

An Experimental Study to Evaluate the Effectiveness of Information Booklet On Knowledge Regarding Awareness of Acute Myocardial Infarction Among People Residing at Selected Areas of Punjab

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Abstract

Introduction: A myocardial infarction, also known as heart attack, is an extremely dangerous condition that occurs because of a lack of blood supply to heart muscle. The lack of blood flow can occur because of many different factors but is usually related to a blockage in one or more of heart's arteries. At present, India has the highest burden of acute coronary syndrome and ST-elevation myocardial infarction (MI).

Materials & Methods: An experimental research design was used. The total sample size of the study was 50 people residing at selected wards of Zirakpur, Punjab, which were selected by non-probability convenience sampling technique. The tool selected for the present study was self-structured knowledge questionnaire. The tool was validated by 11 experts for establishing the content validity. The reliability of the tool was found 'r'0.76 hence the found was highly reliable.

Results: There was no statistically significant difference in pre-test knowledge scores among experimental (13.3+5.0) and control group (11.6+4.2). However, there was statistically significant difference among post test knowledge score of experimental group (32.7+2.4) and control group (12.0+4.6) with $t = 19.461$ (df 48) $p = 0.001$. Further there was no statistically significant difference among pre-test score (11.6+4.2) and post-test score (12.0+4.6) in control group. But there was a statistically significant difference in pre-test score (13.3+5.0) and post-test score (32.7+2.4) in experimental group ($P = 0.001$). Therefore, null hypothesis is rejected and research hypothesis is accepted at $p < (0.05)$.

Conclusions: The study findings concluded that the information booklet regarding awareness of acute myocardial infarction was effective in increasing the knowledge level in experimental group.

Keywords: knowledge; effectiveness; information booklet; awareness; myocardial infarction; people.

Introduction

In India, heart disease is the single largest cause of death with heart attacks being responsible for 1/3rd of all deaths caused by heart diseases. According to the projection by the WHO and the Indian Council for Medical Research (ICMR), India will not only be the heart attack capital but also the capital of diabetes and hypertension by 2020. Heart attacks occur most often as a result of a condition called coronary artery disease (CAD). In CAD, a fatty material called plaque builds up over many years on the inside walls of the coronary arteries (the arteries that supply blood and oxygen to your heart). Eventually, an area of plaque can rupture, causing a blood clot to form on the surface of the plaque. If the clot becomes large enough, it can mostly or completely block the flow of oxygen-rich blood to the part of the heart muscle fed by the artery. The onset of heart attack symptoms can be very sudden and require immediate medical attention. An ambulance should be called and critical care services alerted as soon as symptoms appear.

Myocardial Infarctions are the leading cause of death in the industrialized nations of the world. In the United States, there are about 450,000 deaths due to MIs each year. Now 95% of patients hospitalized with an MI will survive due to improvements in emergency response time, and treatment techniques. The risk of having an MI increases with age, but 50% of MIs in the United States occur in people under the age of 65 years old.

The vast majority of heart attacks occur because of a blockage in one of the blood vessels that supplies your heart. This most often happens because of plaque, a sticky substance that can build up on the insides of your arteries (similar to how pouring grease down your kitchen sink can clog your home plumbing). That buildup is called atherosclerosis.

Objective

1. To assess the pretest knowledge score regarding awareness of acute Myocardial infarction among people residing at selected areas of Punjab.
2. To prepare information booklet on Acute Myocardial infarction
3. To administer information booklet on Acute Myocardial infarction among people residing at selected areas of Punjab in experimental group .

4. To evaluate the effectiveness of an information booklet on awareness regarding Acute Myocardial infarction among people by comparing pretest and post-test awareness score in experimental and control group.
5. To determine association of awareness regarding Acute Myocardial infarction among person with their selected demographic variables.

Materials & Methods:

Research Approach : The choice of the appropriate research approach depends upon the purpose of the study. The quantitative research approach was adopted for the study.

Research Design : The research design was adopted for the study was quasi experimental research design ,which include convenience assignment ,manipulation and control group.

Research Setting : The present study was conducted at ward no 24 and ward no 30 Zirakpur ,Mohali, Punjab .

Target Population; The target population for the present study was all the people residing in selected areas of Punjab .

Inclusion Criteria: People who were

- Willing to participate
- Were present at the time of data collection
- Can read and write in Punjabi/English .

Exclusion Criteria: People who were

- Not willing to participate
- Were illiterate
- Were Not present at the time of data collection

Sample size: The sample size for the present study was 50,25 from ward no 24 and 25 from ward no 30 Zirakpur.

Sampling technique- Sample selected by using convinces sampling technique.

Development and description of tool

Section A; Demographic variables

Section B; Structure knowledge questionnaire

Development and description of the tool

Tool consist of 2 Sections .

Section A- Demographic Profile: This part of tool

will provide the base-line information of study participants and these are Age in year, Gender, educational status, Religion, Type of work pattern, Family monthly Income, Marital status, Family type, Place of residence and Are you patient or relative.

Section B: Structured Questionnaire Schedule: It was formulated to assess the level of awareness among person with highest risk for AMI and their relatives. It consists of total 35 questions to assess the overall understanding.

TABLE: 1FREQUENCY DISTRIBUTION OF SOCIO DEMOGRAFIC VARIABLES.

SECTION-1 SOCIO DEMOGRAPHIC PROFORMA		Experimental (%)	Control (%)	Experimental (N=25)	Control (N=25)
Age in Years	Above 60 years	20%	16%	5	4
	41-50 years	32%	44%	8	11
	31-40 years	36%	32%	9	8
	21-30 years	12%	8%	3	2
Gender	Male	36%	24%	9	6
	Female	64%	76%	16	19
Religion	Hindu	68%	52%	17	13
	Muslim	0%	16%	0	4
	Christian	4%	4%	1	1
	Other	28%	28%	7	7
Education	Graduate	20%	20%	5	5
	Higher secondary	44%	48%	11	12
	Secondary	20%	24%	5	6
	Primary	16%	8%	4	2
Type of Work Pattern	Heavy worker	24%	20%	6	5
	Moderate worker	68%	64%	17	16
	Sedentary worker	8%	16%	2	4
Monthly Income Per Month	RS 20001 and above	52%	52%	13	13
	RS 15001 to 20000	48%	48%	12	12
	RS 10001-15000	0%	0%	0	0
	RS.5000-10000	0%	0%	0	0
Marital Status	Married	84%	72%	21	18
	Unmarried	16%	28%	4	7
	Widow	0%	0%	0	0
Type of Family	Nuclear family	68%	60%	17	15
	Joint family	32%	40%	8	10
Place of Residence	Urban	4%	4%	1	1
	Semi-urban	72%	68%	18	17
	Rural	24%	28%	6	7
Are You Patient or Relative	Patient	64%	64%	16	16
	Relatives	36%	36%	9	9

Table 2: Showing Frequency & Percentage distribution of Pre-Experimental and Pre-Control Group of Knowledge Scores.

CRITERIA MEASURE OF KNOWLEDGE SCORE		
CATEGORY SCORE	PRE EXPERIMENTAL	PRE CONTROL
GOOD(28-35)	0(0%)	0(0%)
AVERAGE(19-27)	5(20%)	4(16%)
POOR(0-18)	20(80%)	21(84%)

Maximum=35 Minimum =0

Table 3: Showing Frequency & Percentage distribution of Post-Experimental and Post-Control Group of Knowledge Scores.

CRITERIA MEASURE OF KNOWLEDGE SCORE		
CATEGORY SCORE	POST EXPERIMENTAL	POST CONTROL
GOOD(28-35)	22(88%)	0(0%)
AVERAGE(19-27)	3(12%)	6(24%)
POOR(0-18)	0(0%)	19(76%)

Maximum=35 Minimum =0

Table No 4: Comparison of descriptive statistics b/w Post Experimental & Post Control Group of knowledge.

N=25+25

	Descriptive Statistics	Mean Score	S.D.	Median Score	Maximum	Minimum	Range	Mean%
	Experimental	32.72	2.458	33	35	26	9	93.49
POST	Control	12.08	4.699	11	19	5	14	34.51

Maximum=35 Minimum=0

Table 5: Comparison of frequency & percentage distribution of pre-test and post-test of both groups of

CRITERIA MEASURE OF KNOWLEDGE SCORE				
SCORE LEVEL	PRE EXPERIMENTAL	PRE CONTROL	POST EXPERIMENTAL	POST CONTROL
GOOD(28-35)	0(0%)	0(0%)	22(88%)	0(0%)
AVERAGE(19-27)	5(20%)	4(16%)	3(12%)	6(24%)
POOR(0-18)	20(80%)	21(84%)	0(0%)	19(76%)

Maximum=35 Minimum=0

Table No 6: Showing comparison within the Group with Paired & Unpaired T Test of Knowledge Scores.

		KNOWLEDGE SCORE				Paired T Test		
		Pretest		Posttest		df	T	Result
Group	N	Mean	SD	Mean	SD			
Experimental Group	25	13.36	5.057	32.72	2.458	24	17.507	P value=<0.001 Significant
Control Group	25	11.680	4.269	12.08	4.699	24	1.445	P value=0.161 Non Significant
Unpaired T Test	df	48		df	48			
	T	1.269		T	19.461			
	Result	P value=0.21 Non Significant		Result	P value=<0.001 Significant			

Maximum = 35 Minimum = 0

Table No 7: Table Showing Association of Scores and Demographic Variables.

DEMOGRAPHIC VARIABLES		ASSOCIATION OF KNOWLEDGE SCORE WITH DEMOGRAPHIC VARIABLES (PRE KNOWLEDGE) EXPERIMENTAL GROUP							
Variables	Opts		AVERAGE	POOR	Chi Test	P Value	df	Table Value	Result
Age in Years	Above 60 years	0	2	3	2.569	0.463	3	7.815	Not Significant
	41-50 years	0	2	6					
	31-40 years	0	1	8					
	21-30 years	0	0	3					
Gender	Male	0	1	8	0.694	0.405	1	3.841	Not Significant
	Female	0	4	12					
Religion	Hindu	0	4	13	0.525	0.769	2	5.991	Not Significant
	Muslim	0	0	0					
	Christian	0	0	1					
	Other	0	1	6					
Education	Graduate	0	1	4	1.364	0.714	3	7.815	Not Significant
	Higher secondary	0	3	8					
	Secondary	0	1	4					
	Primary	0	0	4					
Type of Work Pattern	Heavy worker	0	0	6	2.941	0.230	2	5.991	Not Significant
	Moderate worker	0	5	12					
	Sedentary worker	0	0	2					
Monthly Income Per Month	RS 20001 and above	0	3	10	0.160	0.689	1	3.841	Not Significant
	RS 15001 to 20000	0	2	10					
	RS 10001-15000	0	0	0					
	RS.5000-10000	0	0	0					

Marital Status	Married	0	5	16	1.190	0.275	1	3.841	Not Significant
	Unmarried	0	0	4					
	Widow	0	0	0					
Type of Family	Nuclear family	0	3	14	0.184	0.668	1	3.841	Not Significant
	Joint family	0	2	6					
Place of Residence	Urban	0	0	1	0.347	0.841	2	5.991	Not Significant
	Semi-urban	0	4	14					
	Rural	0	1	5					
Are You Patient or Relative	Patient	0	3	13	0.043	0.835	1	3.841	Not Significant

Conclusions:

The following conclusions were drawn from the following finding of the study.

The informational booklet on awareness of Acute Myocardial infarction and responses to hypothetical symptom scenarios found to be effective in increasing the awareness and response of person and their relative. The samples had a highly significant gain in awareness and response after providing the information booklet.

Recommendations

- An information booklet can be prepared as a teaching aid in the hospitals and out patient clinics.
- A similar study can be done with control group.
- A longitudinal study can be done using post test after one month, six months and one year to see retention of knowledge.
- A similar study can be done in urban and rural areas so findings can be compared.
- Similar study can be replicated on a large sample.
- Similar study can be replicated in outpatient department.
- A study can be done by involving all the cardiac patients, because the cardiac rehabilitation programme also helpful in cardiac surgery

patients.

- A Comparative study can be conducted between two different teaching methods.
- A follow-up study can be conducted to evaluate the effective of planned rehabilitation among the myocardial infarction patient observing their practices at home.

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