

“Effectiveness of Structured Teaching Programmed (Step) On Cardiac Rehabilitation In Terms Of Knowledge and Skill among Staff Nurses of Selected Hospitals at Udaipur”.

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Abstract : A Pre experimental One group pre-test post-test study to assess the effectiveness of structured teaching programme (stp) on cardiac rehabilitation in terms of knowledge and skill among staff nurses of selected hospitals, at Udaipur, Rajasthan The sample consisting of 40 staff nurses in selected hospitals at Udaipur by using simple random sampling technique method. The tool comprised of by using structured knowledge questionnaire. The pretest was conducted and the STP was administered. The post test was conducted after one week .The data obtained were analyzed by using differential and inferential statistics. the mean post-test knowledge score of the subjects was 27.98. Post-test knowledge was higher than the mean pre-test knowledge score of 17.18. In order to test the difference between the 2 means, t-test was computed and the obtained ‘ t value of 7.35 was found to be statistically highly significant at 0.001 level. This indicated that the difference between the means 1.8 was a true difference and not occurred by chance. Hence ,the research hypothesis H1 which stated that “ mean post-test knowledge score of staff nurses who received structured teaching programme (STP) regarding cardiac rehabilitation will be significantly higher than the mean pre-test knowledge score” was accepted and the null hypothesis was rejected.

Key words – STP, Cardiac rehabilitation, knowledge, skill, staff nurses, and hospitals

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I. Introduction

own that these factors, if effectively controlled, can lead to reduction in the risk of developing further complications⁵. Cardiac Rehabilitation is an exercise and education programme designed to improve the patient.s quality of life after a heart attack or another heart problem. It includes a programme of structured exercise is now generally believed not only to improve morbidity but also reduces mortality in patients who have suffered a myocardial infarction (MI). Activity and exercise have been shown to play a role in secondary prevention or reoccurrence of CHD. Cardiac rehabilitation is becoming an integral part of comprehensive care of clients who have been diagnosed with CHD. It has been thought for many years that all patients, regardless of gender, or age, who have ischemic heart disease and or cardiac failure might benefit from cardiac rehabilitation. The concept of nursing is changing fast. Nursing is not only caring for the sick but takes care of prevention of illness, and promotion and maintenance of health. The scope of health promotion goes beyond the prevention and treatment of disease. Health promotion as outlined in American journal of health promotion is the science and art of helping people change their life style to move towards a state of optimal health. Health promotion activities such as routine exercise and good nutrition help the clients to enhance or maintain their present level of health. Health can be influenced by individual practices such as poor eating habits, and little or no exercise¹. It can also be affected by physical stressors, such as poor living environment, exposure to air pollutants and an unsafe environment. Total health programs are directed at individuals changing their lifestyle by developing habits that can improve their level of health. Lifestyle choices are important as they can affect a person’s quality of life. The primary nursing care of the sick is directed toward promoting, maintaining and restoring health. Health promotion in chronically ill patients is possible through life style and behavioral changes by creating awareness. Health education is the major tool of creating awareness among clients to meet their specific health care needed. Health education is an important nursing care because it can determine how well individuals perform behaviors conducive to optimal self-care. People with chronic illness are the most in need of health education. People with chronic illness need health care information to participate actively in and assume responsibility for much of their

own care. Health education can help these individuals to adapt to illness, and prevent complications. The goal of health education is to teach people to live life to its healthiest². Coronary artery diseases continue to be a major cause of death throughout the world despite dramatic advances made in the treatment over the last 25 years. As it is growing and people are affected by it, the nurse has an important role in helping the people to live with the disease and control it through various preventive and therapeutic measures. Cardiac rehabilitation teaches the cardiac client how to be more active and make lifestyle changes that can lead stronger heart and better health.³

II. Research Elaborations

Statement of problem –

“A study to assess the effectiveness of structured teaching programme (stp) on cardiac rehabilitation in terms of knowledge and skill among staff nurses of selected hospitals at Udaipur”.

III. Objectives

1. To determine the level of knowledge of staff nurses regarding cardiac rehabilitation.
2. To identify the skill of staff nurses regarding cardiac rehabilitation.
3. To evaluate the effectiveness of structured teaching programme (STP) on cardiac rehabilitation in terms of knowledge and skill among staff nurses.
4. To find out the relationship between the following
 - Pre-test knowledge score and pretest skill scores.
 - Post-test knowledge scores and post-test skill scores.
5. To find the association between the following.
 - Post-test knowledge score and years of experience of the staff nurses.
 - Post-test skill score and years of experience of the staff nurses.

IV. Hypothesis

- H₁- Mean post-test knowledge score of staff nurses who received structured teaching programme (STP) regarding cardiac rehabilitation will be significantly higher than the mean pre-test knowledge score.
- H₂. Mean post-test skill score of staff nurses who received structured teaching programme (STP) regarding cardiac rehabilitation will be higher than the mean pre-test skill score.
- H₃. a) There will be a significant relationship between pre-test knowledge score and pre-test skill scores among staff nurses, who received STP regarding cardiac rehabilitation.
b) There will be a significant relationship between post-test knowledge score and post- test skill scores among staff nurses who received STP regarding cardiac rehabilitation.
- H₄. a) There will be a significant association between the post-test knowledge score and selected demographic variables among staff nurses who received STP regarding cardiac rehabilitation.
b) There will be a significant association between the post-test skill scores and selected demographic variables among staff nurses who received cardiac rehabilitation.

V. Materials and Methods

Population – Staff nurses.

Sample- Staff nurses who are working in selected Autonomous General hospital at Udaipur.

Sample Size – 40 Staff nurses.

Setting –The study was conducted in selected Autonomous GBH American Hospital

The conceptual framework for the present study is based on system model.

VI. Research Design

The research design selected for the present study was a one group pre-test post-test research design

O1O2 -----X-----O3O4

Table 1 :Pre experimental one group pre and post-test research design

The interpretations of the symbol are as below:

O1 Pre-test assessment of knowledge

O2 Pre-test assessment of skills

X Administration of structured teaching programme

O3 Post-test assessment of knowledge

O4 Post-test assessment of skill.

Ethical Consideration

After obtaining permission from research committee of Geetanjali College of Nursing, prior permission was obtained from nursing superintendent and medical superintendent of GBH American hospital Udaipur Rajasthan, India. Consent was taken from each participant who had participated in the study.

Description Of The Tool

Section A: Consisted of items related to demographic data such as age, gender, religion, educational qualification, designation and years of experience.

Section B Tool-1: Consisted of structured questionnaire with 35 questions related to knowledge of Cardiac rehabilitation. The maximum obtainable score was 35. A right answer was given a score of one and for wrong answer or omitted question a score zero was allotted.

Scoring

Based on the above scoring the level of knowledge was assessed as

- 74 and above - Adequate knowledge
- 51 - 74 - Average knowledge
- 50 and less - Inadequate knowledge

Data Collection And Data Analysis

The data was presented under the following sections

Section A

Demographic variables

Section B

- a) Assessment of pre-test and post-test level of knowledge of staff nurses on Cardiac rehabilitation.
- b) Assessment of pre-test and post-test level of skills of staff nurses on Cardiac rehabilitation.

Section C

Correlation between the knowledge and skills.

Section D

Association of the post-test level of knowledge and skill of the staff nurses and demographic variables.

VII. Results

Section B a. Assessment of Pre-test and Post-test level of knowledge of staff nurses on Cardiac rehabilitation.

Table 2: Frequency and percentage distribution of level of knowledge in pre-test.

N=40

Pre-test Knowledge	Level of Knowledge					
	Inadequate (50% and less)		Average (51-74%)		Adequate (75% and above)	
	NO	%	NO	%	NO	%
	25	62.3	10	25	5	12.5

The above table shows that in the pre-test majority of them 25 (62.5%) had inadequate knowledge, 10 (25%) had average knowledge and only remaining 5 (12.5%) had adequate knowledge.

Section B-b. Assessment of Pre-test and Post-test level of skills of staff nurses on Cardiac rehabilitation in pre-test.

Table-3: Frequency and percentage distribution of level of skill in pre-test
N=40

Pre test Skill	Level of Skill					
	Poor (50% and less)		Fair (51-74%)		Good (75% and above)	
	No	%	No	%	No	%
	24	60	15	37.5	1	2.5

The above table shows that in pre-test majority of them 24 (60%) had Poor skill, 15 (37.5%) had Fair skill and only 1 (2.5%) had Good skill.

Table - 4: Frequency and percentage distribution of level of knowledge in post-test.
N= 40

Post-test Knowledge	Level of Knowledge					
	Inadequate (50% and less)		Average (51-74%)		Adequate (75% and above)	
	NO	%	NO	%	NO	%
	0	0	15	37.5	25	62.5

The above table shows that maximum number of staff nurses 25 (62.5%) had adequate knowledge, 15 (37.5%) had average knowledge and no one had inadequate knowledge.

Table-5: Frequency and percentage distribution of level of Skill in post test.N=40

Post-test Skill	Level of Skill					
	Poor (50% and less)		Fair (51-74%)		Good (75% and above)	
	No	%	No	%	No	%
	5	12.5	30	75	5	12.5

The above table shows that in the post-test, majority of them 30 (75%) had Fair skill, 5 (12.5%) had Good skill and the remaining 5 (12.5%) had Poor skill.

Table-6: Comparison between the pre and post knowledge regarding Cardiac rehabilitation.

Domain	Pre-test		Post-test		Improvement		t-test
	MEAN	SD	MEAN	SD	MEAN	SD	
Knowledge	17.18	6.29	27.98	4	1.8	4.63	7.35

Data on the table 6 shows that the mean post-test knowledge score of the subjects was 27.98. Post-test knowledge was higher than the mean pre-test knowledge score of 17.18. In order to test the difference between the 2 means, t-test was computed and the obtained ‘ t value of 7.35 was found to be statistically highly significant at 0.001 level. This indicated that the difference between the means 1.8 was a true difference and not occurred by chance. Hence ,the research hypothesis H1 which stated that “ mean post-test knowledge score of staff nurses who received structured teaching programme (STP) regarding cardiac rehabilitation will be significantly higher than the mean pre-test knowledge score” was accepted and the null hypothesis was rejected.

Table - 7: Comparison between the pre and post skill regarding Cardiac rehabilitation. N=40

Domain	Pre-test		Post-test		Improvement		t-test
	MEAN	SD	MEAN	SD	MEAN	SD	
Knowledge	8.68	3.49	13	2.91	4.33	1.97	5.76

S***= P > 0.001 level

Data on the table 7 shows that the mean post-test skill score of 13 was higher than the mean pre-test skill score of 8.68. In order to test the difference between the 2 means t-test was computed and the obtained t-value of 5.76 was found to be statistically highly significant at 0.001 level. The difference between the means 4.33 was a true difference and had not occurred by chance. Hence, the research hypothesis H2 which stated that .mean post-test skill score of staff nurses who received structured teaching programme (STP) regarding cardiac rehabilitation will be higher than the mean pre-test skill score. was accepted and the null hypothesis was rejected.

Section C: Correlation between knowledge and skills.

Table - 8: Correlation between pre-test knowledge and pre-test skill. N=40

Domain	Pre Knowledge		Domain Pre Skills		r-value
	MEAN	SD	MEAN	SD	
Correlation	17.18	6.29	8.68	3.49	4.33

S* = P > 0.05 level

Table 8 depicts that the obtained co-efficient of correlation r - 4.33 was significant at 0.05 level. This indicates that there was a highly positive correlation and marked relationship between pre-test knowledge and pre-test skill scores which was significant at 0.05 level. Hence, the research hypothesis H3 (a) which stated that there will be a significant relationship between pre-test knowledge score and pre-test skill scores among staff nurses, who received STP regarding cardiac rehabilitation. was accepted and the null hypothesis was rejected. The finding suggests that when there is increase in knowledge, there will be an improvement in skill.

Table - 9: Correlation between Post-test knowledge and post-test skill.N=40

Domain	Post Knowledge		Domain Post Skills		r-value
	MEAN	SD	MEAN	SD	
Correlation	27.98	4	4.33	1.97	0.71

S***=p>0.001 level

Table 9 depicts that the obtained coefficient of correlation r = 0.71 was significant at 0.001 level. This indicated that there was highly positive correlation and a perfect relationship between post-test knowledge score and post-test skill scores, which was significant at 0.001 level. Hence, the research hypothesis H3 (b) which stated that there will be a significant relationship between post-test knowledge score and post-test skill scores among staff nurses who received STP regarding cardiac rehabilitation. was accepted and the null hypothesis was rejected. The findings suggest that when there is increase in knowledge, there will be a positive change in skill. These findings suggest that the STP has improved the knowledge and has also brought about a corresponding change in skill.

Section – D Association of Post-test level of knowledge and skill of staff nurses with demographic variables.

- The chi square value of all the demographic characteristics, such as age, gender, religion, educational qualification and years of experience showed that there was no statistically significant association with the post-test level of knowledge regarding Cardiac rehabilitation. Hence, the research hypothesis H4 (a) which stated that there will be a significant association between the post-test knowledge score and selected demographic variables among staff nurses who received STP regarding cardiac rehabilitation. was rejected and the null hypothesis was accepted.
- The years of experience of the staff nurses had as significant association with the post-test skill of the staff nurses regarding Cardiac rehabilitation. χ^2 value of 9.55 was significant at 0.05 level. Hence, the research hypothesis H4 (b) which stated that there will be a significant association between the post-test skill scores and selected demographic variables among staff nurses who received cardiac rehabilitation. was accepted and the null hypothesis was rejected.

VIII. Conclusion

The present study assessed the knowledge of staff nurses on Cardiac rehabilitation and found that maximum number of staff nurses 25 (62.5%) had inadequate knowledge and 10 (25%) had average knowledge and only remaining 5 (12.5%) had adequate knowledge. After the structured teaching programme the post-test showed that the maximum number of samples 25 (62.5%) had adequate knowledge, 15 (37.5%) had average knowledge and none of the sample had inadequate knowledge. The comparison of pre-test knowledge scores and post-test knowledge scores of the subjects shows that the overall mean in the pre-test was 17.18 with SD 6.29 and in the post-test 27.98 with SD 4. The overall improvement mean was 1.8 with t-value 7.35 which was highly significant at P>0.001 level. This showed that there was a significant improvement in knowledge of staff nurses after the structured teaching programme. The present study also assessed the skills of staff nurses on Cardiac rehabilitation and found that maximum number of staff nurses 24 (60%) had inadequate skill, and 15 (37.5%) had Fair skill and only 1 (2%) had Good skill. After the structured teaching programme, the post-test showed that the maximum number of samples 30 (75%) had Fair skill, 5 (12.5%) had Good skill and the remaining 5 (12.5%) had Poor skill. The comparison of pre-test skill scores and post-test skill scores of the subjects shows that the overall mean in the pre-test was 8.68 with SD 3.49 and in the post-test mean 13 with SD 2.91. The overall improvement mean was 4.33 with t-value 5.76 which was highly

significant at $P > 0.001$ level. This showed that there was a significant improvement in skills of staff nurses after the structured teaching programme.

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