

# “A Study to Assess the Knowledge Regarding Early Symptoms of Atherosclerosis Among Adults in Selected Area of Pune City”

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## Abstract

Atherosclerosis is a condition where plaque builds up inside your arteries, leading to narrowing and Hardening of the arteries. Apart from this lifestyle factors and heredity, the research suggests that chronic inflammation may play a vital role in increase of atherosclerosis. This highlights the importance of not only managing some traditional risk factors but also to prevent through good lifestyle, by maintaining proper diet, systematic exercise, stress management, maintaining good environment and avoiding drugs, alcohol, smoking, etc

**The present study title:** “A study to assess the knowledge regarding the early symptoms of Atherosclerosis among adults in the selected areas of Pune city.

**“Material and Methods:** The present study conducted was non-experimental with Quantitative Research approach. The population for the current study were the adults of age 30-70years. The data was collected from total of 200 samples using a self-structured questionnaire by non-probability sampling method. The informed consent was filled by the participants prior to filling the tool. The questionnaire consists of two sections mainly demographic section and main tool.

**Result:** The result shows that about 2% people have proper knowledge about the early symptoms of atherosclerosis

**Conclusion:** From the data inspection, it is evident that majority of adults are from age group are of 30 to 40 years, and the study shows that majority of the people that is 66% adults have average Knowledge regarding the early symptoms of atherosclerosis. Demographic variables were found to have no significant association with knowledge. The previous studies also focused on the importance to educate and to conduct more researches and how to improve the knowledge in teens by which we can prevent atherosclerosis before it is too late.

**Recommendation:** A similar study can be conducted on a large population to find definite conclusions.

**Key Words:** Assess early symptoms, atherosclerosis, and knowledge, adult.

## Introduction

Atherosclerosis is a condition where plaque builds up inside your arteries, leading to narrowing and hardening of the arteries. This buildup is made up of cholesterol, fat, calcium, and other substances found in the blood<sup>1</sup>. Over time, it can restrict blood flow to vital organs like heart, brain, liver, kidney and lung increasing the risk of other heart diseases.<sup>2</sup> Inflammatory processes within the body can contribute to the damage of arterial walls and promote the formation of plaques.<sup>3</sup> This highlights the importance of not only managing some traditional risk factors like high cholesterol level, hypertension but also to inscribe about inflammation through good lifestyle, such as maintaining a proper nutritious diet, doing systematic exercise, stress management like relaxing for some time,

keeping and maintaining a calm environment and avoiding drugs, alcohol, smoking, etc.<sup>4</sup> This study especially highlights the early symptoms of atherosclerosis and to know whether the adults have any knowledge regarding to this topic, and how we can prevent the risk factors. Some of the early sign and symptoms are mentioned below: Angina: Chest pain or discomfort, often described as squeezing pressure, reduced blood flow to the heart, tightness, etc. This is the main cause of atherosclerosis (coronary heart disease)<sup>5</sup> Shortness of Breath: Difficulty in breathing or specifically while doing any physical activity, may specify reduced blood flow to the heart or lungs.<sup>9</sup> Weakness/Fatigue: Feeling uncommonly tired while doing regular activities, after taking rest this symptom is not seen patient which leads to a misconception of early diagnosis. This symptom is mostly neglected by the people. Paraesthesia in Extremities: caused due to reduced blood flow to the extremities. This shows numbness of any specific extremities.<sup>10</sup> Poor Wound Healing: Wounds or any cut, scars on the legs or feet or angle heals slowly or do not heal properly.

### Need of the Study

This study is important because the last studies indicated that atherosclerosis was estimated that about 30% of all deaths globally.<sup>7</sup> In 2020, atherosclerosis remained important health concern globally, contributing to various cardiovascular diseases such as heart attacks, strokes and many more. The precise number of instances of atherosclerosis in 2020 would rely on variables like lifestyle choices, population demographics, and medical breakthroughs that could impact reporting and diagnosis.<sup>5</sup> usually the early symptoms of atherosclerosis are unnoticed. From 1990 to 2019 there has been a rapid increase in atherosclerosis even various studies suggested that there is an increase in number of death rate due to heart disease mainly atherosclerosis.<sup>8</sup> However, due to changes in healthcare, lifestyle, and other variables, these figures may fluctuate over time. This study is important as it mainly deals with the early symptoms, usually the early symptoms of atherosclerosis is unnoticed. The mostly unseen symptoms are fatigue, poor wound healing, angina as some of the symptoms are the same symptoms as diabetes and the main symptom of atherosclerosis is weakness which only happens when there are any strenuous activities and will be stabilized when the person takes proper rest. Studying about the knowledge regarding the early symptoms gives an opportunity to know more about how to avoid the risk factors and how to prevent atherosclerosis.

There were many studies conducted and all of them suggested the importance of providing knowledge about atherosclerosis among adults. The results shows that the people had limited knowledge and most of them were not aware about such disease condition and the early symptoms of atherosclerosis because of which most of them didn't take the necessary treatments at the earliest. From conducting this study we understood the importance of providing information among people and how it could be beneficial.

### Aim of the Study

The aim of the study was to assess the knowledge regarding the early symptoms of atherosclerosis among adult in the selected areas of Pune city and to associate the findings with selected demographic variables.

### Research Methodology

**Research Design-** Non experimental Descriptive Research design **Research Variable-** Knowledge regarding the early symptoms of Atherosclerosis **Research Setting-** Selected areas of Pune city **Research Population** -The population for the present study is Adult. **Sample** -Adult [age group – 30- 70years] **Sample size** -Sample size is 200. **Research tool:** **Section A:** Demographic data. **Section B:** Self Structured questionnaire **Reliability:** Reliability and pilot study was completed and  $r = 0.9$

### Results

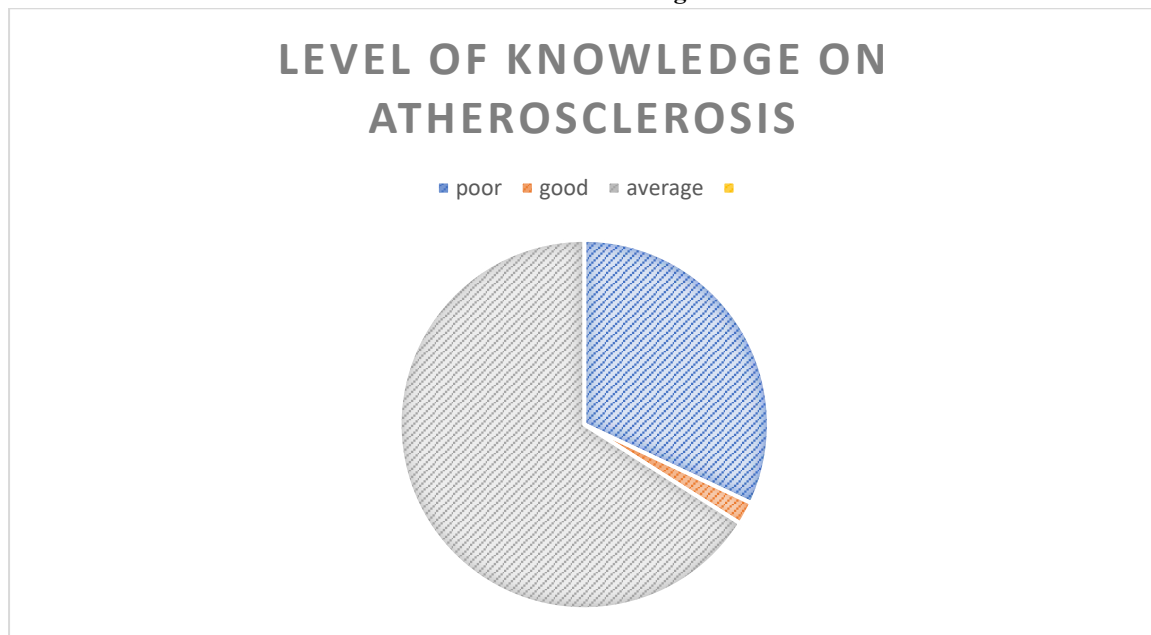
#### Section I:

It depicts, Majority (42.5%) of adult belongs to 30-40 years age group, 29% are of 61-70years, 18% are from 51-60 years and 10% of 41-50years. Majority (52%) of adult are male and 48% are Females. Educational Shows that 59.5% are having primary school education, 27.5% are secondary, 6.5% are graduate, 6.5% are post graduate.

Previous knowledge about disease condition shows that only 2% adult have knowledge about disease condition and 98% adults does not have knowledge regarding atherosclerosis. Family history of atherosclerosis Shows that only 2% of individuals family members had atherosclerosis and 98% of individuals had no family history.

## SECTION II

**Figure 01. Distribution of frequency and percentage of the level of knowledge regarding early symptoms of atherosclerosis among adults**



In this fig. the majority of adults are having average knowledge that is 66%, towards regarding the early symptoms of Atherosclerosis among adults, 32% of the adults were having Poor knowledge eregarding the early symptoms of Atherosclerosis among adults. 2% of the adults were having good knowledge regarding the early symptoms of Atherosclerosis among adults.

**Table.01 Mean, Standard deviation of knowledge score among adults**

KNOWLEDGE SCORE	FREQUENCY	PERCENTAGE
<b>POOR</b> (0 - 7)	64	32%
<b>AVERAGE</b> (8 - 13)	132	62%
<b>GOOD</b> (14 - 20)	4	2%

The mean value received after analysing the knowledge score was 13.46 and the Standard deviation was 2.7

## SECTION III: Item analysis on knowledge regarding early symptoms of atherosclerosis among adults.

n = 200

ITEM NO	FREQUENCY	PERCENTAGE
1.	111	55.50%
2.	106	53%
3.	93	46.50%

4.	96	48%
5.	71	35.50%
6.	69	34.50%
7.	96	48%
8.	76	38%
9.	86	43%
10.	83	41.50%
11.	110	55%
12.	83	41.50%
13.	97	48.50%
14.	88	44%
15.	91	45.50%
16.	81	40.50%
17.	71	35.50%
18.	88	44%
19.	57	28.50%
20.	88	44%

The above research interprets that the demographic of age shows that 42.5% of adult are of 30-40 years, 10% of 41-50years, 18% are from 51-60 years and 29% are of 61-70years. Majority (42.5%) of adult belongs to 30-40 years age group. The distribution of samples according to gender Shows that 52% of the samples are Male and 48% are Females. Majority (52%) of adult are male. Distribution of samples according to education status Shows that 59.5% are having primary school education, 27.5% are secondary, 6.5% are graduate, 6.5% are post graduate. Distribution of samples according to previous knowledge shows that only 2% adult have knowledge about disease condition and 98% adults does not have knowledge regarding atherosclerosis. Distribution of samples according to family history.

### Discussion

The findings of the current study were discussed with the citation of the objectives and assumptions of the study, which was pushed forward to assess the knowledge regarding the early symptoms of atherosclerosis in the selected areas of Pune city among adults. The main findings showed that most of the adults had average knowledge i.e. 66%, 32% of the adults were having Poor knowledge regarding the early symptoms of Atherosclerosis. 2% of the adults were having good knowledge regarding the early symptoms of Atherosclerosis. The above research interprets that the demographic of age shows that 42.5% of adult are of 30-40 years, 10% of 41-50years, 18% are from 51-60 years and 29% are of 61-70years. Majority (42.5%) of adult are 30-40 years age group.

A self-structure questionnaire was prepared to check the knowledge. It was distributed among the adults. From the data inspection, it is evident that majority of adults are from age group are of 30-40 years, and the study shows that majority of the people that is 66% adults have average knowledge 32% have poor knowledge and only 2% of people have good knowledge regarding the early symptoms of atherosclerosis All the demographic variables were found to have no significant association with knowledge and after evaluating the study it is noted that studies regarding atherosclerosis should be made more efficient and should be conducted in a much bigger setting for proper assessment of knowledge. The previous studies also focused on the importance to educate and to conduct more researches and how to improve the knowledge in teens by which we can prevent atherosclerosis before its

too late. From all the pervious studies and recent studies it is understood that how important is the study to educate more people among the community about atherosclerosis and other heart diseases.

### Conclusion

It depicts, Majority (42.5%) of adult are 30-40 years age group, 29% are 61-70years, 18% are from 51-60 years and 10% of 41-50years. Majority (52%) of adult are male and 48% are Females. Educational Shows that 59.5% are having primary school education, 27.5% are secondary, 6.5% are graduate, 6.5% are post graduate. The majority of adults are having average knowledge that is 66%, towards regarding the early symptoms, 32% of the adults were having Poor knowledge regarding the early symptoms of Atherosclerosis. 2% of the adults were having good knowledge regarding the early symptoms of Atherosclerosis.

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**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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