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A Study to Assess The Effectiveness of Planned Teaching Programme on Knowledge Regarding Selected Cardiac Emergencies Among the Staff Nurses Working in the Selected Hospitals of Banaskantha District, Gujarat

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ABSTRACT:

Background: Cardiovascular diseases exert a huge burden on individuals and society, with coronary heart disease the single most common cause of death in the United Kingdom and other developed countries. Death rates from coronary heart disease have been falling over recent decades, mostly because of reductions in important risk factors, especially smoking. About two fifths of the reduction in deaths resulted from improvements in medical care.

Methods: this study included the Quantitative research approach, pre-experimental one group pre–test post-test research design. 80 Staff Nurses were selected by using Non-probability Convenient Sampling technique. On first day pre- test was done by using the Self-administered questionnaire, Explain about cardiac emergencies. On 7th day post-test was done by using Self-administered questionnaire, to check the effect of planned teaching program on knowledge regarding cardiac emergencies among the staff nurses. The data obtained were analyzed and interpreted by using both descriptive and inferential statistical in terms of frequency, percentage, and chi-square.

Results: The knowledge regarding Selected cardiac emergencies among Staff Nurses was assessed. the 'z' value 17.62 is significantly higher than the table value 1.96 at 0.05 level significance. This indicates that there was a difference in the pre-test and post-test knowledge score of respondents and the Planned teaching Programme is effective in improving the knowledge score of Staff Nurses, hence the H_1 hypothesis was proved and accepted. There is an association between post- test knowledge score with selected Socio- demographic variables; hence the research hypothesis (H_2) is accepted.

Conclusion: Planned teaching programme was significantly effective in improving knowledge regarding Selected cardiac emergencies among Staff Nurses.

Keywords: Assess, Effectiveness, planned teaching Programme, Knowledge, selected cardiac emergencies, Staff Nurses.

1. Introduction

Cardiovascular diseases exert a huge burden on individuals and society, with coronary heart disease the single most common cause of death in the United Kingdom and other developed countries. Developments in cardiac care, most of which have closely engaged nurses, have contributed to improvements in care for patients with acute myocardial infarction and other acute coronary syndromes. The success of the coronary care unit concept was, and remains, highly reliant on the expertise of nurses working in close collaboration with medical colleagues. From the early days of the coronary care unit, there has been recognition of the value of nurses developing specialist knowledge and skill in, for example, ECG interpretation, the understanding of treatment of acute myocardial infarction complications and expertise in cardiopulmonary resuscitation.[1]

Cardiac emergencies are critical situations requiring immediate intervention and skilled healthcare professionals. Staff nurses play a pivotal role in providing initial care during cardiac emergencies. There is a weak relationship between severity of pain and degree of oxygen deprivation in the heart muscle i.e. there can be severe pain with little or no risk of a heart attack, and a heart attack can occur without pain.[2] This is over 29% of all deaths globally. It's been projected that 71% of deaths due to ischemic heart disease. Cardio vascular disease is more prevalent in India and china than in all economically developed countries.[3-4]

Projected global coronary heart disease deaths by sex, in all ages, 2015 shows that 53% are in men and 47% are in women.[5] According to WHO estimates in 2013, around the globe16.7 million death due to cardio vascular diseases each year. According to WHO, in 2014 there wenre 7.22 million deaths from coronary heart disease globally. By 2020 heart disease will become the leading cause of both death and disability worldwide. With number of fatalities projected to increase to more than 20 million a year and to more than 24 million a year by 2030.[6]

2. Materials and Methods

Research design and Setting: Pre-experimental one group pre-test post-test research design was selected for this study a study to assess the effectiveness of planned teaching Programme on knowledge regarding selected cardiac emergencies among the staff nurses working in the selected hospitals of Banaskantha district, Gujarat."

Sample, Sample Size and Sampling Technique

The samples selected for the present study are staff nurses. The sample size were 80. The non-probability Convenient sampling techniques was used to select the sample. A 80 sample of staff nurses were selected from selected hospitals of Banaskantha district, Gujarat."

Data Collection Tool and Technique

Demographic data Consist of selected socio-demographic variables such as Age in years, Gender, Educational Status, Total years of Nursing Experience in Hospital, following areas have you presently work, have you attended any training related to Cardiac Emergency, Previous experience of providing care to client with any Cardiac emergency. This section consists of 07 items.

Structured knowledge questionnaire on Selected cardiac emergencies among staff nurses. This section consists of 25 items on selected aspects of cardiac emergencies. Each item had one or more correct answers all of which were scored. Each correct answer was given a score of 'one' and wrong answer 'zero.' The total score was 25.

Processing of the data collection: Data collection is a systematic process of gathering information relevant to the research purpose. Before conducting the main study, the researcher met the concerned authorities in the General hospital Palanpur and obtained the permission from the Assistant superintendent of hospital for the data collection. The data collection was done after obtaining a written consent from the participants. During the data collection period, the respondents who met the inclusion criteria were selected by using non probability convenient sampling techniques. The researchers first introduced himself/herself to the participants and developed a good rapport with them. The pre-test was conducted by using the 25 points tools for assess the knowledge regarding assess the effectiveness of Planned Teaching Programme on knowledge regarding Selected cardiac emergencies among the staff nurses working in the selected hospitals The duration of the administration of the tool was about 20-30 minutes. From that day onwards, the researcher provide planned teaching programme to the participants. After seven days of intervention, the post-test was administered to the 80 staff nurses.

3. Results

Organization and presentation of the data

The collected data was entered in a excel master sheet for tabulation and statistical processing. The data were analysed and interpreted using descriptive and inferential statistics based on the objectives and hypothesis formulated for the present study.

The findings are presented under the following headings:

Section A: frequency and percentage distribution of socio-demographic variables.

Section B: Assessment of pre-test and post-test Level of Knowledge regarding Selected cardiac emergencies among the staff nurses.

Section C: Effectiveness of the planned teaching programme.

Section D: Association between the post-test knowledge with selected demographic variables of Selected cardiac emergencies among the staff nurses.

Section A: Frequency and percentage distribution of Socio-demographic variables.

N =80

Sl. No.	Demographic Variables		Frequency	Percentage
1	Age in Years	21-30	10	12.50%
		31 -40	23	28.75%
		41-50	29	36.25%
		51and above	18	22.50%
		Total	**80**	**100%**
2	Gender	Male	29	36.25%
		Female	51	63.75%
		Transgender	00	0%
		TOTAL	**80**	**100%**
3	Educational Status	GNM	30	37.50%
		B.Sc. Nursing	10	12.5%

		Post Basic B.Sc. Nursing	25	31.25%
		M.Sc. Nursing	15	18.75%
		Total	**80**	**100%**
4	**Total years of Nursing Experience in Hospital**	≤5	22	27.50%
		6-10	36	45%
		11-15	12	15%
		>15	10	12.50%
		Total	**80**	**100%**
5	**following areas have you presently work**	Ward	9	11.25%
		Critical care unit	30	37.50%
		OT	28	35.00%
		Other Department	13	16.25%
		Total	**80**	**100%**
6	**Have you attended any training related to Cardiac Emergency**	No	68	85%
		Yes	12	15%
		Total	**80**	**100%**
7	**Previous experience of providing care to client with any Cardiac Emergency**	No	51	63.75%
		Yes	29	36.25%
		Total	**80**	**100**

Table 1: Frequency and percentage distribution of socio-demographic variables.

Age in Years: Most of the respondent i.e. 36.25% belonged to the age group of 41-50 years, 28.75% respondent belonged to age group of 31-40, 22.50% belonged to the 51and above and 12.50% belonged to age group of 21-30 years of age.

Gender: Most of respondent i.e., 63.75% respondent belonged from female, 36.25% belonged from male and 0% respondent belonged from transgender.

Educational Status: Most of the respondent i.e. 37.50% belonged to the GNM, 31.25% respondent to the P.B.BSC, 18.75% belonged to the M.Sc. Nursing, 12.50% belonged to the B.Sc. Nursing.

Total years of Nursing Experience in Hospital: Most of the respondent i.e. 45% belonged to the 6-10 years of experience, 27.50% respondents belonged to the ≤5 years of experience, 15% belonged from 11-15 years of experience, and 12.50% belonged from >15 years of experience.

areas have you presently work: Most of the respondent i.e. 37.50% belonged to the Critical care unit, 35% respondents from OT, 16.25% belonged from other department and 11.25% belonged from ward.

Have you attended any training related to Cardiac Emergency: majority of the respondent i.e.,85% respondent to the No any training, and 15% respondent belonged from yes, they attended training.

Previous experience of providing care to client with any Cardiac Emergency: majority of the respondent i.e.,63.75% respondent belonged from the No any experience and 36.25% respondent belonged

from yes, they had previous experience.

Table 2 -Assessment of pre-test and post-test Level of Knowledge regarding cardiac emergencies among the staff nurses.

Level of knowledge	Score	Frequency		Percentage	
		Pre-test	Post-test	Pre-test	Post-test
Inadequate knowledge (0-33%)	0-8	56	00	70%	00
Moderately knowledge (34-67%)	9-17	18	20	22.50%	25%
Adequate knowledge (68-100%)	18-25	06	60	7.50%	75%
Total	25	80	80	100%	100%

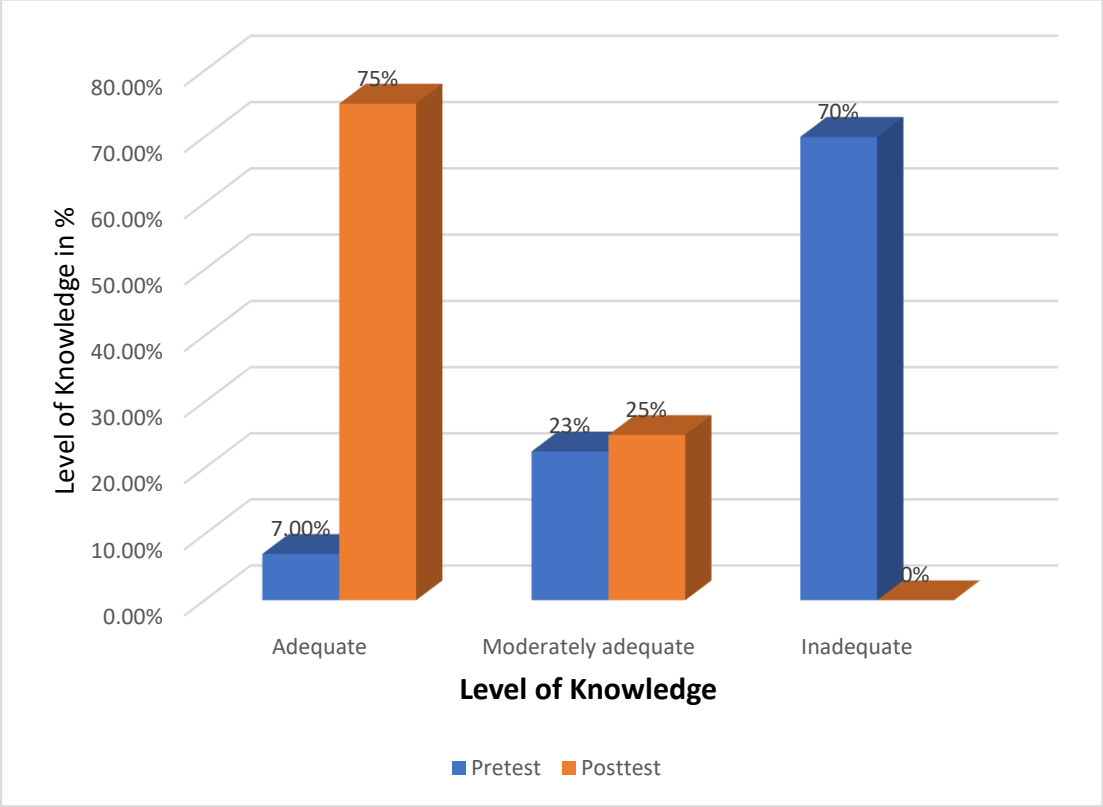

FIGURE 01: LEVEL OF KNOWLEDGE

Table 02 and figure 01: Depicts the Pre-test and Post-test knowledge level of Staff Nurses. The result shows that in pre-test 7% of the respondents had adequate knowledge, 23 % had moderate knowledge, and

70 % had inadequate knowledge and in post-test 75% had adequate knowledge, 25% had moderate knowledge and 0% of the respondent had inadequate knowledge regarding Selected cardiac emergencies.

Section C: Effectiveness of the planned teaching programme

N-80

Knowledge	Mean	Mean %	SD	Enhancement	Enhancement %	Df	Z-Value	Inference
PRE-TEST	9.07	33.28	5.68					
POST-TEST	18.69	66.72	3.74	9.62	33.44%	78	17.62	Significant

Table 03: Effectiveness of the planned teaching Programme

Table 03: The result showed that the mean post-test knowledge score is 18.69 (66.72%) is greater than the mean pre-test knowledge score 9.07 (33.28%). The above table also depicts that the enhancement in the knowledge of respondents is 9.62 (33.44%) supporting the post-test knowledge score are higher than the pretest knowledge score. The data further represent that the 'z' value 17.62 is significantly higher than the table value 1.96 at 0.05 level significance. This indicates that there was a difference in the pre-test and post-test knowledge score of respondents and the Planned teaching Programme is effective in improving the knowledge score of Staff Nurses.

H1: There is a significant difference between the pre and post-test knowledge score of Staff Nurses. A hypothesis was tested at 0.05 levels. The calculated 'z' value 17.62 is significantly higher than the table value 1.96 at 0.05 level of significance. This indicates that there is a significant difference between pre-test and post-test knowledge score, hence the H_1 hypothesis was proved and accepted.

Section D: Finding related to the association between post-test knowledge with selected demographic variables of Staff nurses.

This section deals with analysis and interpretation of the data collected to find out the association between post-test knowledge score with selected demographic variables A parametric chi-square test is used to describe the association between post-test knowledge score with selected demographic variables like Age in years, Gender, Educational Status, Total years of Nursing Experience in Hospital, following areas have you presently work, have you attended any training related to Cardiac Emergency, Previous experience of providing care to client with any Cardiac emergency.

Table 04: Association between post-test knowledge of the respondent with Age in Years

N=80

Variables	Below Median	Above Median	Total	df	CHI Square	P value (0.05)	Inference
1.Age in years							
18-22	6	4	10				
23-27	12	10	23				

28-32	15	14	29	3	19.36	7.815	S
ABOVE 32	10	8	18				
TOTAL	44	36	80				

S=Significant **NS=Not Significant**

Table 04: Showed that the obtained χ^2 value of age in years i.e.19.36 is more than the tabular value 7.815 which indicates that there is significant association between the post-test knowledge score and age in years at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 05: Association between post-test knowledge of the respondent with Gender

N=80

Variables	**Below Median**	**Above Median**	**Total**	**df**	**CHI Square**	**P value (0.05)**	**Inference**
2.Gender							
Male	15	14	29				
Female	25	26	51				
Transgender	00	00	00	02	9.01	5.99	S
	40	**40**	**80**				

S=Significant **NS=Not Significant**

Table 05: Showed that the obtained χ^2 value of Gender i.e.9.01 is more than the tabular value 5.99 which indicates that there is significant association between the post-test knowledge score and Gender at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 06: Association between post-test knowledge of the respondent with Educational status

N=80

Variables	**Below Median**	**Above Median**	**Total**	**df**	**CHI Square**	**P value (0.05)**	**Inference**
1. Educational status							
GNM	16	14	30				
B.Sc. Nursing	2	8	10				
Post Basic B.Sc. Nursing	10	15	25	03	22.87	7.815	S
M.Sc. Nursing	8	7	15				
TOTAL	**36**	**44**	**80**				

S=Significant **NS=Not Significant**

Table 06: Showed that the obtained χ^2 value of educational status i.e.22.87 is more than the tabular value 7.815 which indicates that there is significant association between the post-test knowledge score and Educational status at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 07: Association between post-test knowledge of the respondent with Total years of Nursing Experience in Hospital

N=80

Variables	Below Median	Above Median	Total	df	CHI Square	P value (0.05)	Inference
4.Total years of Nursing Experience in Hospital							
≤5	15	7	22	03	22.34	7.815	S
6-10	20	16	36				
11-15	4	8	12				
>15	5	5	10				
TOTAL	**44**	**36**	**80**				

S=Significant **NS=Not Significant**

Table 07: Showed that the obtained χ^2 value of Total years of Nursing Experience in Hospital i.e. 22.34 is more than the tabular value 7.815 which indicates that there is significant association between the post-test knowledge score and Total years of Nursing Experience in Hospital at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 08: Association between post-test knowledge of the respondent with following areas have you presently work

N=80

Variables	Below Median	Above Median	Total	df	CHI Square	P value (0.05)	Inference
5. following areas have you presently work							
Ward	3	6	9	03	18.59	7.815	S
Critical care unit	14	16	30				
OT	15	13	28				
Other Department	5	8	13				
TOTAL	**37**	**43**	**80**				

S=Significant **NS=Not Significant**

Table 08: Showed that the obtained χ^2 value of following areas have you presently work i.e.18.59 is more than the tabular value 7.815 which indicates that there is significant association between the post-test knowledge score and following areas have you presently work at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 09: Association between post-test knowledge of the respondent with Have you attended any training related to Cardiac Emergency

N=80

Variables	Below Median	Above Median	Total	Df	CHI Square	P value (0.05)	Inference
6. Have you attended any training related to Cardiac Emergency							
NO	42	26	68	01	16.67	3.84	S
YES	6	6	12				
TOTAL	**48**	**32**	**80**				

S=Significant **NS=Not Significant**

Table 09: Showed that the obtained χ^2 value of Have you attended any training related to Cardiac Emergency i.e.16.67 is more than the tabular value 3.84 which indicates that there is significant association between the post-test knowledge score and Have you attended any training related to Cardiac Emergency at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

Table 10: Association between post-test knowledge of the respondent with Previous experience of providing care to client with any Cardiacemergency

N=80

Variables	Below Median	Above Median	Total	df	CHI Square	P value (0.05)	Inference
7. Previous experience of providing care to client with any Cardiacemergency							
NO	25	26	51	01	9.01	3.84	S
Yes	15	14	29				
TOTAL	40	40	80				

S=Significant **NS=Not Significant**

Table 10: Showed that the obtained χ^2 value of Previous experience of providing care to client with any Cardiac emergency i.e.9.01 is more than the tabular value 3.84 which indicates that there is significant association between the post-test knowledge score and Previous experience of providing care to client with any Cardiac emergency at df of 3 ($p<0.05$level). Hence, the H_2 hypothesis is accepted.

H_2: There will be significant association between post-test knowledge regarding Selected cardiac emergencies among the staff with selected socio demographic variables.

The chi-square test was carried out to determine the association between the post-test knowledge and socio-demographic variables such as Age in years, Gender, Educational Status, Total years of Nursing Experience in Hospital, following areas have you presently work, Have you attended any training related to Cardiac Emergency, Previous experience of providing care to client with any Cardiac emergency.

There is a significant association between knowledge of Staff Nurses and demographic variables such as Age in years χ^2=19.36, Gender χ^2=9.01, Educational Status χ^2=22.87, Total years of Nursing Experience in Hospital χ^2=22.34, following areas have you presently work χ^2=18.59, Have you attended any training related to Cardiac Emergency χ^2=16.67, Previous experience of providing care to client with any Cardiac emergency χ^2=9.01, were found to be significant associated with post-test knowledge score at 0.05 level, hence research hypothesis H_2 was accepted.

Conclusion

Study concluded that Planned Teaching Program was significantly effective in improving knowledge among Staff Nurses regarding Selected Cardiac emergency.

Conflict of Interest: None

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