

A Descriptive Study to Assess the Knowledge and Attitude Regarding Prevention of Cardiovascular Diseases (CVD) Among the General Population of Selected Areas of Mirza, Kamrup (R), Assam

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Abstract

Background: Cardiovascular disease (CVD) is an umbrella term encompassing various conditions affecting the heart and blood vessels. It is a leading cause of death globally, with millions of lives lost each year. Risk factors like hypertension, hyperlipidemia, obesity, or diabetes cause the majority of CVD deaths. Cardiovascular diseases include heart attacks, strokes, heart failure, coronary artery disease, and other conditions, all of which can have serious outcomes for health and well-being. It is a significant health issue that requires a sophisticated approach to address effectively. **Objectives:** The present study aimed to assess the knowledge and attitude regarding the prevention of CVDs among the general population of selected areas in Mirza, Kamrup (R), Assam and to find the association between knowledge and attitude regarding the prevention of cardiovascular diseases (CVD) with selected demographic variables. **Methods and materials:** A descriptive research design was adopted, and data were collected from 100 individuals aged 20 to 60 years using a structured knowledge questionnaire and a 3-point Likert attitude scale. **Results:** The results indicated that 31% of participants had good knowledge, 45% had average knowledge, and 24% had poor knowledge. In terms of attitude, 34% had a favourable attitude, 40% had a neutral attitude, and 26% had an unfavourable attitude. Significant associations were observed between knowledge and variables like education, income, and previous knowledge of CVD. Attitude also showed significant associations with education, income, prior knowledge, and CVD history. The findings emphasize the need for targeted health education programs to improve cardiovascular health awareness. **Conclusion:** The study highlights the importance of assessing the knowledge and attitudes of the general population regarding the prevention of cardiovascular diseases (CVD). It reveals that while some individuals may have an understanding of CVD prevention, significant gaps in knowledge and attitudes persist.

Index Terms: Cardiovascular disease, CVD prevention, knowledge, attitude, community health, Mirza, Assam.

Background of the study

Cardiovascular disease (CVD) refers to a group of disorders involving the heart and blood vessels. These include coronary artery disease, hypertension, heart failure, and stroke, all of which contribute significantly to global morbidity and mortality. The World Health Organisation estimates that CVDs account for 17.9 million deaths annually, making it the leading cause of death worldwide. The situation is particularly concerning in India, where CVD-related deaths often occur prematurely, with 52% of deaths occurring before age 70.

Cardiovascular disease (CVD) poses a notable health obstacle worldwide, but with early detection, appropriate management, adequate supervision, and prophylactic strategies, its consequences can be reduced. Therefore, continued research and innovation are essential for boosting outcomes and mitigating the escalating mortality rate related to cardiovascular diseases.

Despite being largely preventable through lifestyle changes, early diagnosis, and public awareness, gaps in knowledge and attitude towards CVD prevention persist in many communities. In regions like Mirza in Kamrup (R), Assam, such studies are crucial to understanding local perceptions and guiding public health interventions.

The overall need of the study is to assess knowledge and attitudes regarding the prevention of cardiovascular disease, which is essential for promoting decision-making, improving health outcomes, and reducing the burden of cardiovascular diseases on individuals and society.

Objectives

The objectives of the study were to assess the knowledge and attitude regarding the prevention of cardiovascular diseases (CVD) among the general population and to find the association between knowledge and attitude regarding the prevention of cardiovascular diseases (CVD) with selected demographic variables.

Materials and Methods

A descriptive, non-experimental quantitative research design was used. The study population included individuals aged 20 to 60 years residing in the selected areas of Mirza, Kamrup (R), Assam. A total of 100 participants were selected through non-

probability

convenience

sampling.

Tools: Data were collected using a three-part tool:

- **Demographic data sheet:** Demographic data sheet consists of 10 items on demographic data like age, gender, religion, educational status, occupational status, residence, family type, family income, and previous knowledge, past history of CVD.

- **Self-structured knowledge questionnaire:** Self-structured knowledge questionnaire consists of 20 questions to assess the knowledge of adults regarding the prevention of cardiovascular diseases in selected areas of Mirza, Assam. This questionnaire has four alternative responses; the correct answer was given a score of "one" and the wrong answer was given a score of 'zero'. The total score of the knowledge questionnaire was 20. The options are categorized as

- Poor knowledge.
- Average knowledge.
- Good knowledge.

- **3-point Likert attitude scale:** 3-point Likert attitude scale consists of around 10 items prepared to assess the attitude of the adults regarding the prevention of cardiovascular diseases in selected areas of Mirza, Assam. Each item has a points scale rating for both positive and negative statements. The total score is 30 for the attitude questionnaire.

- For a positive statement, respondents get 3 for strongly agree, 2 for uncertain, and 1 for strongly disagree.
- For negative statements, respondents get 3 for strongly disagree, 2 for uncertain, and 1 for strongly agree.

Data Analysis: Descriptive statistics (mean, frequency, percentage) and inferential statistics (Chi-square test) were used to analyse the data using Microsoft Excel and SPSS.

Results

- **Knowledge:** Percentage distribution of the general population according to their level of knowledge on the prevention of cardiovascular diseases (CVD) are 24% had poor knowledge, 45% had average knowledge, and 31% had good knowledge (*Table 2*). The mean knowledge score was 11.36 (SD = 4.43).

- **Attitude:** Percentage distribution of general population according to the level of attitude regarding the prevention of cardiovascular disease (CVD) are 26% had unfavourable attitudes, 40%

neutral, and 34% favourable attitudes (Table 3). The mean attitude score was 20.54 (SD = 4.78).

-Significant associations:

- **Knowledge** was significantly associated with educational status (p = 0.0027), income (p = 0.00021), and previous knowledge on CVD (p = 0.00016) (Table 4).
- **Attitude** was significantly associated with income (p = 0.005), education (p = 0.030), previous knowledge (p = 0.000045), and history of CVD (p = 0.05) (Table 5).

Tables

Table 1: Distribution of Study Subjects According to Selected Demographic Variables

Demographic Variable	Category	Frequency	Percentage
Age	20-30 years	34	34%
	31-40 years	29	29%
	41-50 years	30	30%
	51-60 years	7	7%
Religion	Hindu	84	84%
	Muslim	16	16%
Gender	Male	51	51%
	Female	49	49%
Education	Primary	17	17%
	High School	20	20%
	Higher Secondary	19	19%
	Graduation and above	44	44%
Occupation	Job	29	29%
	Business	32	32%
	Farming	17	17%
	Student	22	22%
Family Income	15,000-20,000	34	34%
	21,000-25,000	35	35%
	Above 25,000	31	31%
Dietary Pattern	Vegetarian	8	8%
	Non-Vegetarian	92	92%

Habits	Smoking	16	16%
	Alcohol	12	12%
	Tobacco	21	21%
	None	51	51%
Previous Knowledge on CVD	Yes	28	28%
	No	72	72%
History of CVD	Yes	26	26%
	No	74	74%

Table 2: Knowledge Regarding Prevention of Cardiovascular Diseases

Knowledge Level	Frequency	Percentage
Poor (0-6)	24	24%
Average (7-13)	45	45%
Good (14-20)	31	31%

Table 3: Attitude Regarding Prevention of Cardiovascular Diseases

Attitude Level	Frequency	Percentage
Unfavourable (10-16)	26	26%
Neutral (17-23)	40	40%
Favourable (24-30)	34	34%

Table 4: Association Between Knowledge and Demographic Variables

Demographic Variable	Chi-square (χ^2)	df	p-value	Significance
Educational Status	20.08	6	0.0027	Significant
Family Income	21.86	4	0.00021	Significant
Previous Knowledge on CVD	17.39	2	0.00016	Significant

Table 5: Association Between Attitude and Demographic Variables

Demograph ic Variable	Chi- suar e (χ^2)	d f	p-value	Significan ce
Family Income	14.85	4	0.005	Significant
Educational Status	13.90	6	0.030	Significant
Previous Knowledge on CVD	20.01	2	0.00004 5	Significant
History of CVD	5.87	2	0.05	Significant

Discussion

The study reveals that a considerable portion of the population lacks sufficient knowledge and a favourable attitude toward CVD prevention. While a notable percentage demonstrated moderate awareness, the existence of poor knowledge among nearly a quarter of participants is concerning. The significant association with education and income levels suggests that socioeconomic status influences cardiovascular health literacy. Previous exposure to CVD information and a history of CVD also impacted awareness and attitudes.

These findings align with other regional and national studies emphasising the role of education and awareness in preventive health behaviours. Community-based interventions and sustained health education initiatives could bridge the existing knowledge gaps and encourage healthier lifestyle choices.

Conclusion

This study highlights the importance of assessing the knowledge and attitudes of the general population regarding the prevention of cardiovascular diseases (CVD). It reveals that while some individuals may have an understanding of CVD prevention, significant gaps in knowledge and attitudes persist.

The research provides a foundation for future studies and healthcare practices aimed at reducing the burden of cardiovascular diseases and improving the overall health outcomes of the community. It calls for a collaborative effort among healthcare professionals and the community to foster a culture of cardiovascular health awareness and prevention.

The study highlights the need for enhanced awareness and attitude modification strategies to

prevent cardiovascular diseases. Educational programs tailored to the needs of the population, especially targeting low-income and less educated groups, could be instrumental in reducing the burden of CVD in communities like Mirza, Kamrup (R), Assam.

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