other prevalent factors comprised a family history of cardiovascular disease (18%), obesity (16%), hyperlipidaemia (14%), diabetes (12.7%), migraine (11%), and chronic kidney disease (4%). Hypertension and smoking emerged as the most significant contributors to cardiovascular diseases due to their influence on atherosclerosis formation, elevated blood pressure, decreased HDL (good cholesterol) levels, and increased blood clot formation. Utilizing a heart risk assessment, participants were categorized into high-risk, moderate-risk, and low-risk groups based on their risk scores, with the majority (51%) falling within the 31-40 age group.

CONCLUSION

As per the outcomes of this research investigation, the stratification of cardiovascular disease risk into high, moderate, and low categories offers a valuable framework for identifying individuals with varying vulnerability levels. This classification facilitates the implementation of targeted preventive initiatives, early interventions, and effective management strategies to enhance overall health outcomes and mitigate the impact of cardiovascular disease.

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