Research Article

Effectiveness of an Information Booklet on Knowledge Regarding Angina Pectoris among Adults in Selected Areas of Pune City

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Abstract

Title of the project: A Pre-Experimental Study to Assess the Effectiveness of Information Booklet on Knowledge regarding Angina Pectoris among Adults in Selected Areas of Pune City

Background: Angina pectoris is one of the most common manifestations of coronary artery disease and remains a major public health concern worldwide. Inadequate awareness regarding its risk factors, symptoms, prevention, and management often leads to delayed diagnosis and treatment, thereby increasing morbidity and mortality. Educational interventions play a crucial role in improving community awareness and promoting preventive health behaviors.[1,2]

Aim: To assess the effectiveness of an information booklet on knowledge regarding angina pectoris among adults in selected areas of Pune city.[3]

Methods: A quantitative pre-experimental one-group pre-test and post-test research design was adopted. The study was conducted among 100 adults aged 18–60 years residing in selected areas of Pune city. Non-probability purposive sampling technique was used for sample selection. Data were collected using a structured knowledge questionnaire consisting of demographic variables and 15 knowledge-related questions on angina pectoris. Reliability of the tool was established using Karl Pearson's correlation coefficient ($r = 0.8449$). An information booklet was administered after the pre-test, followed by post-test assessment.[4]

Results: Pre-test findings revealed that 53% of participants had poor knowledge, 27% had average knowledge, and 20% had good knowledge regarding angina pectoris. Following administration of the information booklet, 66% demonstrated good knowledge and none of the participants had poor knowledge. Mean knowledge score increased from 6.93 ± 3.67 to 12.23 ± 2.06. The calculated paired t-value was 12.1268 ($p < 0.05$), indicating a statistically significant improvement in knowledge.[5,6]

Conclusion: The information booklet was highly effective in improving knowledge regarding angina pectoris among adults. Educational interventions should be incorporated into community health programs to enhance awareness and facilitate early recognition and prevention of cardiovascular diseases.[7,8]

Keywords: Angina Pectoris, Information Booklet, Knowledge, Adults, Health Education, Cardiovascular Disease

Introduction

Cardiovascular diseases remain the leading cause of mortality worldwide, accounting for nearly one-third of all global deaths. Among these conditions, coronary artery disease (CAD) represents a major contributor to morbidity and mortality. Angina pectoris, characterized by chest pain or discomfort resulting from reduced blood flow to the myocardium, is one of the most common manifestations of CAD.

The symptoms of angina may vary from mild discomfort to severe chest pain and are often described as pressure, tightness, heaviness, or squeezing sensation in the chest. The pain may radiate to the neck, jaw, shoulders, back, or arms. Angina serves as an important warning sign of underlying cardiac pathology and may precede myocardial infarction.

Several risk factors contribute to the development of angina pectoris, including hypertension, diabetes mellitus, dyslipidemia, obesity, smoking, sedentary lifestyle, stress, and advancing age. In India, rapid urbanization and lifestyle changes have significantly increased the burden of cardiovascular diseases. Despite advances in medical care, lack of awareness regarding symptoms and preventive measures remains a major challenge.

Health education has been recognized as an effective strategy for promoting awareness and encouraging healthy lifestyle modifications. Information booklets are cost-effective educational tools that provide structured and evidence-based information to individuals. Such interventions can empower adults to recognize symptoms early, seek timely medical care, and adopt preventive measures.

Therefore, the present study was undertaken to evaluate the effectiveness of an information booklet on knowledge regarding angina pectoris among adults residing in selected areas of Pune city.[9,10]

Need for the Study

Angina pectoris is a significant public health problem due to its association with coronary artery disease and cardiovascular mortality. Globally, more than 110 million individuals are affected by ischemic heart disease. In

India, coronary artery disease prevalence is steadily increasing because of unhealthy lifestyles, physical inactivity, smoking, obesity, and diabetes.

Many individuals remain unaware of the early symptoms and risk factors of angina pectoris. Delayed recognition and treatment may result in severe complications including myocardial infarction, heart failure, and sudden cardiac death. Community awareness regarding cardiovascular diseases is therefore essential.

Educational interventions have demonstrated positive effects on improving health-related knowledge and promoting healthy behavior. Information booklets provide simple and accessible learning material that can be used in community settings. Assessing the effectiveness of such interventions will help nurses and healthcare professionals implement evidence-based educational strategies for cardiovascular disease prevention.

Aim of the Study

To assess the effectiveness of an information booklet on knowledge regarding angina pectoris among adults in selected areas of Pune city.

Research Methodology

Objectives

1. To assess pre-test knowledge regarding angina pectoris among adults.
2. To assess post-test knowledge regarding angina pectoris among adults.
3. To evaluate the effectiveness of an information booklet on knowledge regarding angina pectoris.
4. To determine the association between pre-test knowledge scores and selected demographic variables.

Research Approach

Quantitative research approach.

Research Type

Evaluative research.

Research Design

Pre-experimental one-group pre-test and post-test design.

Setting

Selected areas of Pune city.

Population

Adults aged 18–60 years.

Sample and Sample Size

A total of 100 adults participated in the study.

Sampling Technique

Non-probability purposive sampling technique.

Tool Description

Section A: Demographic variables including age, gender, education, occupation, marital status, income, and previous information regarding angina pectoris.

Section B: Structured knowledge questionnaire consisting of 15 multiple-choice questions related to definition, causes, symptoms, risk factors, prevention, and management of angina pectoris.

Reliability

The reliability of the tool was established using Karl Pearson's correlation coefficient (test-retest method). Reliability coefficient obtained was r = 0.8449, indicating high reliability.

Pilot Study

A pilot study was conducted among 10 adults to determine feasibility, clarity, and applicability of the tool. Findings confirmed that the study was feasible and the tool was suitable for data collection.

Results

Section II A: Finding related to assess the level of Knowledge regarding Angina Pectoris among Adults before administration of Information booklet.

Table No.1 - Related to assess the Pre test level of Knowledge regarding Angina Pectoris among Adults.

Level of Knowledge Pre Test	F	%	Mean	SD

Poor (0-5)	53	53	6.93	3.67
Average (6-10)	27	27		
Good (11-15)	20	20		

Fig.01: Related to assess the Pre test level of Knowledge regarding Angina Pectoris among Adults.

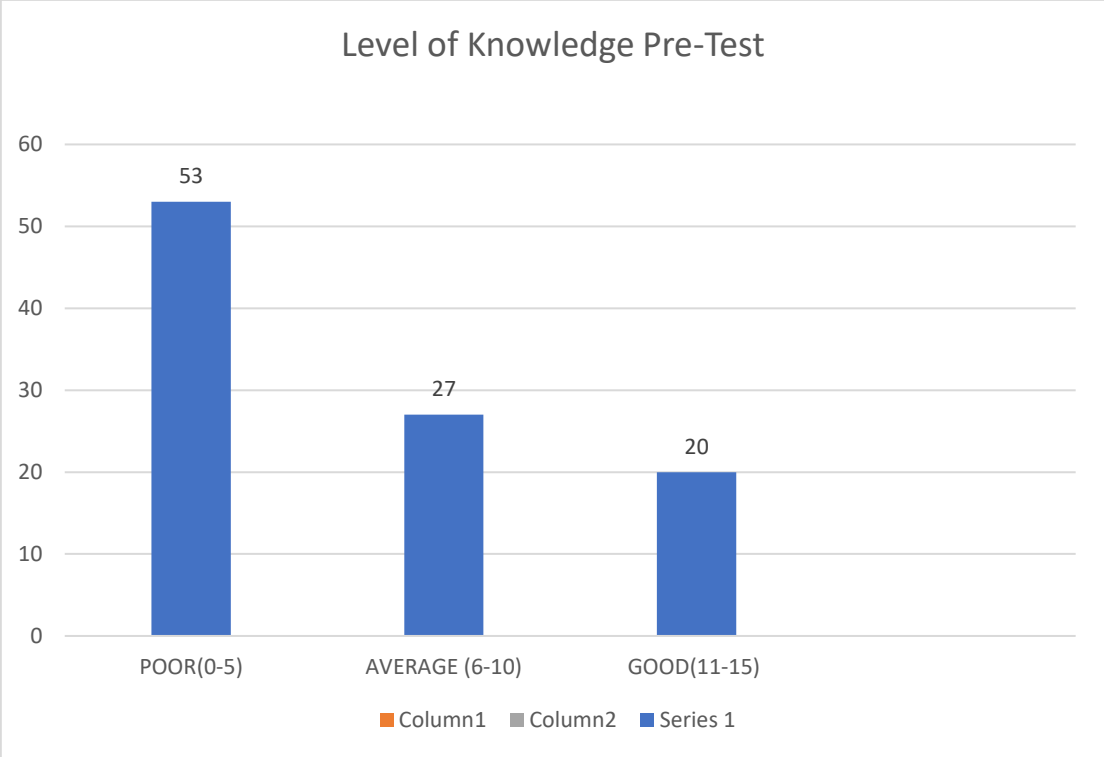


Fig.1 Level of knowledge Pre - Test

Result:

The pre-test assessment of knowledge regarding angina pectoris among adults in selected areas of Pune showed varying levels of awareness before the administration of the information booklet. Most participants (53%) had poor knowledge , 27% had average knowledge, and only 20% had good knowledge. These findings indicate that the majority of adults had inadequate knowledge about angina pectoris prior to the intervention.

Section II B: Finding related to assess the Post test level of Knowledge regarding Angina Pectoris among Adults after administration of Information booklet.

Table No.2 - Related to assess the Post test level of Knowledge regarding Angina Pectoris among Adult.

Level of Knowledge Post Test	F	%	Mean	SD
Poor (0-5)	0	0	12.23	2.06
Average (6-10)	34	34		
Good (11-15)	66	66		

Fig.02: Related to assess the Post test level of Knowledge regarding Angina Pectoris among Adult.

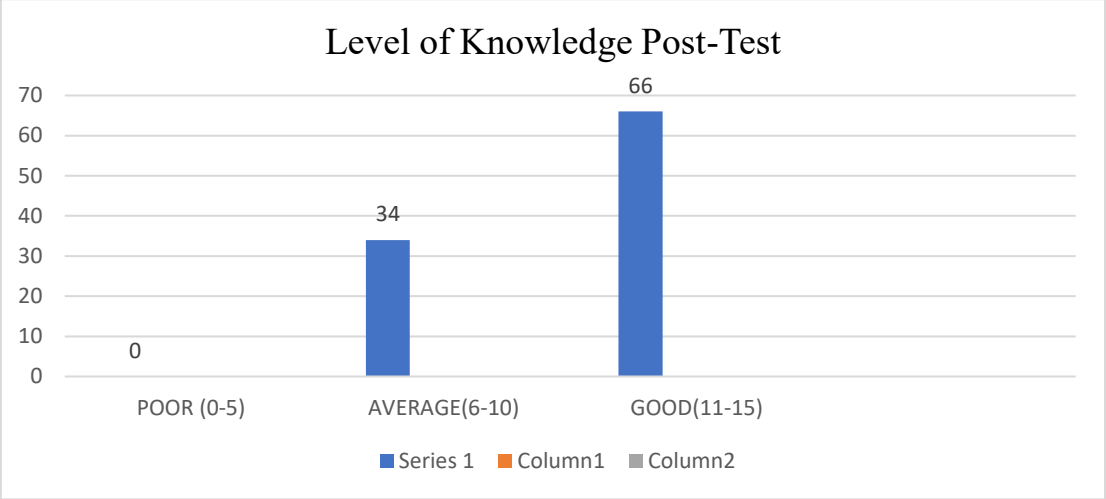


Fig.2 Level of knowledge Post - Test

Result: The post-test assessment of knowledge regarding angina pectoris among adults in selected areas of Pune showed a significant improvement after the administration of the information booklet. The majority of participants (66%) had good knowledge, while 34% had average knowledge, and none remained in the poor knowledge category . The mean post-test knowledge score was 12.23 ± 2.06, indicating that the information booklet was effective in improving knowledge regarding angina pectoris among adults.

Section- III: To evaluate Effectiveness of Information Booklet on Knowledge regarding Angina Pectoris among Adults in selected areas of Pune city.

Table No.3- Related to compare the information booklet on knowledge regarding Angina Pectoris among Adults by comparing pre-test and post-test knowledge scores.

Effectiveness of information booklet on knowledge regarding Angina Pectoris	Mean	SD	DF	T test calcaluated value	P value	Remarks
Pre test	6.93	3.67	99	12.1268	0.00001	Significant
Post test	12.23	2.06	99			

Discussion

The present study was conducted to assess the effectiveness of an information booklet on knowledge regarding angina pectoris among adults in selected areas of Pune. The findings revealed that before the educational intervention, the majority of participants had inadequate knowledge regarding angina pectoris, including its causes, symptoms, risk factors, prevention, and management. More than half of the participants (53%) had poor knowledge, while only 20% demonstrated good knowledge in the pre-test assessment. This indicates a considerable lack of awareness among adults regarding cardiovascular health and early recognition of angina pectoris.

After administration of the information booklet, a remarkable improvement in knowledge was observed. The proportion of participants with good knowledge increased to 66%, while no participant remained in the poor knowledge category. The mean knowledge score increased from 6.93 ± 3.67 in the pre-test to 12.23 ± 2.06 in the post-test, indicating a substantial gain in knowledge following the intervention. The paired t-test value of 12.1268 with a p-value of 0.00001 demonstrated that the improvement was statistically highly significant.

The findings of the present study are consistent with previous studies conducted by researchers such as Shubhangi Gaikwad et al. (2022) and Nidhi Gupta and Smriti (2025), who also reported significant improvement in knowledge after educational interventions using information booklets or structured teaching programmes.

Furthermore, the study found no significant association between pre-test knowledge scores and demographic variables such as age, gender, education, occupation, marital status, income, previous information, and source

of information, suggesting that lack of knowledge regarding angina pectoris existed across all demographic groups.

Conclusion

The study concluded that adults in selected areas of Pune had insufficient knowledge regarding angina pectoris before the educational intervention. Most participants lacked awareness regarding the causes, symptoms, risk factors, prevention, and management of the condition. The pre-test findings highlighted the need for effective educational strategies to improve community awareness about cardiovascular diseases and their early warning signs.

The administration of the information booklet resulted in a significant improvement in participants' knowledge levels. The post-test scores demonstrated a marked increase in understanding, with the majority of adults achieving good knowledge after the intervention. Statistical analysis confirmed the effectiveness of the information booklet, as evidenced by the significant difference between pre-test and post-test mean scores and the highly significant p-value.

The study also revealed that demographic characteristics had no significant association with pre-test knowledge levels, indicating that educational interventions should target all adults irrespective of age, gender, education, or socioeconomic status. Overall, the findings support the use of information booklets as an effective, simple, and economical method for improving awareness and promoting early prevention and management of angina pectoris among adults

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

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