A Study To Assess The Knowledge And Health-Related Quality Of Life In Patients With Coronary Artery Disease With A View To Develop A Self-Instructional Module At A Selected Private Hospital, Rewari, Haryana

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Abstract

Background: Coronary Artery Disease (CAD) is one of the leading causes of morbidity and mortality worldwide. Patients with CAD often experience limitations in physical activity, emotional distress, and reduced quality of life. Adequate knowledge regarding disease management and lifestyle modification plays a crucial role in improving health-related quality of life (HRQOL).

Objectives:

1. To assess the level of knowledge regarding coronary artery disease among patients.
2. To assess the health-related quality of life of patients with coronary artery disease.
3. To determine the relationship between knowledge and health-related quality of life.
4. To develop a self-instructional module based on identified knowledge gaps.

Methods: A quantitative descriptive research design was adopted. The study was conducted at a selected private hospital in Rewari, Haryana. A sample of 100 patients diagnosed with coronary artery disease was selected using non-probability purposive sampling. Data were collected using a structured knowledge questionnaire and a standardized health-related quality of life scale.

Results: The findings revealed that a majority of patients had moderate knowledge regarding CAD and reported average to poor quality of life in physical and emotional domains. A significant relationship was found between knowledge level and health-related quality of life.

Conclusion: The study concluded that improved knowledge is associated with better health-related quality of life among patients with CAD. Development and use of a self-instructional module is recommended to enhance patient education and long-term disease management.

Keywords: Coronary artery disease, knowledge, health-related quality of life, self-instructional module, patient education

Introduction

Coronary Artery Disease (CAD) is a chronic and progressive condition caused by narrowing or blockage of coronary arteries due to atherosclerosis. It is a major contributor to cardiovascular morbidity and mortality, particularly in developing countries like India. Lifestyle changes, urbanization, stress, and unhealthy dietary habits have increased the burden of CAD among adults.

Patients with CAD often suffer from chest pain, fatigue, anxiety, depression, and reduced physical functioning, which negatively affect their health-related quality of life. Effective management of CAD requires not only medical treatment but also adequate patient knowledge regarding disease process, medication adherence, diet, exercise, stress management, and risk-factor control.

Health-related quality of life (HRQOL) is an important outcome measure that reflects the physical, psychological, and social impact of disease. Studies indicate that patients with better disease-related knowledge demonstrate improved coping ability and quality of life. However, many patients lack sufficient understanding of CAD and its long-term management.

A self-instructional module (SIM) is a structured educational material that enables patients to learn at their own pace and reinforces essential health information. Developing a SIM based on patients' learning needs can help improve knowledge, self-care practices, and quality of life. Hence, this study was undertaken to assess knowledge and HRQOL among CAD patients with a view to develop a self-instructional module.

Objectives

1. To assess the level of knowledge regarding coronary artery disease among patients.
2. To assess the health-related quality of life of patients with coronary artery disease.
3. To find the relationship between knowledge and health-related quality of life.
4. To develop a self-instructional module on coronary artery disease.

Methodology

Research Design

A **quantitative descriptive research design** was adopted to assess the knowledge and health-related quality of life among patients diagnosed with coronary artery disease.

Research Approach

A **quantitative research approach** was used to systematically collect and analyze numerical data related to knowledge and quality of life.

Setting of the Study

The study was conducted at a **selected private hospital in Rewari**.

Population

The population of the study comprised **patients diagnosed with coronary artery disease (CAD)** who were attending the selected private hospital during the period of data collection.

Sample Size

A total of **100 patients with coronary artery disease** were included in the study.

Sampling Technique

Non-probability purposive sampling technique was used to select the study participants based on the inclusion and exclusion criteria.

Inclusion Criteria

- Patients diagnosed with coronary artery disease
- Patients aged **40 years and above**
- Patients who were **willing to participate** in the study
- Patients who were able to **understand Hindi or English**

Exclusion Criteria

- Patients who were **critically ill** at the time of data collection
- Patients with **cognitive impairment** or inability to respond appropriately

Description of the Tool

The data collection instrument consisted of three sections:

Section A: Socio-Demographic Variables

This section included items related to **age, gender, educational status, occupation, duration of illness, lifestyle habits, and previous information regarding coronary artery disease**.

Section B: Structured Knowledge Questionnaire

A structured questionnaire was used to assess patients' knowledge regarding coronary artery disease, covering areas such as:

- Meaning and causes of CAD
- Risk factors and clinical manifestations
- Treatment modalities
- Lifestyle modification
- Prevention of complications

Section C: Health-Related Quality of Life Scale

A **standardized health-related quality of life (HRQOL) scale** was used to assess patients' physical, psychological, social, and functional well-being.

Validity of the tools was established through expert review by professionals in **nursing and cardiology**. **Reliability** was ensured using appropriate statistical methods.

Data Collection Procedure

- Formal permission was obtained from the hospital authorities prior to data collection.
- Written informed consent was obtained from each participant.
- The structured knowledge questionnaire and HRQOL scale were administered using the **interview method**.
- Confidentiality and anonymity of participants were maintained throughout the study.

Plan for Data Analysis

Descriptive Statistics

- Frequency and percentage distribution
- Mean and standard deviation

Inferential Statistics

- **Correlation test** to determine the relationship between knowledge and health-related quality of life
- **Chi-square test** to assess the association between knowledge, HRQOL, and selected demographic variables

The level of statistical significance was set at $p < 0.05$.

Results

Table 1

Distribution of Patients According to Level of Knowledge Regarding Coronary Artery Disease (n = 100)

Knowledge Level	Frequency (n)	Percentage (%)
Inadequate	22	22.0
Moderate	54	54.0
Adequate	24	24.0
Total	**100**	**100**

Interpretation:
More than half of the patients (54%) had **moderate knowledge** regarding coronary artery disease, while 22% had inadequate knowledge.
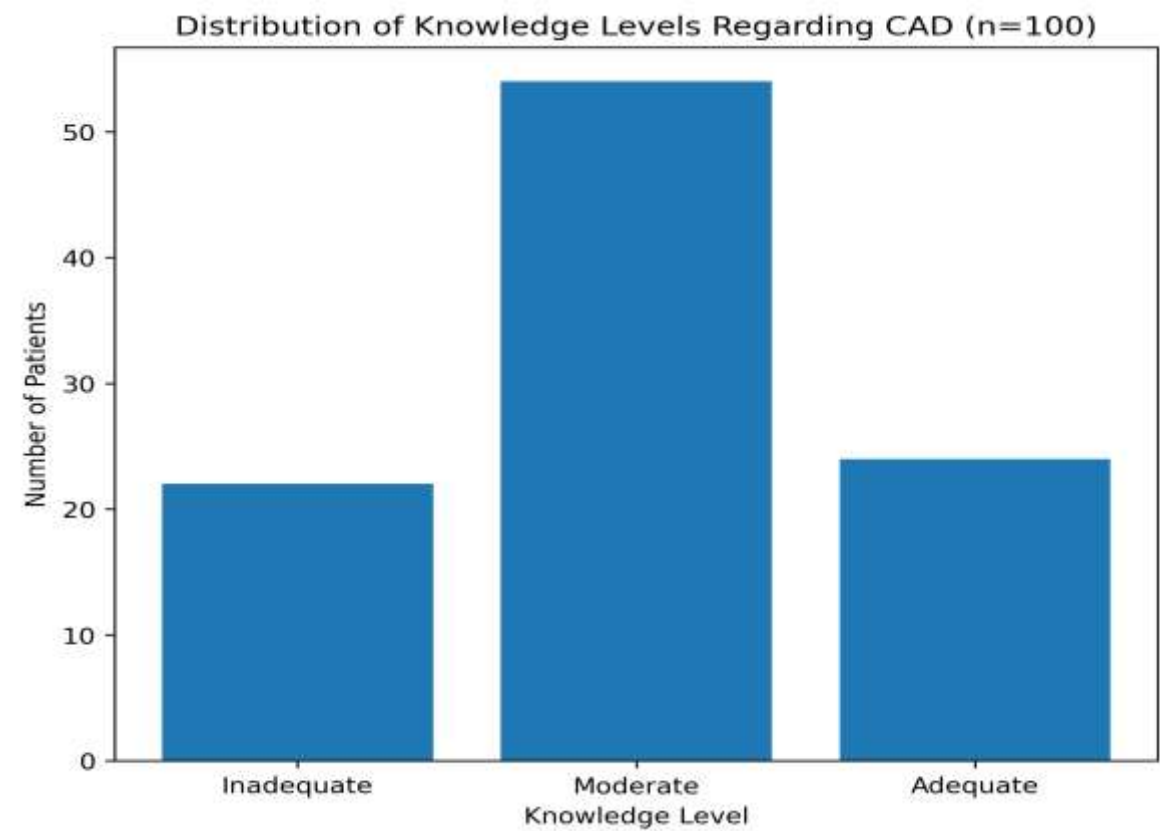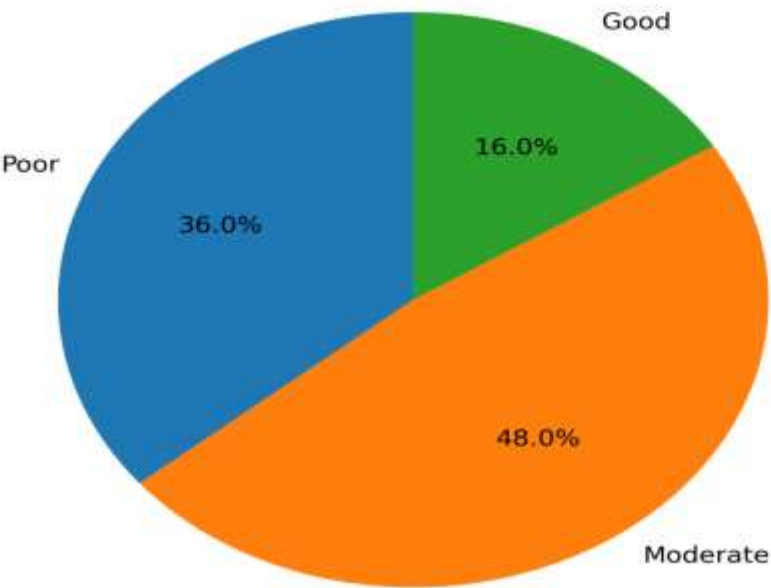
Distribution of Knowledge Levels Regarding CAD (n=100)

Table 2

Distribution of Patients According to Health-Related Quality of Life Levels (n = 100)

HRQOL Level	Frequency (n)	Percentage (%)
Poor	36	36.0
Moderate	48	48.0
Good	16	16.0
Total	**100**	**100**

Interpretation:

The majority of patients (84%) had **poor to moderate health-related quality of life**, indicating considerable impact of coronary artery disease on daily living.
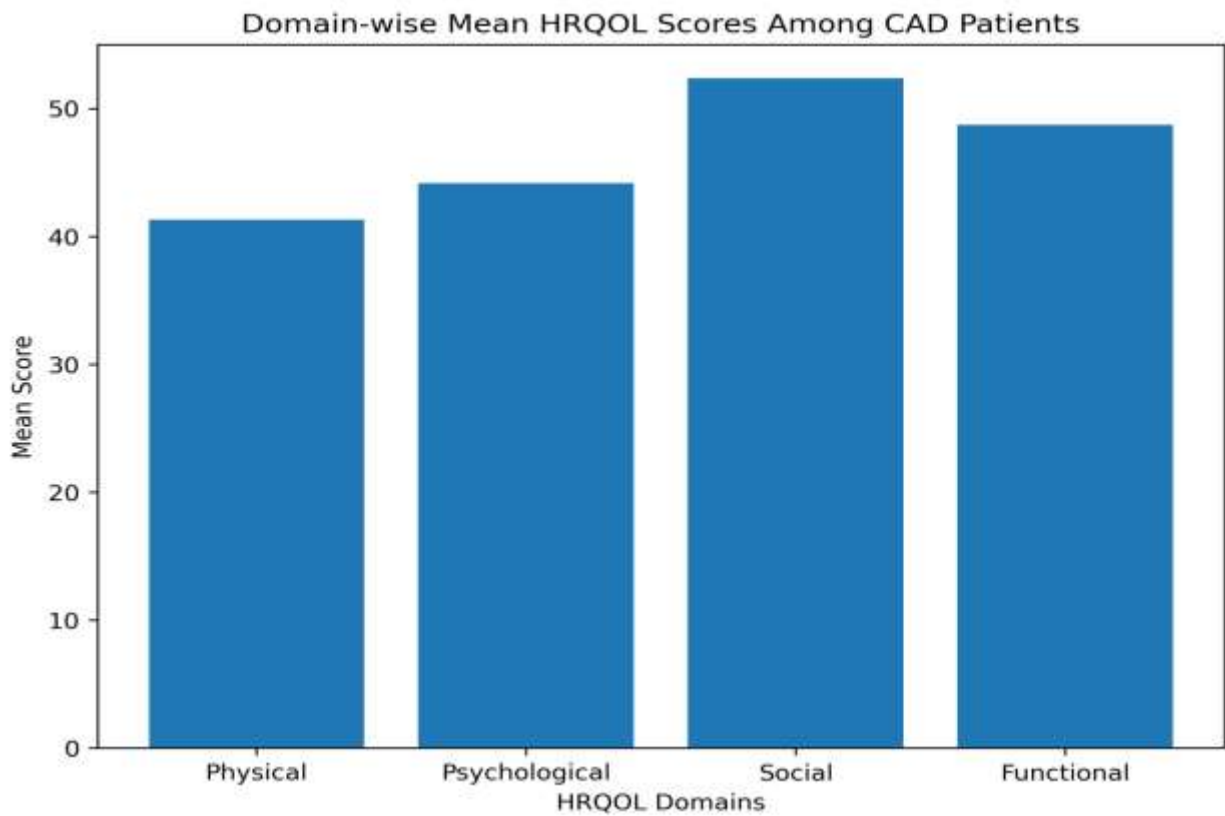
Health-Related Quality of Life Levels (n=100)

Table 3

Domain-Wise Mean and Standard Deviation of Health-Related Quality of Life Scores (n = 100)

HRQOL Domain	Mean Score	Standard Deviation (SD)
Physical	41.28	7.64
Psychological	44.15	6.92
Social	52.36	8.11
Functional	48.72	7.38

Interpretation:

Lower mean scores were observed in the **physical and psychological domains**, indicating greater impairment in these areas.
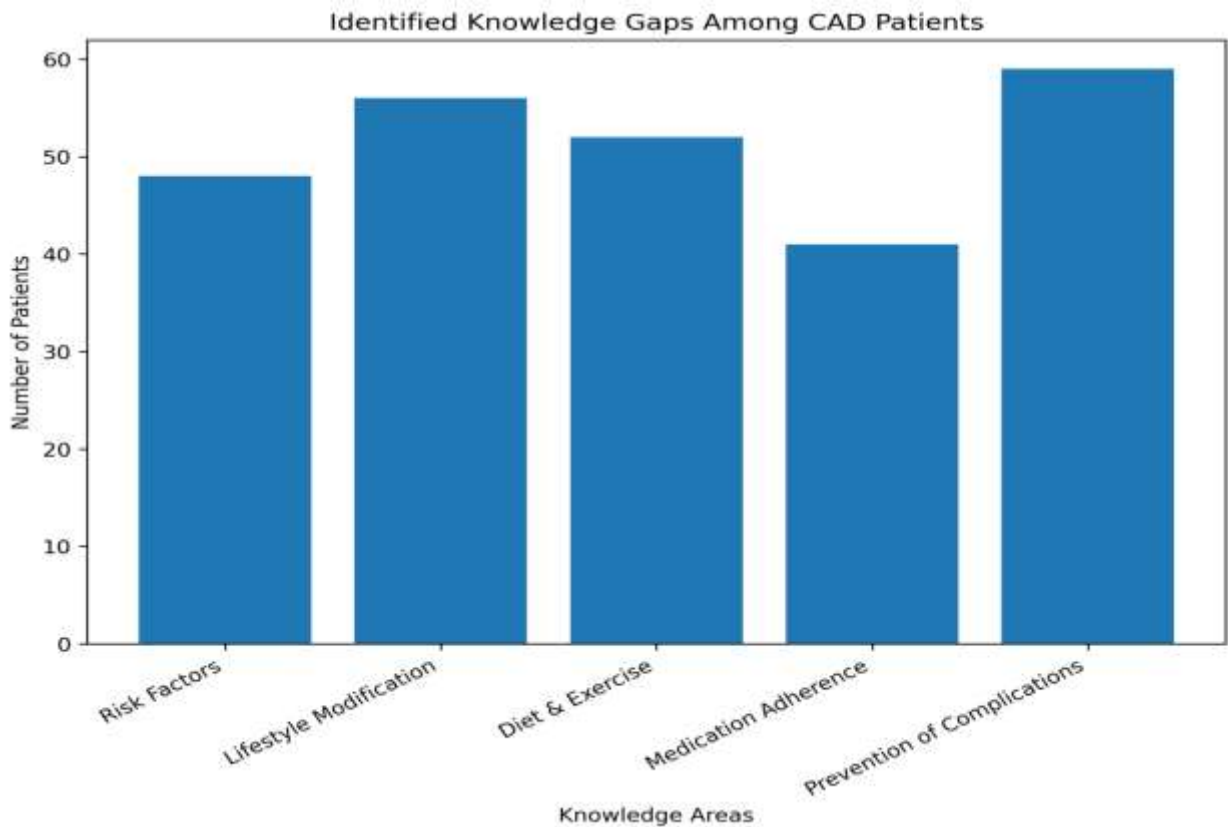

Domain-wise Mean HRQOL Scores Among CAD Patients

Table 4

Correlation Between Knowledge Scores and Health-Related Quality of Life Scores (n = 100)

Variables Compared	Correlation Coefficient (r)	p Value	Significance
Knowledge vs HRQOL	0.62	< 0.05	Significant

Interpretation:

A **significant positive correlation** was found between knowledge and health-related quality of life, suggesting that higher knowledge levels were associated with better quality of life.

Identified Knowledge Gaps Among CAD Patients

Table 5

Identified Knowledge Gaps Among Patients With Coronary Artery Disease (n = 100)

Knowledge Area	Patients With Inadequate Knowledge (n)	Percentage (%)
Risk factors of CAD	48	48.0
Lifestyle modification	56	56.0
Diet and physical activity	52	52.0
Medication adherence	41	41.0
Prevention of complications	59	59.0

Interpretation:

Major knowledge deficits were identified in **lifestyle modification, prevention of complications, and dietary management**, which guided the development of the self-instructional module.

Discussion

The study findings highlight the importance of patient education in improving quality of life among individuals with coronary artery disease. Similar findings have been reported in previous studies, emphasizing that adequate knowledge enhances self-care behavior, treatment adherence, and psychological well-being. Development of a self-instructional module serves as an effective strategy to address learning needs and promote self-management.

Conclusion

The study concluded that patients with coronary artery disease had inadequate to moderate knowledge and compromised health-related quality of life. A significant relationship between knowledge and HRQOL was observed. The developed self-instructional module can serve as an effective educational tool to improve patient outcomes.

Recommendations

- Implementation of self-instructional modules in cardiac units
- Replication of the study with larger samples
- Interventional studies to evaluate effectiveness of SIM

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