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A Study to Assess the Level of Knowledge Regarding Risk Factors and their Prevention of Coronary Artery Disease among Students of Selected Colleges at Bagalkot

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Abstract | **Original Research Article**

Background: Coronary artery disease (CAD) is one of the leading causes of morbidity and mortality worldwide. The increasing prevalence of unhealthy lifestyle habits such as sedentary behavior, poor diet, smoking, and stress has contributed significantly to the rise of CAD, especially among young adults. Early identification of risk factors and preventive measures through education can help reduce the future burden of the disease. Assessing the level of knowledge among students is essential for planning appropriate educational interventions. ***Objectives:*** (1) To assess the level of knowledge regarding risk factors of coronary artery disease among students. (2) To assess the level of knowledge regarding prevention of coronary artery disease among students. (3) To determine the association between knowledge level and selected socio-demographic variables. ***Materials and Methods:*** A quantitative descriptive cross-sectional research design was used. The study was conducted among 120 students from selected colleges in Bagalkot using a convenient sampling technique. Data were collected using a structured knowledge questionnaire consisting of socio-demographic variables and questions related to CAD risk factors and prevention. Data were analyzed using descriptive and inferential statistics. ***Results:*** The study findings revealed that 22 (18.3%) students had poor knowledge, 68 (56.7%) had average knowledge, and 30 (25%) had good knowledge regarding CAD risk factors and prevention. There was no statistically significant association between knowledge level and selected socio-demographic variables at $p < 0.05$ level. ***Conclusion:*** The study concluded that most students had only average knowledge regarding CAD risk factors and preventive measures. This highlights the need for health education programmes to improve awareness and promote healthy lifestyle practices among students.

Keywords: Coronary artery disease, Risk factors, Prevention, Knowledge, Students, Health education.

INTRODUCTION

Coronary artery disease (CAD) is a condition caused by narrowing or blockage of coronary arteries due to the accumulation of fatty deposits known as atherosclerotic plaques. This reduces blood supply to the heart muscle and may lead to angina, myocardial infarction, and even sudden cardiac death. CAD is a major public health problem affecting both developed and developing countries.

In recent years, the incidence of CAD has increased among younger populations due to rapid urbanization, unhealthy dietary habits, lack of physical activity, smoking, alcohol consumption, obesity, hypertension, diabetes, and stress. Many of these risk factors are preventable through lifestyle modifications.

Students represent an important group for preventive interventions because habits developed during this stage often continue into adulthood. Lack of adequate knowledge about CAD risk factors and prevention may increase their vulnerability to future cardiovascular diseases.

Therefore, assessing students' knowledge regarding CAD risk factors and preventive measures is essential to develop effective health education strategies and reduce the future burden of cardiovascular disease.

MATERIALS AND METHODS

Research Design: A quantitative descriptive cross-sectional research design was adopted.

Setting: The study was conducted in selected colleges in Bagalkot, Karnataka.

Population: The target population consisted of students studying in selected colleges in Bagalkot.

Sample Size: The sample size consisted of 120 students.

Sampling Technique: Convenient sampling technique was used to select the participants.

Inclusion Criteria

- Students who: - Were studying in selected colleges of Bagalkot -
- Were available during data collection -
- We're willing to participate in the study

Exclusion Criteria

- Students who were absent during data collection or unwilling to participate were excluded.

VARIABLES

Independent Variables: Socio-demographic variables such as age, gender, course of study, year of study, family type, and lifestyle habits.

Dependent Variable: Knowledge regarding risk factors and prevention of coronary artery disease.

DATA COLLECTION TOOL

The tool consisted of two sections:

Section I: Socio-Demographic Data

Included age, gender, education, year of study, family type, and lifestyle habits.

Section II: Structured Knowledge Questionnaire

Consisted of multiple-choice questions related to: - Risk factors of coronary artery disease - Signs and symptoms - Preventive measures

Scoring System

Knowledge scores were classified as: - Poor knowledge: 0–9 - Average knowledge: 10–19 - Good knowledge: 20–30

Validity and Reliability

- The tool was validated by experts in the field of nursing and medical sciences.
- Reliability was established using appropriate statistical methods and found suitable for the study.

Data Collection Procedure

Permission was obtained from the college authorities prior to data collection. The purpose of the study was explained to the students and informed consent was obtained. The questionnaire was distributed to the students and sufficient time was given to complete it. Confidentiality and anonymity were maintained.

Statistical Analysis

Data were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation. Inferential statistics such as chi-square test were used to determine association between knowledge level and sociolect-demographic variables.

RESULTS

Table 1: Distribution of Students Based on Socio-Demographic Variables (N=120)

Variable	Frequency	Percentage
Age 18–20 years	72	60%
Age 21–23 years	48	40%
Male	52	43.3%
Female	68	56.7%
Arts	40	33.3%
Science	45	37.5%
Commerce	35	29.2%
Nuclear family	78	65%
Joint family	42	35%

Table 2: Students Level of Knowledge Regarding CAD (N=120)

Knowledge Level	Frequency	Percentage
Poor	22	18.3%
Average	68	56.7%
Good	30	25%
Total	120	100%

Table 3: Mean and Standard Deviation of Knowledge Scores of students

Variable	Mean	Standard Deviation
Knowledge Score	15.8	4.2

DISCUSSION

The present study assessed knowledge regarding CAD risk factors and prevention among students. The findings revealed that most students had average knowledge, while only a small proportion had good knowledge. The mean score of 15.8 indicates moderate awareness. This suggests the need for educational programmes to improve knowledge and encourage preventive behaviors.

These findings are consistent with previous studies which reported inadequate awareness among young adults regarding cardiovascular risk factors.

FUTURE PROSPECT

Majority of students had average knowledge regarding CAD risk factors and prevention. Some students had poor knowledge, indicating lack of awareness. Health education programmes are necessary to improve awareness. Early education can help prevent future cardiovascular diseases.

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Author Contribution

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