



International Journal Of
**Recent Scientific
Research**

ISSN: 0976-3031
Volume: 7(6) June -2016

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THE OFFICIAL PUBLICATION OF
INTERNATIONAL JOURNAL OF RECENT SCIENTIFIC RESEARCH (IJRSR)
<http://www.recentscientific.com/> recentscientific@gmail.com



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

International Journal of Recent Scientific Research
Vol. 7, Issue, 6, pp. 11574-11579, June, 2016

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Research Article

A STUDY TO ASSESS THE AWARENESS REGARDING EARLY SIGNS OF HEART AND ITS MANAGEMENT AMONG THE EXECUTIVES WORKING IN SELECTED OFFICES OF PUNE CITY

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ARTICLE INFO

Article History:

Received 20th March, 2016
Received in revised form 29th April, 2016
Accepted 30th May, 2016
Published online 28th June, 2016

Key Words:

Awareness, Knowledge, Early Signs, Management, Executives, Heart Attack, Coronary Artery, Ischemia

ABSTRACT

Background: Over the past two centuries, due to the industrial and technological revolutions associated with economic and social transformations it has resulted in drastic change in the non communicable diseases responsible for illness and death. Cardiovascular disease is one of the leading causes of death worldwide. Lifestyle changes like physical inactivity, altered dietary habits (eg. junk foods rich in cholesterol) etc can cause heart attack. **Aim:** To assess the awareness regarding early signs of heart attack and its management among Executives **Methods:** A descriptive Survey method was used for this study. Research design was non experimental survey method. Sample size was 100 employees from the selected offices in the post of Executives. Five offices were selected by random sampling technique and employees were selected by purposive sampling technique. Content validity was obtained by Expert with field of Medical and Surgical Nursing opinion. Data collection was carried out from 22/2/16 to 18/03/16. Tool reliability was calculated by Split half method and Correlation coefficient was calculated, Chronbach's alpha was 0.83. Data was collected by administering self structured knowledge questionnaire. After assessing the responses to questions, wherever the knowledge gap was identified the respondents were given incidental Health information. Data was compiled and Analysis was done by using inferential statistics **Result:** The data analysis revealed that awareness regarding early signs of heart attack and its management was good among only 19% of the respondent were good, 34% of respondent were average, while 47% of the respondent were poor in knowledge and knowledge of practices. **Conclusion:** Finding of the study revealed that there is lack of knowledge and knowledge of practice regarding early signs of heart attack and its management among the executives. Hence the knowledge needs to be imparted to the Executives class of people keeping in view their sedentary style of working and daily life style, predisposing them to health risk.

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INTRODUCTION

Heart disease has become a leading cause of death to mankind. Cardiac problems are increasing day by day due to lifestyle changes. Coronary artery disease is no longer be perceived as the disease of the elite and elderly (Harvey M 1970). Leading cause of morbidity and mortality is cardio vascular disease. In industrialized countries, they are also emerging as prominent national health problem in developing countries, where communicable diseases are being brought under control. Among them coronary artery disease has become the most important cause of premature death and disability in the population (Ahmad N 2005).

Heart is a muscle that pumps blood around body. It can beat about 100000 times a day that's about 3 billion heart beats during an average lifetime. Heart responsible for circulating

blood throughout the body . Myocardium is the heart muscle that contracts to pumps that blood and like any other muscle, it requires oxygen rich blood for energy (Paul A. Laizzo, 2009). Atherosclerosis occurs due to narrowing of the arteries caused by a buildup of plaque. Arteriosclerosis occurs due to hardening of the arteries, Arteries are the blood vessels that carry oxygen and nutrients from the heart to rest of the body. Fat and cholesterol collect in the arteries and form plaque. The buildup of plaque makes it difficult for blood to flow through the arteries. The deposition of the lumen of the artery leads to narrowing of the artery means the diameter of the lumen is decreased.

Due to the plaque formation oxygen rich blood flow in the artery gets limited. Over a time plaque gets hardened leads to narrowing of coronary arteries and reduces the flow of oxygen rich blood to the heart. And if flow of oxygen rich blood get reduce or diminished cause heart block, angina or heart attack

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can occur. Signs of angina are chest pain or discomfort; it may even feel pressure or squeezing in chest. The pain can radiates to shoulder, arms, neck, jaw or back (Mr A.V. Yadav).

WHO has predicted that by AD 2020, up to three quarters of ailments would result from non – communicable disease and that coronary heart disease will be the first. Coronary heart disease is considered an important public health problem not only in the developed countries, but also in developing countries like India (Yeolekor, WHOSIS). CAD has reached alarming proportions. In India the incidence of this disease ranges from 30 million heart patient, 14 million resides in urban areas and 16 million in rural areas if this will continue then by 2020 India will be leading capital for Cardio Vascular disease (WHO, 2015). The growth of the CVD is increasing drastically may be due to change in lifestyle, unhealthy eating habits and rapidly evolving socio economic, CVD is not only seen in urban population is also seen in rural population also. The prevalence of CHD in India has more than doubled in the past two decades. Prevalence in urban Indians is alarmingly increasing with increasing rates of urbanization in India. Major lifestyle changing patterns have occurred for a large proportion of individuals. This has led to a trend towards decreasing physical activity due to improved transportation and availability of energy saving devices, thus increasing weight and consequently increased rate of diabetes, hypertension and dyslipidemia in urban population (Yeolkor MG. 1998).

Coronary Artery Disease identified a number of lifestyles and environmental factors as the underlying causes of CHD. These risk factors may be modifiable and non modifiable. Age, sex, smoking history of high blood pressure, diabetes, elevated plasma cholesterol /triglycerides, obesity, sedentary lifestyle, personality type and psychological stress are considered some of the major risk factors for CAD. Heart disease have been a global burden of lifestyle disease we can see a dramatic rise in heart disease cases in India can be seen Dr Nikhil Kumar, Director, Cardiology, Fortis Memorial Research Institute says that it is estimated by year 2030 the death rate will be 35.9%. Heart disease is more prevalent in young generation due to owing poor lifestyle, stress, lack of exercise if this continues then this can lead to escalated changes in statistics of mortality and morbidity of young generation from age group of 25-35 (AHA).

Objectives

- To assess the knowledge regarding early signs and management of heart attack.
- To evaluate the knowledge of the practice regarding management of heart attack
- To find the association of awareness regarding heart attack with the demographic variables.
- To find the association of awareness regarding knowledge of practice regarding heart attack with the demographic variables.

MATERIALS AND METHODS

Research Approach

Research approach used in this study was descriptive survey approach

Research Design

Non experimental design (Descriptive survey design)

Setting of the Study

The present study was undertaken in different offices of Pune City.

Sample

Population for the present study was executives.

Sample Size

The total sample size of this study was 100.

Sampling Technique

Non probability purposive sampling technique was adopted.

Sampling Criteria

Inclusion criteria for sampling

1. Professional working as executives at the offices.
2. Professionals keen to become aware of the health organization.
3. Samples who are willing to participate in the study
4. Both female and male are included in the study.

Exclusion criteria for sampling

1. Executives already under treatment for cardiac ailments
2. Executives whose family members are suffering from cardiac health problem.
3. Subjects who are not willing to participate
4. Subjects who are absent on the particular day of data collection

Data Collection Tool

A self-structured questionnaire on knowledge and knowledge of practices was developed to assess the knowledge and knowledge of practices among the executives of offices of Pune. It were validated by experts and guide.

Description of the Tool

Section I: Demographic characteristics of participants

It mainly contained all the demographic aspects for executives covering important areas like level of education, mode of transportation, their health habits, life style practices and stress levels in the office.

Section II: Structured questionnaire to assess knowledge regarding heart attack.

- The questions covered knowledge in the area of:
 1. Meaning of heart attack
 2. Risk factor
 3. Cause
- Each questions had 3 options
- The samples had to answer these question.

Section III: Structured self structured questionnaire to assess knowledge regarding practice of heart attack

The investigator has prepared the tool where the section been divided into different aspect of practice, exercise, diet, lifestyle habits

Section IV: Structured self structured questionnaire to assess the knowledge regarding management of heart attack

The questionnaire regarding the knowledge of management of heart attack which includes the signs and symptoms been seen at patient who had got heart attack, first aid management and medicine that to be taken at the time of heart attack.

Content Validity

Content validity of the tool was established by 8 experts from various fields of expertise.

Reliability

The reliability of the tool was established by using Split half technique and Correlation Coefficient. The reliability of the nursing assessment tool was found to be 0.87. Hence, the tool was found to be highly reliable.

Pilot Study

Pilot study was conducted on 8 subjects.

RESULT

Table 1 Description of respondents based on their personal characteristics in terms of frequency and percentage N=100

Demographic Variable	Frequency	Percentage
Name of the work place		
Bank	20	20%
Construction Company	20	20%
Institution	20	20%
IT	20	20%
NGO	20	20%
Age		
21-35 years	39	39%
36-50 years	55	55%
51-65 years	6	6%
Gender		
Male	52	52%
Female	48	48%
Marital status		
Married	57	57%
Single	41	41%
Divorce	2	2%
Educational qualification		
Diploma	8	8%
Graduate	58	58%
Post graduate	34	34%
Job Designation		
Director	6	6%
Managers	20	20%
Administrative officers	23	23%
Head of department	17	17%
Others specify	34	34%
BMI		
Normal range (18.5-24.9)	9	9%
Over weight (> 25.0)	6	6%
Preobese (25.0-29.9)	58	58%
Obese (> 30.0)	6	6%
Obese class 1 (30.0-34.9)	15	15%
Obese class2 (35.0-39.9)	6	6%

Dietary habit		
Vegetarian	19	19%
Non vegetarian	76	76%
Eggetarian	5	5%
Mode of transportation to office		
Car	59	59%
Scooter	33	33%
Cycle	1	1%
By walking	1	1%
Public transport	6	6%
Distance of work place from home		
>15 km	10	10%
11-15 km	20	20%
6-10 km	56	56%
Upto 5 km	13	13%
Do you smoke		
Occasionally	14	14%
Habitual	8	8%
Non smoker	78	78%
If Yes, How many cigarettes do you smoke /day		
2	2	2%
3	2	2%
4	8	8%
5	3	3%
6	5	5%
No	80	80%
About how many years have you been smoking		
4	1	1%
5	3	3%
6	3	3%
7	2	2%
8	9	9%
11	1	1%
12	1	1%
Nil	80	80%
Do you drink alcohol		
Occasionally	20	20%
Binge	2	2%
Non alcoholic	78	78%
About how many years have you been alcohol		
4	2	2%
5	5	5%
6	5	5%
7	4	4%
8	4	4%
11	1	1%
12	1	1%
1	2	2%
Nil	76	76%
If Yes, How many units do you drink in a day		
1 unit	12	12%
2 units	13	13%
Nil	75	75%
How many hours do you sleep in a day		
5	3	3%
6	18	18%
7	39	39%
8	37	37%
9	3	3%
Are you drowsy or sleepy during you awake hours		
Never	31	31%
Sometimes	69	69%
How often do you face stress situation in your offices		
Never	13	13%
Sometimes	78	78%
Always	9	9%
How do you feel while working in the organization		
Great	31	31%
Satisfied	62	62%
Frustrated	7	7%

Table 1 depict that the majority of the samples were from age group of 21-35 years (39%),

(52%) were male, married respondents were (57%), most of respondent were graduate with (58%), (23%) were administrative officers, more them half of them are pre obese with (58%), majority of them were non vegetarian (76%), (59%) use car as mode of transportation to office, (14%) of them are occasional smoker, (20%) of them are occasional drinker, (39%) of them sleep for 8 hours in a day, (69%) of respondents sometimes drowsy or sleepy during awake hours, most of the respondents face stress situation in office were (78%), (62%) of them are satisfied while working in the organization.

Section II: Analysis of Data Related To the Knowledge Regarding Early Signs and Management of Heart Attack

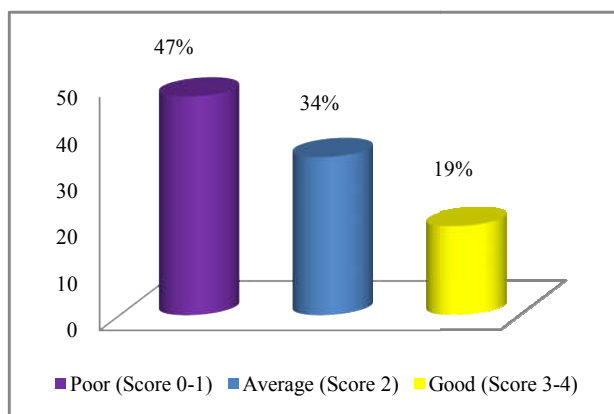


Fig 1 Distribution of respondents knowledge regarding early signs and management of heart attack N=100

Fig 1 shows that 47% of the samples had 19% of them had good knowledge, 34% of them had average knowledge and 47% respondent had poor knowledge regarding early signs and management of heart attack.

Section III: Analysis of Data Related To The Knowledge of The Practice Regarding Early Signs And Management of Heart Attack.

Table 2 Knowledge of the practice regarding early signs and management of heart attack N=100

Practices	Frequency	Percentage
Poor (Score 0-6)	27	27%
Average (Score 7-13)	55	55%
Good (Score 14-20)	18	18%

Table 1 depict that 18% of them had good knowledge of practices, 55% of them had average knowledge of practices and 27% of the samples had poor knowledge of practices, regarding early signs and management of heart attack.

Section IV: Analysis of Data Related To the Associate the Awareness Regarding Heart Attack with The Demographic Variables

Association of the awareness regarding heart attack with the demographic variables was assessed using Fisher’s exact test. The summary of Fisher’s exact test is tabulated below:

Table 2 Fisher’s exact test for association of the knowledge regarding heart attack with the demographic variables N= 100

Demographic variable	Average	Good	Poor	p-value	
Name of work place	Bank	5	2	13	0.863
	Construction company	7	4	9	
	Institution	8	5	7	
Age	IT	7	4	9	0.162
	NGO	7	4	9	
	21-35 years	17	5	17	
Gender	36-50 years	17	13	25	1.000
	51-65 years	0	1	5	
	Male	18	10	24	
Marital status	Female	16	9	23	0.439
	Married	23	10	24	
	Single	11	9	21	
Educational qualification	Divorce	0	0	2	0.059
	Diploma	3	1	4	
	Graduate	15	16	27	
Job Designation	Post graduate	16	2	16	0.285
	Director	3	1	2	
	Managers	4	5	11	
BMI	Administrative officers	6	3	14	0.343
	Head of department	4	5	8	
	Others specify (18.5-24.9)	17	5	12	
Dietary habit	Normal range (18.5-24.9)	5	1	3	0.751
	Over weight (> 25.0)	4	0	2	
	Preobese (25.0-29.9)	7	3	5	
Mode of transportation to office	Obese (> 30.0)	1	1	4	0.648
	Obese class 1 (30.0-34.9)	3	0	3	
	Obese class2 (35.0-39.9)	14	14	30	
Distance of work place from home	Vegetarian	7	3	9	0.227
	Non vegetarian	26	16	34	
	Eggetarian	1	0	4	
Do you smoke	Car	17	12	30	0.947
	Scooter	13	5	15	
	Cycle	1	0	0	
Do you drink alcohol	By walking	1	0	0	0.353
	Public transport	2	2	2	
	> 15 km	3	1	6	
Are you drowsy or sleepy during you awake hours	11-15 km	7	7	7	0.686
	6-10 km	17	11	28	
	Upto 5 km	7	0	6	
How often do you face stress situation in your offices	Occasionally	6	2	6	0.670
	Habitual	3	1	4	
	Non smoker	25	16	37	
How do you feel while working in the organization	Occasionally	10	3	7	0.826
	Binge	0	0	2	
	Non alcoholic	24	16	38	
Do you feel while working in the organization	Never	9	7	15	0.686
	Sometimes	25	12	32	
	Never	4	4	5	
How often do you face stress situation in your offices	Sometimes	28	14	36	0.670
	Always	2	1	6	
	Great	9	8	14	
How do you feel while working in the organization	Satisfied	22	10	30	0.826
	Frustrated	3	1	3	

Since all the p-values are large (greater than 0.05), none of the demographic variable was found to have significant association with knowledge regarding heart attack.

Table 3 Fisher's exact test for association of the knowledge of practices regarding heart attack with the demographic variables N=100

Demographic variable		Average	Good	Poor	p-value
Name of work place	Bank	11	3	6	0.127
	Construction company	8	4	8	
	Institution	11	4	5	
	IT	17	3	0	
Age	NGO	8	4	8	0.536
	21-35 years	21	9	9	
	36-50 years	32	8	15	
	51-65 years	2	1	3	
Gender	Male	26	10	16	0.564
	Female	29	8	11	
Marital status	Married	30	9	18	0.542
	Single	24	9	8	
	Divorce	1	0	1	
Educational qualification	Diploma	3	2	3	0.230
	Graduate	33	7	18	
	Post graduate	19	9	6	
	Director	2	1	3	
Job Designation	Managers	12	4	4	0.605
	Administrative officers	11	3	9	
	Head of department	8	4	5	
	Others specify	22	6	6	
	Normal range (18.5-24.9)	4	2	3	
BMI	Over weight (> 25.0)	2	1	3	0.565
	Preobese (25.0-29.9)	32	12	14	
	Obese (> 30.0)	5	0	1	
	Obese class 1 (30.0-34.9)	8	1	6	
	Obese class2 (35.0-39.9)	4	2	0	
Dietary habit	Vegetarian	11	3	5	0.940
	Non vegetarian	41	15	20	
	Eggetarian	3	0	2	
Mode of transportation to office	Car	37	11	11	0.048
	Scooter	15	4	14	
	Cycle	0	1	0	
	By walking	0	1	0	
Distance of work place from home	Public transport	3	1	2	0.037
	> 15 km	4	0	6	
	11-15 km	10	3	8	
	6-10 km	35	13	8	
	Upto 5 km	6	2	5	
Do you smoke	Occasionally	9	3	2	0.303
	Habitual	7	0	1	
	Non smoker	39	15	24	
Do you drink alcohol	occasionally	15	3	2	0.114
	Binge	1	1	0	
Are you drowsy or sleepy during you awake hours	Non alcoholic	39	14	25	0.019
	Never	19	1	11	
How often do you face stress situation in your offices	Sometimes	36	17	16	0.899
	Never	7	3	3	
How do you feel while working in the organization	Sometimes	44	13	21	0.079
	Always	4	2	3	
	Great	18	2	11	
	Satisfied	31	15	16	
	Frustrated	6	1	0	

Since p-values corresponding to mode of transportation to office, distance of work place from home and 'Are you drowsy or sleepy during you awake hours' are small (less than 0.05), demographic variables mode of transportation to office, distance of work place from home and 'Are you drowsy or sleepy during you awake hours' were found to have significant association with knowledge of practices regarding heart attack.

DISCUSSION

The present study proved that there is lack of knowledge and knowledge of practice regarding early signs and management to support it a similar study is been done A descriptive study been done by (Vas M *et al*, 2000) to find out the detail physical activity profiles of educated employed in urban India. About 40% subjects between the ages 25 and 58 years were respondent. The study revealed that 50% of the subjects were aware of the benefits of exercise in preventing heart disease. Lack of motivation and time were the most often cited reasons for being unable to achieve ideal exercise goals.

A descriptive cross sectional study was done by (Kirkland SA *et al*, 2004) regarding the knowledge and awareness of risk factors of CVD among Canadians. The samples were 4976 samples were included in analysis and knowledge and awareness of CV risk factors was determined from the survey questionnaire. BP, anthropometric measurement, and blood measurement were obtained during a clinic visit. The finding were smoking and stress were manifested as a major cause of heart attack 41% men and 44% women, awareness of BP women did not differ in their (23%), physical inactivity (28%) as causes for heart attack.

A cross sectional study been done by (Yuba R *et al*, 2005) to determine the knowledge of heart attack and its symptoms and the anticipated first response to the symptoms among the public in Nepal aged between 16 to 18 years. A samples of 862 were taken for study. The results revealed that 91.7% of samples have heard about heart attack, but 21.3% could not name any symptoms of heart attack. The conclusion is awareness is not adequate and knowledge of wide range of heart attack symptoms is deficient in Nepalese general population.

In the present study researcher want to discuss regarding the importance of education can bring a change in reduce of heart attack. A field experiment was undertaken by (Hislop TG *et al*, 2003) in three northern California towns to determine whether community health education can reduce the risk of heart attack. The samples varied from 12000 and 15000 from two town an intensive mass campaign been done before that each samples were interviewed and examined before campaign began and one to two years afterwards to assess the knowledge of behavior related to heart attack and to measure the physiological indicators of risk. The result showed that in the community the risk of CVD increased over two years, but in the intervention communities there was a substantial and sustained decrease in risk. The net difference in estimated total risk between control and intervention samples was 23-28%.

CONCLUSION

As heart attack is major cause of death worldwide so it is important for the executives to have an awareness regarding the early signs and management of heart attack to cope up with situation if it arises for the self as well as for other. As the finding suggest that is lack of awareness regarding the early signs of heart attack and its management. With this it will help to prevent the mortality and morbidity rate of heart attack and can give first aid to self or others.

Acknowledgement

First of all, I praise and thank **ALMIGHTY GOD** for his loving care and special grace bestowed on me and led me thus far. I am grateful to **Lt Col Shobha Naidu (Retd), Symbiosis College of Nursing** for her timely guidance and support to conduct this research study and to the **respondents** for participation in the study.

Conflict of Interest

The author does not have any conflict of interest.

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How to cite this article:

Unni Sini K and Lt Col. Shobha Naid.2016, A Study to Assess the Awareness Regarding Early Signs of Heart and its Management among the Executives Working in Selected offices of Pune City. *Int J Recent Sci Res.* 7(6), pp. 11574-11579.

T.SSN 0976-3031



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