PREVALENCE OF CARDIAC DISEASE AND ASSOCIATED RISK FACTORS IN ASHTHGAM VILLAGE IN THE NAVSARI DISTRICT: A COMMUNITY-BASED CROSS-SECTIONAL SURVEY

ABSTRACT:

Cardiovascular diseases continue to impose a significant public health burden, particularly in underserved rural areas. Cardiovascular diseases constitute a major public health challenge, particularly in rural communities where early detection and preventive care are often inadequate. Hypertension and dyslipidemia are important modifiable risk factors contributing to cardiac morbidity and mortality.

OBJECTIVE

To assess the prevalence of cardiac disease–related risk factors among residents of Ashthgam village in the Navsari district.

MATERIAL AND METHODS

A community-based cross-sectional survey was conducted on 27th September 2024 in Ashthgam village in the Navsari district under the Department of Community Medicine, S. S. Agrawal Homoeopathic Medical College and General Hospital. A total of 47 individuals were screened by 4th year BHMS students using a structured proforma. Data regarding demographic characteristics, blood pressure, and cholesterol levels were collected and analyzed descriptively.

RESULT

Of the 47 participants, 32 were females and 15 were males, with a predominance of middle-aged and elderly individuals. Hypertension was detected in 17 participants, of whom 3 also had elevated cholesterol levels. The majority of affected individuals belonged to the 51–70 years age group.

CONCLUSION

The study reveals a considerable prevalence of hypertension and associated cardiac risk factors in the rural population studied. These findings highlight the need for regular community-based screening programs, early detection, lifestyle modification, and health education to reduce the burden of cardiovascular diseases.

KEYWORDS

Cardiac disease, Community-based survey, Cross-sectional study, Rural population

INTRODUCTION

Cardiovascular diseases (CVDs) are the leading cause of morbidity and mortality worldwide, placing a substantial burden on healthcare systems. Approximately 17.9 million deaths occur annually due to CVDs, accounting for over 30% of global mortality. The burden has increasingly shifted to low- and middle-income countries, largely due to rapid urbanization, population aging, and lifestyle changes associated with modifiable risk factors such as hypertension, diabetes mellitus, dyslipidemia, obesity, tobacco use, physical inactivity, unhealthy dietary practices, and harmful alcohol consumption.

In India, cardiovascular disease shows an early age of onset and rising prevalence in both urban and rural populations. Cardiovascular diseases constitute a major non-communicable disease burden in the country, driven by demographic transition and lifestyle modifications. However, most available data remain urban-centric, often overlooking rural communities where the disease burden is frequently under-recognized due to limited healthcare access, inadequate screening, and low awareness.

Ashthgam village in the Navsari district represents a rural population undergoing epidemiological transition, with increasing exposure to cardiovascular risk factors such as sedentary lifestyle, changing dietary habits, hypertension, diabetes mellitus, obesity, and tobacco use. However, systematic data on the prevalence of cardiac disease and its associated risk factors in this community are lacking.

Therefore, the present community-based cross-sectional study was undertaken to assess the prevalence of cardiac disease and identify associated risk factors among residents of Ashthgam village (Navsari district), with the aim of supporting targeted preventive and promotive health interventions.

AIM AND OBJECTIVES

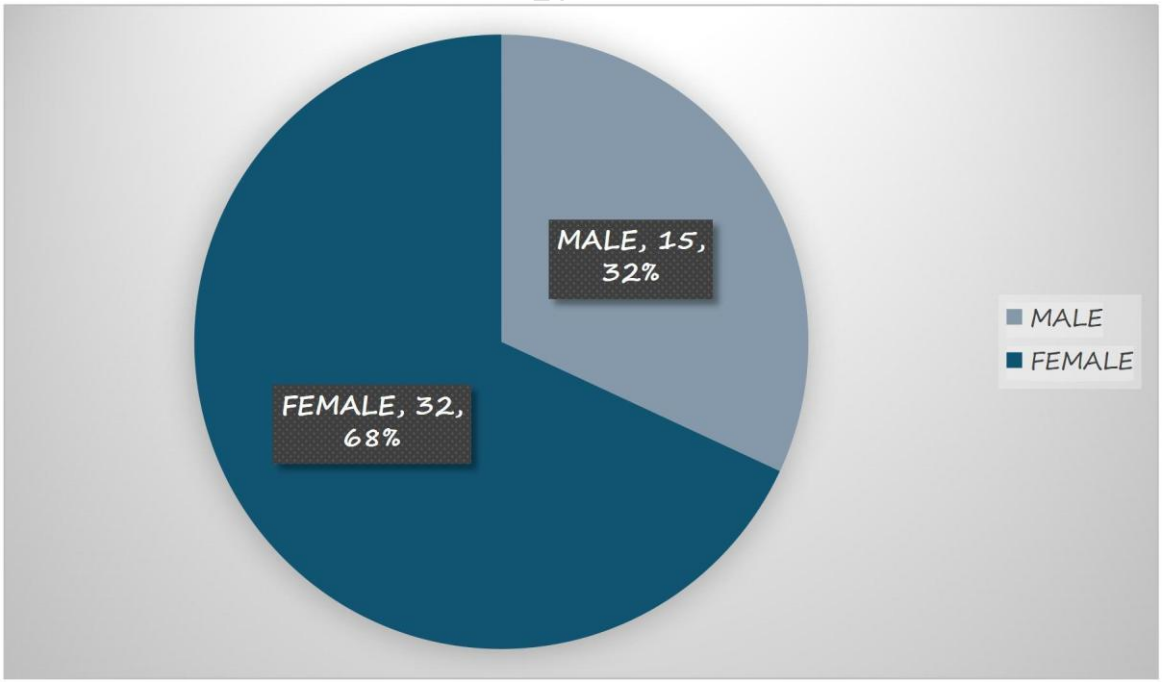
- To assess the prevalence of cardiac disease–related risk factors among residents of Ashthgam village in the Navsari district through a community-based screening survey.
- To screen the population of Ashthgam village in the Navsari district for cardiac disease–related risk factors.

METHODOLOGY

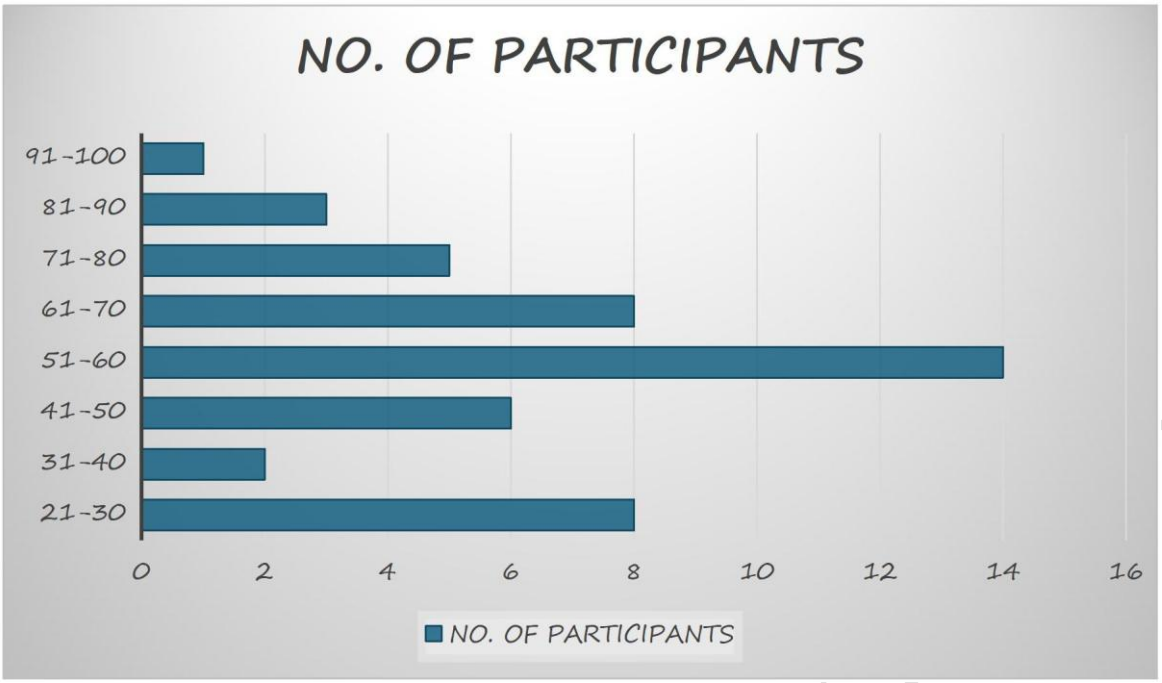
- **Study design:** Community-based cross-sectional screening study
- **Study area:** Ashthgam village, Navsari district, Gujarat
- **Study period:** 27th September 2024

- **Study population:** Residents of Ashthgam village in the Navsari district present during the survey and willing to participate
- **Sample size:** 47 individuals
- **Sampling method:** Convenience sampling
- **Study team:** 4th year BHMS students of S. S. Agrawal Homoeopathic Medical College and General Hospital, Navsari, Gujarat, Department of Community Medicine, under the guidance of Dr. Dinesh Chavan and Dr. Himani Punawala
- **Data collection:** Structured screening format including demographic details, blood pressure measurement using a standard sphygmomanometer, and enquiry regarding dietary habits and physical activity
- **Inclusion criteria:**
    1. Individuals aged 21 years and above
    2. Person who gave informed consent
- **Exclusion criteria:**
    1. Unwilling participants
    2. Seriously ill individuals who is unable to undergo screening

DATAANALYSIS



GRAPH 1: Gender-wise Distribution of Participants



GRAPH 2 : Age-wise Distribution of Participants

TABLE 1 : Distribution of Hypertension and Cholesterol Status among Participants

Health Status	Number of Participants	Percentage (%)
Hypertensive only	14	29.8
Hypertensive with elevated cholesterol	3	6.4
Non-hypertensive	30	63.8
Total	**47**	**100**

DISCUSSION

This community-based screening revealed a substantial burden of cardiovascular risk factors among residents of Ashthgam village in the Navsari district. Hypertension was identified in 17 out of 47 participants, with a higher prevalence among middle-aged and elderly individuals, particularly those aged 51–70 years. The coexistence of elevated cholesterol levels in 3 of the 17 hypertensive individuals indicates clustering of cardiovascular risk factors, which may further increase the risk of adverse cardiac events. These findings underscore the need for early detection through routine community-level screening and the promotion of healthy lifestyle practices such as regular physical activity, dietary modification, and stress management to reduce the burden of cardiovascular diseases in rural communities.

CONCLUSION

The present community-based screening study demonstrated a notable prevalence of cardiovascular risk factors among residents of Ashthgam village in the Navsari district, with hypertension being the most common finding, particularly among middle-aged and elderly individuals. The presence of elevated cholesterol in some hypertensive participants highlights the coexistence of multiple risk factors and an increased risk of cardiovascular disease.
Regular screening and lifestyle modification are essential to reduce the burden of cardiovascular diseases in this rural community.

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