Research Article

"A STUDY TO ASSESS THE KNOWLEDGE REGARDING HEART ATTACK AMONG THE ADULTS IN SELECTED OFFICES OF GUWAHATI, ASSAM"

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A R T I C L E   I N F O

A B S T R A C T

Myocardial infarction or 'heart attack" is a type of acute coronary syndrome in which the coronary artery is usually blocked by a blood clot that has formed on an atherosclerotic plaque. Many primary risk factors have been identified with the development of the atherosclerotic coronary artery disease and MI like smoking, obesity, dyslipidemia, diabetes mellitus, hypertension, tobacco use, male gender, family history of atherosclerotic arterial disease, age, post-menopausal state in female. The classic symptoms of heart attack are chest pain, shortness of breath, pressure or tightness in the chest, pain in the neck, jaw, shoulder, radiating to the back, sweating, nausea. Various diagnostic tests are helpful in diagnosing MI, which commonly includes electrocardiograms (ECG), blood tests (troponin, creatinine kinase), coronary angiography. Treatment of an MI is time-critical. Aspirin is an appropriate immediate treatment for a suspected MI. In people with blockages of multiple coronary arteries and diabetes, coronary artery bypass surgery (CABG) may be recommended rather than angioplasty. After an MI, lifestyle modifications, along with long term treatment with aspirin, beta blockers, and statins, are typically recommended. The overall prevalence for MI is about 7.9 million, or 3% in US adults. In 2015,heart attacks claims 114,023 lives in the US. The estimated annual incidence of heart attack in the US is 720,000 new attacks and 335,000 recurrent attacks. Average age at the first heart attackis 65.6 years for males and 72.0 years for females. Approximately every 40 seconds, an American will have a heart attack. Heart Attacks ($12.1 billion) and Coronary Heart Disease ($9.0 billion) were 2 of the 10 most expensive conditions treated in US hospitals in 2013.

Objectives:
•To assess the knowledge regarding Heart Attack among the adults in selected offices of Guwahati, Assam.
•To find out the association of knowledge regarding Heart Attack among the adults with their selected demographic variables such as age, gender, educational qualification, marital status, monthly income, family history of Heart Attack, previous knowledge about heart attack and source of information.

Methods and materials: The study was conducted among 128 adults between 25-64yrs of age in selected offices of Guwahati, Assam who fulfilled the inclusion criteria. Samples were selected by using purposive sampling technique and structured knowledge questionnaire was used to assess the knowledge level.

Results: It was found that out of 128 respondents, majority i.e., 67 (52.35%) respondents had moderately adequate knowledge, 54(42.18%) respondents had adequate knowledge, and seven (5.47%) respondents had inadequate knowledge regarding heart attack. The overall mean and standard deviation of knowledge level was 13.88 and 3.46 respectively. Chi square analysis showed that, there was significant association of knowledge with Educational Qualification, Monthly Income And Source of Information

Conclusion: Thus from this study the investigator concluded that majority of the adults had moderately adequate knowledge level, which means knowledge was required for the adults regarding Heart Attack.

INTRODUCTION

Myocardial infarction or 'heart attack" is a type of acute coronary syndrome in which sudden blockage of a coronary artery, and subsequent myocardial ischaemia, results in damage to the surrounding heart muscle. In a myocardial infarction, the coronary artery is usually blocked by a blood clot that has formed on an atherosclerotic plaque.

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Many primary risk factors have been identified with the development of the atherosclerotic coronary artery disease and MI like smoking, obesity, dyslipidemia, diabetes mellitus, hypertension, tobacco use, male gender, family history of atherosclerotic arterial disease, age, post-menopausal state in female. The classic symptoms of a heart attack are chest pain, shortness of breath, pressure or tightness in the chest, pain in the neck, jaw, shoulder, radiating to the back, sweating, nausea. Various diagnostic tests are helpful in diagnosing MI, which commonly includes electrocardiograms (ECG), blood tests (troponin, creatinine kinase), coronary angiography. Treatment of an MI is time-critical. Aspirin is an appropriate

immediate treatment for a suspected MI. In people with blockages of multiple coronary arteries and diabetes, coronary artery bypass surgery (CABG) may be recommended rather than angioplasty. After an MI, lifestyle modifications, along with long term treatment with aspirin, beta blockers, and statins, are typically recommended.[2]

A positive impact from primary prevention can be basically achieved through a reduction in high blood pressure and by correcting dyslipidemia. The benefit can be substantially increased by smoking cessation, increasing physical exercise, reduction of body weight, use of post-menopausal oestrogen, moderate alcohol consumption and use of high doses of vitamin E in those patients who are compliant with the specific strategies. Secondary prevention of MI can be obtained by controlling blood pressure and reducing serum cholesterol in patients surviving acute MI who can also benefit from the administration of beta-blockers, aspirin and probably ACE-inhibitors particularly in presence of left ventricular dysfunction.

Objectives

- ✓ To assess the knowledge regarding Heart Attack among the adults in selected offices of Guwahati, Assam.
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Review of Literature

Section I: Literature related to Knowledge on Heart Attack
Gomathi K.G. et al. (2017) conducted a cross sectional survey on Knowledge of warning signs, presenting symptoms and risk factors of coronary heart disease among the population of Dubai and Northern Emirates in UAE, the study finding revealed that majority of participants were males (56.7%) and of South Asian (57.5%) or Middle-Eastern (30.8%) ethnicity. Regarding presenting symptoms of CHD, chest pain was identified by around 80% of population, whereas pain in the left shoulder was recognized by 61% .Atypical symptoms were poorly identified. Regarding risk factors, only one-fourth population knew that males were at higher risk compared to premenopausal females. Few knew that the risk increases in females after menopause and that the risk is higher for females who smoke and use oral contraceptives. 62% knew that the survivors of a heart attack are at high risk of recurrences. Except for tobacco smoke, hypercholesterolemia and hypertension, knowledge of other risk factors was not satisfactory. Older adults and females had comparatively higher level of knowledge. Knowledge level of many of the symptoms and risk factors of CHD is unsatisfactory.[4]

Section II: Literature related to Risk Factors of Heart Attack

Milind S.H. P. et al.(2017) conducted a study on Acute Myocardial Infarction, among young adults in India-clinical profile and risk factors, where out of 45 patients more than 80% were male, 35% were in the age group of 41-45 years and only 6% were below 30 years age. 46% of patients belonged to physically more active group. Highest incidence of infarction was in social class II and III constituting 66.67%. Smoking was one of the important risk factors for AMI in this study, present in 55.56% of patients. Type-A personality was noted in 16 patients (35.36%). Apart from conventional risk factors two cases of structural aortic disease, one case each of increase dLp(a) level, Hyperhomocysteinemia and protein-c deficiency had been noted as risk factors as newer risk factors. In young patients with AMI majority of the patients belong to the age group between 36-45 years. Newer risk factors are commonly associated with AMI at young age.[8]

Section III: Literature related to Prevalence of Heart Attack

Dr.Ravikeerthy M. et al.(2015) conducted a study of right ventricular infarction in inferior wall myocardial infarction, 50 cases of inferior wall infarction were included in the study and patients with history of previous infarction ,bundle branch block, cor-pulmonale, suspected pulmonary embolism were excluded. Incidence of right ventricular infarction is about 40% in inferior wall myocardial infarction. Most patients presented with retrosternal chest pain associated with sweating, raised JVP, hypotension, bradycardia. Incidence of right ventricular infarction in inferior wall infarction was fairly common. If diagnosis of right ventricular infarction done accurately and treated early prognosis is usually better.[17]

RESEARCH METHODOLOGY

Research approach: Quantitative research

Research design: Descriptive research

Research variables: Knowledge

Demographic variable: Age, Gender, Educational Qualification, Marital Status, Monthly Income, Family History of Heart Attack, Previous Knowledge about Heart Attack, Source of Information of the Adults.

Setting of the Study: Assam Power Distribution Company Limited (APDCL), Office of the Commissioner, Barak Valley Division, Sports and Youth Welfare Office

Population: Adults

Target population: Adults whose age group was between 25-64 years.

Accessible population: Adults whose age group was between 25-64 years in selected offices of Guwahati, Assam.

Sample: Adults of age group between 25- 64 years in selected offices of Guwahati, Assam, who fulfills the inclusion criteria)

Sampling Technique: Purposive sampling technique

Sample Size: 128

Tools and Technique: Structured knowledge Questionnaire and Self Report

Scoring Key: The correct answer was given score of '1' (one) and wrong answer score '0' (zero). The total score on knowledge regarding Heart Attack was 23.

Category of knowledge level

- ✓ Inadequate knowledge= <33% (<8)
- ✓ Moderately adequate knowledge= 33%-66% (8-15)
- ✓ Adequate knowledge= >66% (>15)

Validity of the tool: The prepared instrument along with the problem statement and objectives was submitted to six experts

of medical surgical nursing and one cardiologist for establishing content validity.

Reliability of the tool: The reliability of the tool was done by using Split half method. It was revealed that the tool was reliable as reliability of the questionnaire was 1.

Pilot Study: The pilot study was conducted from 18th to 23rd June, 2018. 12 samples were selected using purposive sampling technique.

Main study: 2nd- 28th July, 2018.

RESULTS

Section I: Distribution of adults according to their demographic characteristics

Table I Frequency and percentage distribution of adults according to their age group

n=128

Age in years	Frequency	Percentage
25-34	57	44.53%
35-44	29	22.65%
45-54	24	18.75%
55-64	18	14.06%
TOTAL	**128**	**100%**

The table I shows that, out of 128 adults, majority i.e. 57(44.53%) of the respondents were in the age group of25-34 years, 29(22.65%) respondents were in the age group of 35-44years, 24(18.75%) respondents were in the age group of 45-54 years, 18 (14.06%) respondents were in the age group of 55-64.

Table II Frequency and percentage distribution of adults according to their gender

n=128

Gender	Frequency	Percentage
Male	91	71.09%
Female	37	28.90%
TOTAL	**128**	**100%**

The table II shows that, out of 128 adults majority i.e. 91 (71.09%) of the respondents were male, and the rest 37 (28.90%) respondents were female.

Table III Frequency and percentage distribution of adults according to their educational qualification

n=128

Educational Qualification	Frequency	Percentage
Primary	0	0%
High School	11	8.59%
Higher Secondary	12	9.35%
Graduation	68	53.12%
Post-Graduation	37	28.90%
TOTAL	**128**	**100%**

The table III shows that, out of 128 adults majority i.e. 68 (53.12%) of the respondents were Graduates,37(28.90%) respondents completed Post Graduation, 12 (9.35%) respondents completed Higher Secondary, eleven (8.59%) respondents completed High School and zero (0%) respondents completed primary..

Table IV Frequency and percentage distribution Of adults according to their marital status

n=128

Marital Status	Frequency	Percentage
Married	0	62.50%
Unmarried	48	37.50%
TOTAL	**128**	**100%**

The table IV shows that, out of 128 adults i.e.,80 (62.50%) of the respondents were married, 48 (37.50%) respondents were unmarried.

Table V Frequency and percentage distribution of adults according to their monthly income

n=128

Monthly Income(In Rs)	Frequency	Percentage
≤ 20000	10	7.81%
20001 - 40000	45	35.15%
40001 - 60000	43	33.59%
≥ 60001	30	23.43%
TOTAL	**128**	**100%**

The table V shows that, out of 128 adults majority i.e. 45 (35.15%) of the respondents had monthly income between Rs. 20001-40000, 43 (33.59%) of the respondents had monthly income of Rs. 40001-60000, 30 (23.43%) of the respondents had monthly income of>Rs 60001 and the rest ten (7.81%) respondents had monthly income $\leq$ Rs 20000.

Table VI Frequency And percentage distribution of adults according to their family history of Heart Attack

n=128

Family history of Heart Attack	Frequency	Percentage
Yes	10	7.81%
No	118	92.18%
TOTAL	**128**	**100%**

The table VI shows that, out of 128 adults majority i.e., 118(92.18%) of the respondents were not having family history of heart attack and the rest ten (7.81%) respondents were having family history of heart attack.Out of ten respondents, seven of the respondent's father had history of Heart Attack and three of the respondent's uncle had history of Heart Attack.

Table VII Frequency and percentage distribution of adults according to their previous information about heart attack

n=128

Previous information about heart attack	Frequency	Percentage
Yes	122	95.31%
No	6	4.68%
TOTAL	**128**	**100%**

The table VI shows that, out of 128 adults majority i.e.122(95.31%) of the respondents were having previous information about heart attack and the rest six (4.68%) of the respondents were not having previous information about heart attack.

Table VIII Frequency and percentage distribution of adults according to their source of information

n=128

Source Of Information	Frequency	Percentage
Mass Media	48	37.50%
Books	13	10.16%
Parent , Friends , Relatives	39	30.46%
Health Care Professionals	22	17.18%
TOTAL	**122**	**95.31%**

The table VIII shows that, out of 122 adults majority i.e. 48 (37.50%) respondents had the source of information from mass media, 39 (30.46%) respondents had from parents, friends and relatives, 22 (17.18%) respondents had from health care professional and the rest 13 (10.16%) respondents had from books.

Section II- Distribution of adults according to their level of knowledge regarding Heart Attack.

Table IX Frequency and percentage distribution of adults according to their level of knowledge

n=128

Knowledge	Frequency	Percentage
Inadequate (<33%) (Marks <8)	7	(5.47%)
Moderately Adequate (33-66%) (Marks 8-15)	67	(52.35%)
Adequate (>66%) (Marks >15)	54	(42.18%)

The table IX reveals that out of 128 respondents, majority i.e. 67 (52.35%) respondents had moderately adequate knowledge, 54(42.18%) respondents had adequate knowledge, and seven (5.47%) respondents had inadequate knowledge regarding heart attack. The overall mean and standard deviation of knowledge level was13.88 and 3.46 respectively. The results were shown in bar diagram in figure 1.
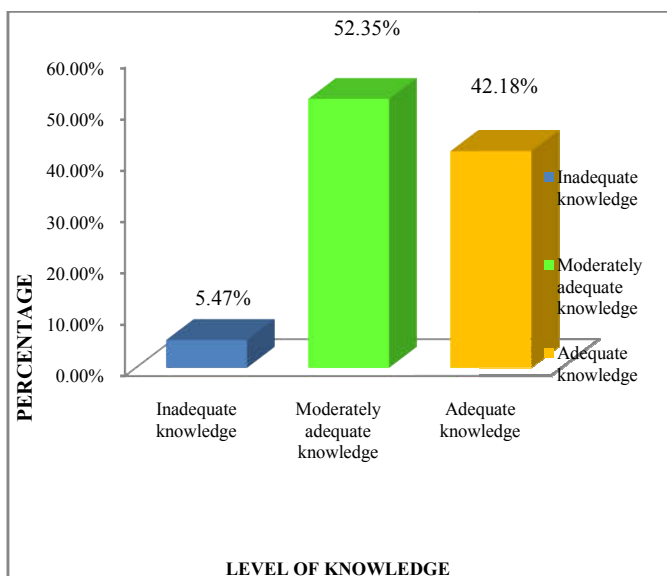

Figure 1 Percentage distribution of the respondents according to their level of knowledge

Section III- Association between the knowledge of the adults with their selected demographic variables

Table X Association between the knowledge of the adults with their selected demographic variables

n=128

Variables	A	MA	Frequency	df	Cal value	Table value	Remarks
Age group							
25-34 years	25	32	57				
35-44 years	13	16	29	3	1.88	7.81	NS
45-54 years	7	17	24				
55-64 years	9	9	18				
Gender							
Male	37	54	91	1	0.63	3.84	NS
Female	17	20	37				
Educational qualification							
Below Graduation	5	18	23				
Above Graduation	49	56	105	1	4.81	3.84	S
Marital status							
Married	32	48	80				
Unmarried	22	26	48	1	0.42	3.84	NS
Monthly Income							
≤Rs.40,000	20	35	55	1	5.3	3.84	S
≥Rs.40,000	34	39	73				
Family History of Heart Attack							
Yes	4	6	10	1	0.019	3.84	NS
No	50	68	118				
Source of information							
Mass Media	18	30	48				
Books	10	3	13				
Parents, Friends, Relatives	19	20	39	3	10.92	7.81	S
Health Care Professionals	5	17	22				

NOTE: For calculation purpose, clubbing of the scores were done for moderately adequate and inadequate and chi square formula is applied at α=0.05 level of significance
MA- Moderately Adequate, A- Adequate, NS- Non significant, df- Degree of freedom, S- Significant

The table X reveals that, there is no association between knowledge and the Age, Gender, Marital status, and Family history of heart attack.

CONCLUSION

In knowledge, the results showed that out of 128 respondents, majority i.e. 67 (52.35%) respondents had moderately adequate knowledge, 54 (42.18%) respondents had adequate knowledge, and seven (5.47%) respondents had inadequate knowledge. In association, the results showed that there was significant association between knowledge among adults regarding heart attack with educational qualification, monthly income and source of information about Heart Attack. The investigator has provided leaflets as a reinforcement to all the adults of the selected offices irrespective of their level of knowledge after the data collection to enhance their knowledge regarding heart attack. Thus, this study give the area to improve the knowledge regarding heart attack among the adults.

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