A study to assess the knowledge regarding early signs of myocardial infarction among the adults in selected urban areas of Pune city

Shivcharan Singh Gandhar, Nandini Jadhav, Pooja Ghanekar and Priya Devkar
Bharati Vidyapeeth College of Nursing, Pune, Maharashtra, India

Abstract
Introduction: Myocardial infarction is recognized as one of the leading causes of death worldwide. Depending on the extent of the heart muscle damages, the patient may experience significant disability or die as a result of myocardial infarction. Identifying early signs of myocardial infarction may aid in the early diagnosis of myocardial infarction.

Purpose: To assess the knowledge regarding early signs of myocardial infarction. To associate findings with selected demographic variables.

Methods: This was a Non experimental, exploratory research design and quantitative research approach. 100 adults were selected from urban areas of Pune City by non-probability purposive sampling technique. A self-structured questionnaire was used to assess knowledge with the observational checklist.

Results: Mean score of knowledge regarding early signs of myocardial infarction was 8.28 with 5.061401 standard deviation that show average knowledge and the 'p' value was more than the level of significance 0.05 so There is an association between age, income, occupation, dietary pattern, habits, exercise with knowledge. There is no any association between genders, weight, previous history of myocardial infarction, Family history of myocardial infarction with knowledge.

Conclusion: Knowledge regarding early signs of myocardial infarction was average.

Keywords: substituted Li ferrite, magnetostatic and spin waves, microstrip array antenna, X-band frequency range

1. Introduction
Myocardial infarction, commonly known as a heart attack is the irreversible necrosis of heart muscle secondary to prolonged ischemia. This usually results from an imbalance in oxygen supply and demand of the myocardium. Myocardial infarction is a serious result of coronary artery diseases. Myocardial infarction occurs when a coronary artery is so severely blocked that there is a significant reduction or break in the blood supply, causing damage or death of a portion of the myocardium. Complications of myocardial infarction include arrhythmic, mechanical and inflammatory squeal, as well as left ventricular mural thrombus. In addition to these broad categories right ventricular infarction and cardiogenic shock are another possible complication of myocardial infarction. To avoid the complication and recurrent attack it is necessary to know the early signs of myocardial infarction.

2. Methodology
Quantitative research approach with non-experimental research design was adopted the study was conducted on 100 adults in selected urban areas of Pune city by using non-probability purposive sampling technique. The data were collected by using self-administered questionnaire and checklist. Content validity of the tool was established by suggestion of five experts. The tool was found reliable, which is calculated by test re-test method. (R=0.98)

Ethical consideration: Formal administrative approval was obtained from Bharati Vidyapeeth college of nursing and obtained written informed consent from the participants.

3. Findings
Section 1: Analysis of data related to demographic variables. Below table shows that in the age group majority 34% were 35-40 years of age. In Gender majority 56% were female. In Family income majority 45% was 5000 – 15000 Rs per month. In weight majority 35% was 50-59 Kg. In occupation majority 36% doing the job. In majority 82% had no previous history of myocardial infarction. In majority 74% had no family history of myocardial infarction. In majority dietary pattern 80% were vegetarian. In majority 43% adults had no habits. In majority 71% adults did exercise sometimes.

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Demographic variables</th>
<th>Frequency</th>
<th>Percentage%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>18-23</td>
<td>22</td>
<td>22%</td>
</tr>
<tr>
<td>1</td>
<td>24-28</td>
<td>25</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 1: Frequency and percentage distribution of the adults, according to the demographic variables.
Section II A
Analysis of the data related to the level of knowledge of early signs of myocardial infarction according to their score.

Table 2: Frequency percentage of knowledge score. n=100

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Knowledge score</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Good knowledge</td>
<td>26</td>
<td>26%</td>
</tr>
<tr>
<td>2</td>
<td>Average knowledge</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td>3</td>
<td>Poor knowledge</td>
<td>44</td>
<td>44%</td>
</tr>
</tbody>
</table>

Table No.2- Majority of adults 26% had good knowledge regarding early signs of myocardial infarction, 30% had average knowledge regarding early signs of myocardial infarction and 44% had a poor knowledge regarding early signs of myocardial infarction.

Section II B

Table 3: Mean and standard deviation of knowledge assessed.

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.28</td>
<td>5.061401</td>
</tr>
</tbody>
</table>

Table No. 3- Mean is 8.28 and the standard deviation is 5.061401.

Section III

Table 4: Association of the research findings with selected demographic variables.

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Demographic</th>
<th>X²</th>
<th>P value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>13.65</td>
<td>0.05</td>
<td>Association</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>1.93</td>
<td>0.50</td>
<td>Not association</td>
</tr>
<tr>
<td>3</td>
<td>Income</td>
<td>32.40</td>
<td>0.01</td>
<td>Association</td>
</tr>
<tr>
<td>4</td>
<td>Weight</td>
<td>9.50</td>
<td>0.50</td>
<td>Not association</td>
</tr>
<tr>
<td>5</td>
<td>Occupation</td>
<td>18.08</td>
<td>0.01</td>
<td>Association</td>
</tr>
</tbody>
</table>
6. Previous history of myocardial infarction 2.28 0.25 Not association
7. Family history of myocardial infarction 1.12 0.50 Not association
8. Dietary pattern 6.38 0.05 Association
9. Habits 21.59 0.01 Association
10. Exercise 6.40 0.05 Association

Table No. 4: The p value was more than the level of significance 0.05 so there is no association between age, income, occupation, dietary pattern, habits, and exercise with knowledge. There is no any association between genders, weight, previous history of myocardial infarction, Family history of myocardial infarction with knowledge.

4. Discussion of the research findings
In one of the study, the researcher wishes to assess knowledge regarding early signs of myocardial infarction. Similarly, in our study too we observe the knowledge regarding early signs of myocardial infarction among adults was average.

5. Conclusion
On the basis of the findings of the present study, it can be concluded that adults are having average knowledge regarding early signs of myocardial infarction so we can improve their knowledge by providing more information.

6. Recommendation
Keeping in view the finding of the present study the following recommendation made.
1. A study can be done on large samples
2. The same study can be done with a quantitative research approach having a major group.
3. A similar study can be replicated in a different setting to strengthen the finding.

7. Acknowledgement
We express our appreciation to the respected officials of the Bharati Vidyapeeth deemed university, college of nursing, Pune for cooperation with us for executing the research. The author would like to thank Mrs. Khurshid Jamadar (Principal) and Mr. Shivcharan Singh Gandhar (Guide) for their constant encouragement. The authors also thank to all participants.

8. References
6. www.rguhs.ac.in