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Development of an information booklet on prevention of myocardial infarction among selected employees of Pune city

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Abstract

A descriptive with cross sectional study to develop an information booklet on prevention of myocardial infarction among selected employees of Pune city was conducted. 100 samples were selected by Non Probability Purposive sampling technique. Pre-test done with help of structured questionnaire to assess the knowledge of myocardial infarction & its prevention. The data obtained were analyzed by using differential and inferential statistics. The data shows that maximum frequency & percentage is 59 (59) % for the score of 36 – 65 which is good score. The frequency & percentage for the score of 0-35 is 22 (22%) which is poor and the lowest frequency & percentage is 19 for the score of 66-100 which is excellent.

Keywords

Tuberculosis, Knowledge, Attitude

INTRODUCTION

Traditionally heart is considered to be the "Seat of soul", "Centre of courage", "Treasure of love and Affection" and "Abode for soul" and even 'refuge for hatred too'. All these are merely literary expression and not far away from physiological truth. In fact heart is the nonstop pump, which maintains circulation of the life, sustaining the fluid, the blood to circulate every part of the body. "Heart beat represents life and lack of it pronounces death".

Myocardial infarction is a life threatening condition characterized by the formation of localized necrotic areas within the myocardium, called heart attack, coronary occlusion, or simply a coronary. The occlusion of coronary artery is sudden and leads to an abrupt cessation of blood and oxygen flow of the myocardium leading to necrosis and can be lethal.

Dewan B.D. published the first Indian study using the Minnesota code in 1974, which reported Coronary Heart Disease prevalence of 2.28% among males and 1.73% among females in rural Maharashtra. Later during 1987-88 Chadha et. al carried out a study in the rural areas of Haryana and reported a lower prevalence of symptomatic Coronary Heart Disease among men (0.74%) and women (0.51%) while total prevalence was higher (2.71%) when silent Coronary Heart Disease cases were also included. The urban sample had a higher symptomatic Coronary Heart Disease prevalence (3.19%) compared to rural areas (0.59%).Indian Childhood & Maternity Reproductive Task force, carried out a study in 1991-94 reported 11% and 10% prevalence of Coronary Heart Disease among men and women respectively in urban Delhi. At the same

time the rural areas in Haryana had a lower prevalence (5.6% & 6.4%) than urban Delhi. Gupta R. carried out serial epidemiological surveys in Jaipur during 1992-95 and 2001 and presented almost similar prevalences among men (5.96% vs 6.18%) and women (10.5% vs 10.1%). Although no major differences in total prevalence was reported, age specific rates show a decline in males less than 40 years old. There was an increase in Coronary Heart Disease prevalence in those aged 40–59 years among men. South Indian population in general had higher prevalence compared to north Indian population. Ramchandran reported 4% CHD prevalence in Chennai during 1994 while Mohan V. documented a higher prevalence (11%) during 1996-97. Similarly, Kutty V.R. carried out a study in the rural areas of Kerala and found 7.4 % prevalence of Coronary Heart Disease among twenty-five plus age group during 1990-91.Beegom R. reported 13.9% of CHD prevalence in 1995 in the urban areas of Trivandrum, Kerala. Chadha et al carried out a prospective cohort study while Gupta and Khetrapaul carried out a registry based study. The earliest study was carried out by Gupta et al during 1977-78 reported the incidence of CHD among men and women at 0.57% and 0.23% each. Trivedi et al followed a cohort in Kheda, Gujarat from 1987 to 1992 and demonstrated the incidence of Coronary Heart Disease at 0.252%. Chadha et al conducted two repeat surveys in Delhi and documented the incidence of Coronary Heart Disease, during 3 year period after initial survey carried out during 1987-90, at 1.73% among men and 2.1% among women. (W.H.O. 2002)

STATEMENT OF A PROBLEM

"Development of an information booklet on prevention of myocardial infarction among selected employees of Pune city".

OBJECTIVE

(1) To identify the knowledge on prevention of myocardial infarction among selected employees.

(2) To find an association between the level of knowledge on prevention of myocardial infarction among selected employees with selected demographic variables.

(3) To develop an information booklet on prevention of myocardial infarction.

ASSUMPTIONS

The study assumed that:

1) The selected employees of Pune city may have some knowledge regarding prevention of Myocardial Infarction.

2) Information booklet may help to enhance knowledge regarding Prevention of Myocardial Infarction.

3) Demographic variable may influence the knowledge regarding Prevention of Myocardial Infarction.

4) Selected employee's knowledge regarding prevention of myocardial infarction will help them for early detection & identification of myocardial infarction which in turn help them for early referral to health care facility.

Methodology:

Research Approach

The researcher has adopted descriptive with cross sectional approach. The present study aims at "Development of an information booklet on prevention of myocardial infarction among selected employees of Pune city".

Research Design

The researcher has adopted descriptive with cross sectional design. The descriptive design was used to develop information booklet on prevention of myocardial infarction, after assessing knowledge on prevention of myocardial infarction among selected employees of Pune city. It provides the best framework for the study.

Setting of the Study

The setting for this study was State Bank of India & Central Bank of India Pimpri, Nigadi Police station, Tata Sehgal Motors & Company, Chinchwad & DR. D.Y. Patil College of Arts, Commerce & Science Pimpri of P.C.M.C. area of Pune city.

Population

The population of the present study comprises the employees of Bank, Police station, Private Company & College of P.C.M.C. area of Pune city.

Sample Size

The sample size selected for this study was 100. 25 employees were from Bank, 25 were from Police station, 25 were College & 25 were from Private Company of P.C.M.C. area of Pune city. Only those who fulfilled the sampling criteria and who expressed their willingness to participate in the study were selected.

Data Collection Technique and Tool

Most important and crucial aspect of any research is data collection which provides answers to the question under study. Tool is selected appropriately in a given situation, depending on the research approach, sample size, laid down criteria etc. The phenomena in which researcher is interested must ultimately be translated in to data that can be analyzed.

The present study aimed at development of an information booklet on prevention of myocardial infarction among selected employees of Pune city. Thus a structured questionnaire was used for data collection.

Development of Tool

Structured questionnaire was worded in a manner that could minimize the risk of response biases, enhance clarity and unambiguously, and being courteous to the needs and rights of respondents especially when asking questions of highly private nature.

For selection of the items and preparation of the tool, the following steps were taken. Review of research & non research literature was conducted in the area related to myocardial infarction knowledge among selected employees.

Opinion and suggestion were taken from expert, which helped in determining the important areas to be included.

Description of Tool

Section I: This section is divided into three parts which included items seeking information on

A. Demographic data: It includes age, gender, education, occupation, monthly family income, it consists of 5 questions.

B. Medical data: It includes past & present history of illnesses of self & family member & history of medicine for any illnesses & for oral contraceptives. It consists of total 6 questions.

C. Personal data: It includes question related to habit of food pattern, tobacco, tea/coffee, and alcohol consumption. It includes total 4 questions.

Section II: This section included items to assess the knowledge of myocardial infarction & its prevention. There are total 20 questions.

Reliability-

The Split half test reliability was used .The researcher administered the same test to a sample of individuals then compared the scores obtained. The comparison procedure is performed objectively by computing reliability by Cronbach's alpha method.

The reliability (r) was calculated and the value is equal to 0.82. If value of (r) is greater than 0.70 then the test is reliable. Thus the tool was found reliable.

Procedure for Data Collection

The final study was conducted from 18th November to 08th December 2009. Actual data collection was done on 100 employees for meeting the criteria for the study. Samples were collected from P.C.M.C. area of Pune.

The following schedule was followed for data collection: Objective of the study was discussed with subjects and their consent was obtained for participation in the study.

Plan for Data Analysis

The statistical analysis was made on the basis of objectives and assumptions. The data analysis was planned to include descriptive and inferential statistics. The following plan was developed for data

analysis on the basis of the opinion of experts.

- For the analysis of demographic data frequencies and percentage was calculated.
- For the analysis of data related to knowledge on prevention of myocardial infarction frequency, percentage was calculated and finding was documented in table & graphs.
- The significance was calculated by using sum, factorial and calculated 'p' value. Fisher's exact test was used to find the co-relation with every item and the findings were documented in tables, graphs.

FINDING OF THE STUDY

Table 1 consists of distribution of sample characteristics.

N = 100

S.NO.	CHARACTERISTIC OF SAMPLE	FREQUENCY	PERCENTAGE
DEMOGRAPHIC DATA			
1.	**AGE IN YEARS**		
	21-30	35	35%
	31-40	27	27%
	41-50	28	28%
	51 & Above	10	10%
2.	**GENDER**		
	Male	67	67%
	Female	33	33%
3.	**EDUCATION**		
	High school	3	3%
	Graduate	47	47%
	Post graduate	50	50%
	Doctorate	0	0%
4.	**OCCUPATION**		
	Bank employees	25	25%
	Police	25	25%
	Manager	25	25%
	Teacher	25	25%
5.	**MONTHLY FAMILY INCOME**		
	Below Rs.10,000	12	12%
	RS.10,001-15000	28	28%
	RS.15,001-20,000	29	29%
	More than 20,001	31	31%
MEDICAL DATA			
1.	**Presence of any heart disease at present**		
	Yes	11	11%
	No	89	89%
2.	**History of other illness at present**		
	Yes	18	18%
	No	82	82%
3.	**Past history of other illness**		
	Yes	17	17%
	No	83	83%
4.	**Family members have heart disease**		
	Yes	32	32%

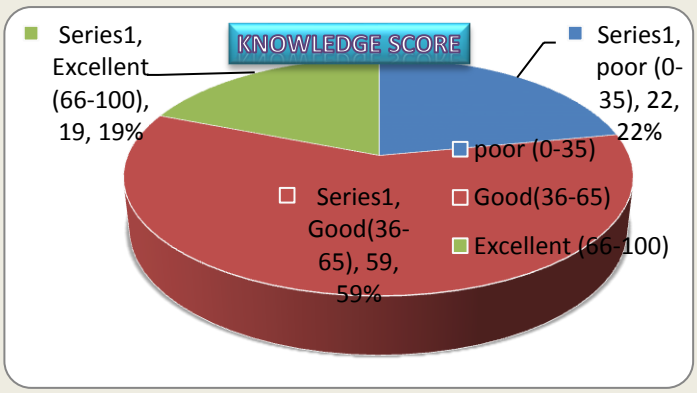
	No	68	68%
5.	**Taking any medicine**		
	Yes	20	20%
	No	80	80%
6.	**Taking any oral contraceptive (Females)**		
	Yes	4	12.12%
	No	29	87.88%
PERSONAL HABITS			
1.	**FOOD PATTERN**		
	Vegetarian	48	48%
	Non Vegetarian	52	52%
2.	**TOBBACCO**		
	a. Smoking		
	Yes	29	29%
	No	71	71%
	b. Chewing		
	Yes	19	19%
	No	81	81%
3.	**a. TEA**		
	Yes	74	74%
	No	26	26%
	b. COFFEE		
	Yes	61	61%
	No	39	39%
4.	**ALCOHOL**		
	Yes	23	23%
	No	77	77%

Tables 2 Explain the data related to knowledge on prevention of myocardial infarction among selected employees.

Distribution of Category wise percentage of the knowledge scores. N=100

S.NO.	CATEGORY	PERCENTAGE
1.	Meaning & definition	70 %
2.	Physiology of heart	85 %
3.	Incidence	51 %
4.	Causes	52.25 %
5.	High risk factors	51 %
6.	Sign & symptoms	36 %
7.	Management & prevention	49.5 %
8.	Complication	80 %

Figure 1 Distribution of level of knowledge scores in percentage



This section deals with the association of demographic variables with knowledge score. Here Fisher's exact test is used to find association between Demographic variable & knowledge score.

Table 3- Analysis of data to find the association between the levels of knowledge of selected employees with selected demographic variables.

N=100

S.NO.	DEMOGRAPHIC VARIABLES	p – VALUE
1.	AGE	0.80
2.	GENDER	0.46
3.	EDUCATION	0.67
4.	OCCUPATION	0.06
5.	MONTHLY FAMILY INCOME	***0.04***
6.	PRESENCE OF ANY HEART DISEASE AT PRESENT	0.82
7.	PRESENT HISTORY OF OTHER ILLNESS	0.08
8.	PAST HISTORY OF OTHER ILLNESS	0.16
9.	FAMILY MEMBERS HAVING HEART DISEASE	0.72
10.	TAKING ANY MEDICINE AT PRESENT	0.61
11.	TAKING ANY ORAL CONTRACEPTIVE(FEMALES)	1
12.	FOOD PATTERN	
	A. VEGETARIAN	1
	B. NON VEGETARIAN	0.17
13.	TOBBACCO	
	A.SMOKING	0.26
	B.CHEWING	0.56
14.	A.TEA	0.73
	B.COFFEE	0.21
15.	ALCOHOL	***0.000***

The above table shows that, there is significant association between family monthly income & alcohol consumption with knowledge scores on prevention of myocardial infarction of selected employees with the help of FISHER'S EXACT test. There is no significant relation between other rests of demographic variables with knowledge score on prevention of myocardial infarction at 5% level of significance. Thus knowledge on prevention of myocardial infarction improvement is necessary.

CONCLUSION

Knowledge score shows that 22% employees having poor knowledge, 59% employees having good knowledge and only 19% employees are having excellent knowledge on prevention of myocardial infarction.

The findings on relationship between knowledge regarding prevention of myocardial infarction and selected demographic variables of the employees shows that, there is significant association between family monthly income & consumption of alcohol. Thus knowledge on prevention of myocardial infarction improvement is necessary.

On the basis of above findings the information booklet on prevention of myocardial infarction was prepared.

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