

Effectiveness of Nursing Process in Providing Quality Care to Cardiac Patients

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Abstract:-

Introduction:

Benjamin Franklin once wrote that failing to have a plan is planning for failure. These wise words echo as true today as they did over 200 years ago.

"Failing to PLAN is planning to FAIL"

Just like an architect who makes elaborate and detailed blue prints before building any structure or work of art. Nurses' use Nursing Process - a patient centered, problem-solving approach, goal oriented method of caring, that enables the nurse to provide care in an organized scientific manner.

Material & Methods:

a quasi-experimental, one group pre-test, post-test design was adopted to measure the effectiveness nursing process in providing quality nursing care to cardiac patients in selected hospitals of Gwalior. The study was conducted on 200 nurses who were providing care to cardiac patients in cardiac patients. Data was collected from October 2014 to December 2014. A structured questionnaire was used to assess the knowledge about nurses about cardiac disease, Knowledge of nursing process and use of nursing process by nurses in providing care to cardiac patients. And a Plan Teaching Program (PTP) was prepared to provide pertinent information about the same.

Results:

The data revealed that, there is significant difference in mean of pre-test score (3.815) and mean of post-test score (5.67) of nurses about use of nursing process in providing quality patient care. Major findings of study revealed that Plan Teaching Program (PTP) is effective in enhancement of nurses' knowledge. Use of nursing process by nurses about quality patient care to cardiac patient was significantly associated with qualification of nurse.

Conclusion:

After the detailed analysis of this study shows that effective use of nursing process help in providing quality patient care to cardiac patients, that could also be used for other disease also in hospital as well as community setting.

Key words: *Nursing Process, Cardiac Disorders, Plan Teaching Program (PTP).*

I. INTRODUCTION

The objective of Nursing Process is to help patients alleviate, minimize, or prevent actual or potential health problems. Through effective communication between nurse and patients in any variety of settings this process is being carried out continually.

Yura and Walsh (1998) define the nursing process as "An orderly systematic manner of determining the client's health status, specifying problems defined as alterations in human need fulfillment, making plans to solve them, initiating and implementing the plan, and evaluating the extent to which the plan was effective in promoting optimum wellness and resolving the problems identified". The care plan is the application of the nursing process and is a communication tool for nurses to provide continuity of care for patients. Nurses use the elements of reasoning in critical thinking to develop a nursing care plan. Nursing process has evolved and has been modified with health industry changes over time.

Cunning, B., & Pfloderer, D. (1986) reported that there is a demand to establish the nursing process in practical care in every health institution, within hospitals as well as in the community as a whole. The nursing process should be established in care practice at all health care institutions, in hospitals as well as in the community as a whole.

A study conducted by Meade and Kim (1984) demonstrated that an education program on the documentation of nursing diagnoses (an integral part of the nursing process) had no effect on overall standards of documentation of nursing diagnosis in clinical practice. These findings are supported by Carstens (1984) who

found that an in service program on nursing process had no effect on registered nurses' ability to identify and label valid nursing diagnoses.

Hence effective implementation of the nursing process leads to improved quality of care and stimulates the construction of theoretical and scientific knowledge based on the best clinical practice. Aiming at collecting information to improve the nursing care currently provided, we performed a cross-sectional retrospective study to compare the steps of the nursing process, as actually implemented in the daily routine of a general hospital, with those recommended in the literature.

Researches shown that efficient use and knowledge of nursing process increases quality of nursing care to patients.

Objectives of study:

- 1) To assess the indicators of quality care given by nurses to cardiac patients before administration of Plan Teaching Program on Nursing Process.
- 2) To develop Plan Teaching Program (PTP) for nurses on nursing process for cardiac patients.
- 3) To assess the quality of care given by nurses to cardiac patients after administration of Plan Teaching Program on Nursing Process.
- 4) To compare the quality of patient care given by nurses to cardiac patients before and after administration of Plan Teaching Program (PTP) for nurses on nursing process for cardiac patients.
- 5) To find association between quality of patient care given by nurses using Nursing Process before administration of Plan Teaching Program (PTP) and selected demographic variables of nurses under study.

II. MATERIAL & METHODS

A quasi-experimental study was carried out on 200 nurses who were working in cardiac wards of different hospitals to measure the effectiveness nursing process in providing quality nursing care to cardiac patients in selected hospitals of Gwalior. The sample for the study comprised of 200 nurses who were working in cardiac wards.

The sample who met sampling criteria and available during the month of Oct. 2014 to Dec. 2014 were selected as the subject for the study. They were selected by non-probability convenient sampling technique.

In Phase I of the study, a descriptive survey approach was adopted to assess the knowledge of nurses about use of nursing process in providing quality care to cardiac patients. In Phase II of the study an evaluative approach was used to measure the effectiveness of Plan Teaching Program (PTP) on Nursing Process for cardiac patient. The research design used was Quasi-experimental, one group pre-test, post-test design to measure the

effectiveness of nursing process in providing quality nursing care to cardiac patients.

A self-structured assessment questionnaire on nursing process was developed which consists knowledge of cardiac disorder, knowledge of nursing process and application of nursing process. And an (PTP) Plan Teaching Program was prepared to provide pertinent information about the same.

Section A: This section contained (05) questions about the demographic profile of sample such as qualification, work experience, specialized course, gender, no. of patient cared in each shift.

Section B: This section contained (08) questions about cardiac disorders.

Section C: This section contained (32) questions about nursing process.

Section D: This section contained (15) questions about application of nursing process.

Section E: This section contained (10) questions about indicators of quality nursing care to cardiac patients.

Section F: This section contained PTP on nursing process for cardiac patients.

The content validity of questionnaire was established by experts. The experts were selected on the basis of their expertise, experience and interest in the problem being studied. They were from different specialties i.e. Psychiatry, Psychology, Education, Research, Statistics and Mental Health Nursing. They were requested to give their opinions on the appropriateness and relevance of the items in the tool. Necessary modifications were made as per the expert's advice. The reliability of the questionnaire was established by Split Half method and was found to be $r=0.82$.

A final study was carried out on 200 nurses who were working in cardiac wards. Data was collected from Oct 2014 to Dec 2014. The sample for the study comprised of the nurses, who met the designated criteria were selected through convenient sampling technique. Objectives of study was discussed and obtained consent for participation in study. Existing use of nursing process was assessed by administering a structured assessment questionnaire, followed by administration of Plan Teaching Program (PTP) on Nursing process for cardiac patients. Posttest was taken after 7 days. Based on the objective and the hypothesis the data was analyzed by using various statistical tests i.e. percentage, mean, and standard deviation.

Statistical methods

The significance was calculated by using mean, Standard deviation, unpaired t statistics, paired t statistics for comparison and the Chi-square statistics is used to find the independence of difference. Significance was accepted at 0.01 and 0.05 level of probability.

III. RESULTS

Section I : Description of Socio demographic data of nurses

Findings of section I show that out of 200 The sample distribution in table 1 shows that out of 200 samples majority 81 (41.5%) were GNM staff. 64 (32%), 73 (36.5%) were B. Sc. Nursing staff, and minority i.e. 46 (23%) were Post Basic Nursing staff. Majority of staff i.e. 109 (54.5%) were having experience of working in cardiac ward is 6 months to 1 year and minority 15 (7.5%) had experience of more than 3 years. Out of 200 samples majority 133 (66.5%) has not done any specialized course and minority 67 (33.5%) had done specialized course in cardiac field. Out of 200 samples majority 150 (75%) were female and minority 50 (25%) were males who were working in cardiac field. Out of 200 samples majority 158 (79%) has cared up to 10 patients in each duty whereas minority 11 (5.5%) has cared 21 and more cardiac patient during each duty.

Section II: Description of total knowledge score about Cardiac disorders

Findings related to knowledge of cardiac disorder among nurses working with cardiac patients it is evident that out of 200 sample majority of samples replied that 65 (32.5%) of clients complaints chest pain and vomiting, sample found abnormal findings 64 (34%) as abnormal ECG, 77 (38.5%) think major mortality after age of 45 occurs due to cardiac disorders in their client, 53 (26.5%) think are the major cause of cardiac disorder is habits, 53 (26.5%) think are the major cause of cardiac disorder is habits, 109 (54.5%) of samples replied that all patients came for regular checkup who are diagnosed as having cardiac disorder, 81 (40.5%) samples replied that 41-60% patients relapse after discharge from hospital, 90 (45%) of samples replied that length of hospital stay of a cardiac patient is > 2 weeks and majority i.e. 109 (54.5%)

Table 1: Description of total knowledge score by frequency, percentage, mean, mean % and SD of quality care of cardiac patient by nurses in pre-test.

N=200

Sr.	Category	Frequency	Percentage	Mean	SD
1	High	0	0		
2	Low	30	15	3.815	2.7802
3	No	170	85		

From the table no. 4 it is clear that majority i.e. 170 (85%) of samples have no knowledge about nursing process to render quality care to cardiac patients which also clearly shown by Mean and SD value.

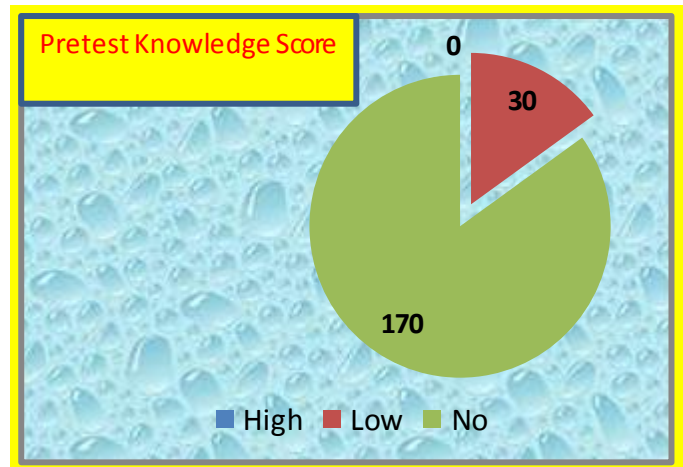


Figure : 1 Pie diagram shows pretest knowledge of Nursing Process

Table 2: Description of total knowledge score frequency, percentage, mean, mean % and SD of quality care of cardiac patient by nurses in post-test.

N=200

Sr.	Category	Frequency	Percentage	Mean	SD
1	High	105	52.5		
2	Low	80	40	5.67	2.4700
3	No	15	7.5		

From the table no. 5 it is clear that majority i.e. 105 (52.5%) of samples has high level knowledge about nursing process after PTP, to render quality care to cardiac patients which also clearly shown by Mean and SD value.

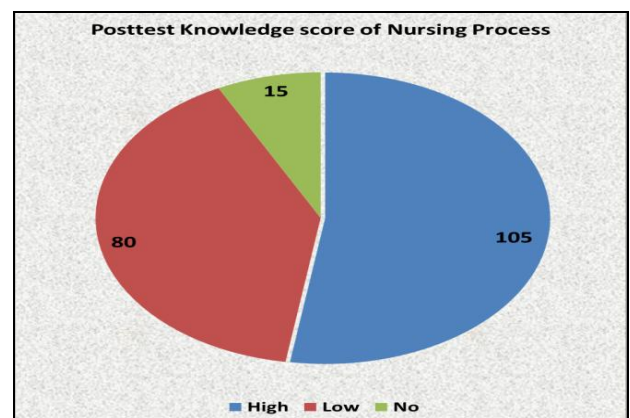


Figure :2 Pie diagram shows posttest knowledge of Nursing Process

Section III: Comparison of Knowledge score about nursing process

Table 3: Comparison of Knowledge score about nursing process in frequency, percentage, Mean, SD and Mean difference pretest and post-test.

(N= 200)

Description	Level of Knowledge	Freq	%	Mean	SD	Mean difference
Pretest Knowledge	High	0	0	3.815	2.7802	4.6325
	Low	30	15			
	No	170	85			
Posttest Knowledge	High	105	52.5	5.67	2.47	
	Low	80	40			
	No	15	7.5			

Calculated t-value = 1.456

The Table No.01 indicates the comparison between pre and post knowledge score of nurses about nursing process to render quality nursing care to cardiac patients, where posttest mean 5.67 is more than pretest mean 3.815.

Calculated value of t at 0.01 level of significance is 1.456 which is less than the table value (1.645), therefore research hypothesis **H₁ is accepted.**

i.e. 48 (24%) lies in high quality indicators of nursing care in pretest whereas majority of samples i.e. 188 (94%) lies in high quality care indicators and minority i.e. 12 (06%) lies in low quality indicators of nursing care to cardiac patients after PTP on Nursing Process.

Hence it is clear from above data that use of nursing process makes the nursing care more effective and quality indicators of care improved very much.

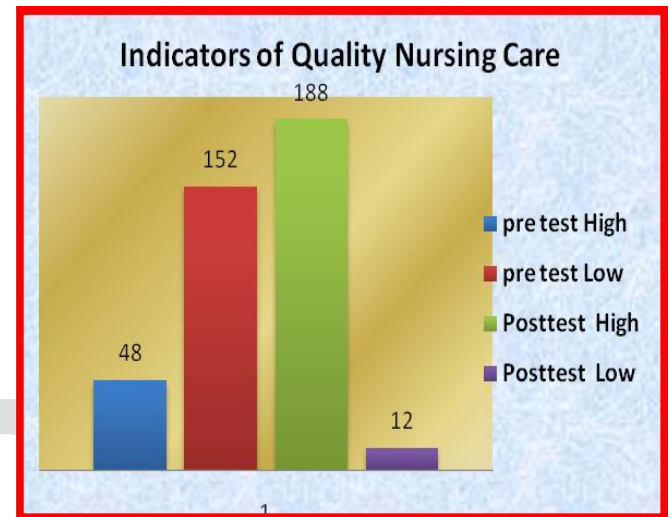


Figure: 4 Bar diagram shows Comparative scores of indicators of quality nursing care

Section V: Association of pretest knowledge score with selected demographic variables.

Table 2: Association of pretest knowledge score about nursing process in terms of quality nursing care and selected demographic variables.

(Significant at 0.05% level of significance)

Findings of the gathered data reveals that the association between pretest knowledge of nurses regarding quality care of cardiac patients by use nursing process with selected demographic variables is statistically tested by applying chi-square test as “p” value of qualification of nurses is less (0.05 < 0.00012) than other variable hence it is was found significant. Other variables like Experience in cardiac ward, any specialized course done, Gender and no. of patient you care each duty were not found significant as “p” value is found >0.05. Thus **H₂ is accepted. As P < 0.05 significant ***

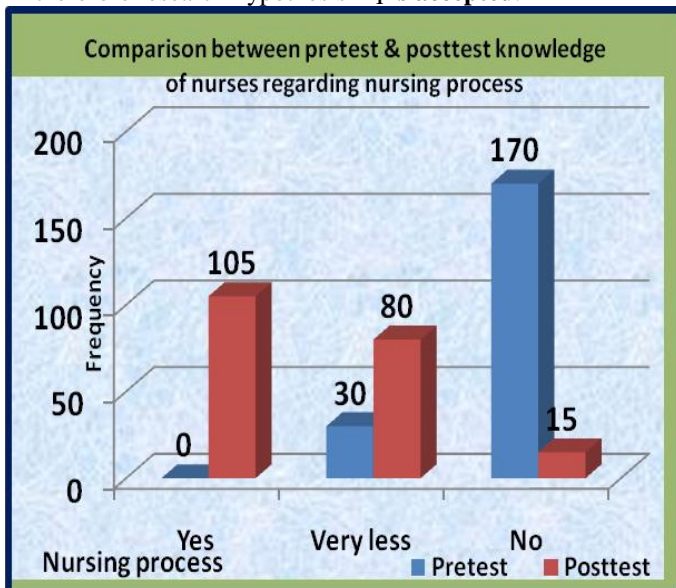


Figure :3 Bar diagram showing comparison of pretest and posttest knowledge of Nursing Process

Section IV: Comparison of Indicators of quality nursing care given by nurses to cardiac patients.

N=200

Sr.	Indicators of quality Nursing care	Level	Frequency	Percentage
1	pre test	High	48	24
		Low	152	76
2	Posttest	High	188	94
		Low	12	6

Table 4 depicts that majority of samples i.e. 152 (76%) lies in low quality care indicators whereas minority

IV. DISCUSSION

The present study revealed in analysis of phase I that majority 81 (41.5%) were GNM staff, 109 (54.5%) were having experience of working in cardiac ward is 6 months to 1 year, 133 (66.5%) has not done any specialized course, 150 (75%) were female and majority 158 (79%) has cared up to 10 patients in each duty.

Majority of samples scored high in post-test than that of pre-test and mean percentage score of samples

regarding quality of patient care using nursing process was higher in post-test than that of pre-test.

There is significant association between qualification of nurse. Whereas other demographic variable like experience, gender etc. have insignificant association with pre-test knowledge score.

Recent studies on Nursing process it is clarified that secondary prevention practice in a cardiovascular department in a sample of two hundred and twenty patients discharged from the Intensive Coronary Care Unit, Cardiac Surgery Unit and Vascular Surgery Unit has shown that nurses play a vital role in the implementation of guidelines, risk assessment, drug treatment and effective patient education, Steffenino et.al, (2003).

Ulmer, (1996) reported in his a randomized study of thirty patients hospitalized with Acute Myocardial Infarction to determine the effectiveness of two different nursing interventions on reducing the stress associated with CCU has shown that nurse interventions reduce patient stress and cardiovascular complications. Recent research findings suggest that morbidity and mortality in cardiac patients can be improved with a comprehensive treatment plan using nursing process.

V. CONCLUSIONS

The present study explore that there is significant effect of PTP on effective use of nursing process in providing quality care to cardiac patient. The correlation finding which was done to find the relationship with selected demographic variables was done by using 'chi-square' test. PTP have significant effect in improving nurses knowledge of nursing process so as to provide quality patient care to cardiac patient.

VI. IMPLICATION & RECOMMENDATION

The findings of study have implication at various level of nursing like nursing practice, nursing education, nursing administration and nursing research in following ways:-

- If the nurse implement effective nursing care for the cardiac patients using nursing process, recovery of patient become faster smother and patient comply to treatment, reduces no. of re-admissions and care is cost effective. The study finding reported that due to patient load provision of nursing care by nursing process is not always practicable. This indicates that nursing practices need to be updated on by increasing clerical staff in the field.
- Nursing education is developing rapidly in India. We are training nurses to achieve an International standard. To achieve high level of educational standards, nursing education needs to be raised to a greater extent. This is achieved if all aspects of health needs are considered as a whole. Findings of the present study also have an implication in nursing education.

- This study highlights the need to give importance to maintain records that may be standardized to save time and to have effective implementation of nursing care for the cardiac patients in the coming days.
- As a part of administration, nurses' administrators play a vital role in educating people, clients and students. Nurse administrator can utilize this type of survey researches to impart further knowledge and improve practice of people about domestic waste management.
- The findings of the present study will help nurse administrators to organize and plan for various programmes to provide best possible nursing care to cardiac patients using nursing process. As this study has shown difficulties in implementation of nursing care using nursing process due to patient and clerical work load, nursing administrators can effectively plan to focus on effective use of human resource. Nurse administrator can prepare nursing process record for all conditions of cardiac patients to save time and to reduce clerical load.
- Nursing research is an essential aspect of nursing as it uplifts the profession and develops new nursing norms and a body of knowledge. There is a need for extended and intensive nursing research in the area of health education and cardiac clinical field.
- The present study is an attempt to assess the effectiveness of nursing process in providing quality care to cardiac patient. Based on this study the nurse researcher can design further research for other conditions like Hypertension, asthma etc. The Implication of this study for the nurse researcher can be viewed from the effective measures for the care of critical fetal disease.

Keeping in view the findings of the study, the following recommendations are made:

- A similar study can be done for other disorders also.
- A similar study can be done to develop standardized nursing process.
- A similar study can be replicated on larger group and in different setting.
- A similar study on particular cardiac disorders could be carry out.

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