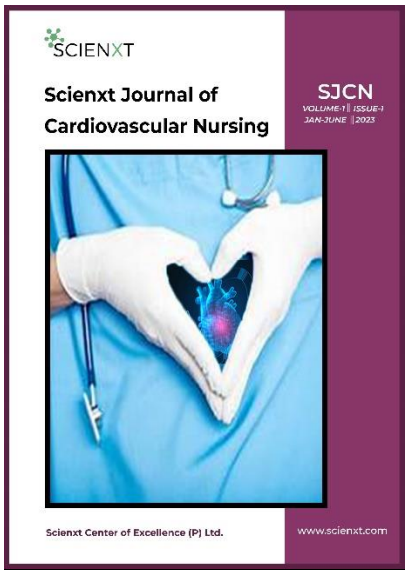

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"A Pre-experimental study to assess the effectivesness of planned educational program on the knowledge and practices regarding coronary angiogram care among staff nurses at a selected hospitals"

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Abstract:

A study was conducted to assess the effectiveness of planned educational program on knowledge and practice regarding coronary angiogram care among staff nurses at a selected hospital.

The objectives of the study were:

1. To assess the pre and post-test level of knowledge and practice of the staff nursesregarding coronary angiogram care.
2. To correlate the post-test knowledge and practice of the staff nurses regardingcoronary angiogram care.
3. To assess the effectiveness of planned educational program on knowledge andpractice of the staff nurses regarding coronary angiogram care.
4. To associate the mean differed level of knowledge and practice of the staff nurseswith their selected demographic variables.

Methodology:

The research approach was quantitative approach and the research design was pre-experimental one group pre-test and post-test. Sixty samples were selected based on sample selection criteria using non probability purposive sampling technique. The study was conducted in MLB hospital, Jhansi. Structured questionnaire was used to assess the knowledge level and an observational check list to assess the practice level of staff nurses on coronary angiogram care. The data was collected in three phases.

Findings:

The overall pre-test level of knowledge revealed that many 39(65%) needs improvement and 21(35%) had moderately adequate knowledge regarding coronary

angiogram care. The overall post- test level of knowledge revealed that majority 59(98.33%) had adequate knowledge and 1(1.67%) had moderately adequate knowledge regarding coronary angiogram care.

The overall pre-test level of practice revealed that 30(50%) had fair practice and 30(50%) needed improvement and none of the samples had good practice regarding coronary angiogram care. The overall post-test level of practice revealed that all 60(100%) had good practice regarding coronary angiogram care.

The calculated 'r' test value r = 0.371 showed a moderate positive correlation between post-test knowledge and practice score which was found to be statistically significant at $p<0.01$.

The findings also revealed that the pre-test mean score of knowledge was 13.0 with S.D of 3.71 whereas

In the post test the mean score of knowledge was 26.98 with S.D of 1.89. The calculated paired't' test value t= 28.758 found to be statistically significant at $p<0.001$. The findings revealed that the pre-test mean score of practice was 22.63 with S.D of 2.01 whereas

In the post- test the mean score of practice was 40.75 with S.D 1.51. The calculated paired't' test value t = 57.933 was found to be statistically significant at $p<0.001$.

The findings revealed that there was statistical significance found between the mean differed level of knowledge and the demographic variable age ($\chi^2 = 4.286$) at ($p=0.038$) and there was no statistically significant association found with other demographic variables.

Conclusion:

The study concluded that the planned educational program was effective in improving theknowledge and practice of staff nurses. It helps them to be more confident in their duty and to omit errors.

1. Introduction:

In the dynamic human life previously most of the deaths and diseases were mainly due to communicable diseases. Now the scenario has changed as non- communicable diseases such as diabetes, hypertension and Coronary Artery Disease (CAD) which has become the major burden in the society and also constitutes about 63%of all the deaths. CAD is also called "Ischemic Heart Disease" (IHD).

World Health Organization (WHO) (2009) stated that around 23.6 million people will die because of Cardio Vascular Disease (CVD) by 2030 with high incidence in South East Asian countries. In 1990, there was an estimated 1.17 million deaths related from CAD and it was doubled to 2.03 million deaths in 2010. CAD was prevalent in India for last 40 years.

According to the WHO report of 2009, it has been concluded that the emergence of non-communicable diseases is responsible for 63% of all deaths worldwide, which primarily includes CVDs, cancers, chronic respiratory disease and diabetes. Among this, cardiovascular disease brings a major part of disease burden to the society. CAD is the leading cause of deaths in United Kingdom (UK) and worldwide.

2. Need for the study:

According to WHO report 2010, nearly 3.8 million men and 3.4 million women died worldwide due to CAD in the year 2008. Of the 57 million deaths occurred under the age of 70 globally in 2010 is mainly due to non-communicable disease out of which 82% is due to cardio vascular disease. In that 17 million deaths are due to CAD. The major cause of CAD is the formation of atherosclerotic plaque in the coronary artery there by blocking the blood supply to the heart. 45 million people are affected with CAD with an increasing number of young Indians getting effected. In India, in the past 5 decade the rate of CAD among urban population has risen from 4% to 11%. An estimated 1.5 million people die due to CAD every year. The prevalence of CAD was higher in Kerala (4.6%) than in Tamil Nadu (4.3%) or Gujarat (3.5%). The prevalence was higher in South India especially in lower socioeconomic groups. The main risk factors of coronary artery disease include lack of exercise, poor diet, smoking, exposure to chemicals and other environmental exposures.

As a solution to identify CAD, PCI is probably the greater technological innovation provided in the field of cardiology. Coronary angioplasty is a revascularization procedure that has revolutionized the treatment of IHD over the past 20 years. Coronary angiogram is now a gold

standard in diagnosing CAD. In India, approximately one lakh coronary angiograms are performed each year. The purpose of coronary angiography is to visualize the coronary anatomy and the degree of obstruction of the coronary arteries. According to the reports the rate of coronary angiogram is increasing day by day.

The number of people opting for coronary angiography is increasing tremendously in UK, USA, and India and in many other nations. It has been calculated that more than 1 million coronary angiograms are performed every year worldwide. The studies showed that more than 5.5 lakh coronary angiogram is performed in USA each year (The American Academy of Cardiac Surgeons, 2005).

According to the Cardiac diagnostic conference (2007), the number of coronary angiography patients has increased dramatically. According to them India's total patients were 1,02,87,37,436 which showed a 21.3% increase since 1991, among them 7, 66, 22,381 were coronary angiography patients.

In Indian hospitals more than 76.6 million people are admitted per year after coronary angiography. With regard to the data of health ministry, India has 76,622,321 patients admitted per year in which 11.6 million are from Uttar Pradesh, 8.45 million from Maharashtra and 5.5 million from Tamil Nadu.

Coronary angioplasty is a revascularization procedure that has revolutionized the treatment of IHD over the past 20 years. Coronary angiogram is now a gold standard in diagnosing CAD. A study conducted by national interventional council on the Indian coronary data for the year 2011 was published in Indian heart journal September 2013 which states that "A total of 152332 PCI procedures were performed in 332 centres and there is a growth of 28.8% as compared to the data available for the previous year". In India, approximately 1 lakh angiograms are performed each year. In US in the year 1993, the coronary angiogram was performed on 10 lakhs patient's which has increased to 30 lakhs by the year 2010. Complication rates of PCI are low but neither negligible nor irreducible. Complication ranges widely from minor problems with short term sequel to life threatening situations that may cause irreversible damage, if urgent care is not provided. The complication of coronary angiogram includes hematoma formation, pseudo aneurysm, neuropathy, bacteraemia etc.

Taylor (2001) states that after coronary angiography the post-operative patients were mostly affected by back pain sleep disturbance and discomfort. Sleep management measure, psychological support, comfortable position and calm environment should be involved in the

nursing care to improve the comfort level of the patients.

Advanced clinical care (1990) published an article on cardiac catheterization - before and after, what the patient need to know, what the nurses need to know. This provided helpful information for nurses regarding preparing patient for procedure, pre- catheterization and post-catheterization teaching information, discharge instructions and follow up care.

Monett & Roberts (1995) published an article in describes the current management of patients posted for interventional cardiac catheterization and also given information about the new catheters, monitoring equipment and standards for the skilled personal.

Tracey (2009) published an article on evidence based care for patients undergoing coronary angiogram, which aim at updating the nurse's knowledge and skill on caring for a patient undergoing coronary angiogram. The indication, contraindication and complication, various aspects of patient care were also discussed.

Thomas & Longo (1976) published an article on care of patients after cardiac catheterization. The article emphasizes that the nursing action is very important to recognize and interpret potential post-catheterization complications. Any invasive procedure can lead to complications, quick and accurate nursing assessment and action are essential.

Coronary angiography is very safe and is performed to detect an occlusion in the coronary arteries of the heart, by inserting a catheter into the coronary artery, either using a femoral or radial approach in order to view the patency of blood flow through the heart. Its risk and complication are very rare and the knowledge will help the staff nurses to detect them early and offer great assistance in preventing complications (Patient Education Institute, 2005). So the nurses should be vigilant enough to rule out the complications to avoid serious mishaps.

The complication rates of coronary angiogram cannot be neglected. Here arises the need for a checklist which was suggested by many researchers while working in the coronary care unit. A check list is an effective method to improve best practices and is a simple cost effective methodto prevent or omit errors. Implementation of a checklist for pre and post angiogram period will improve their assessment, quality of care and can help to prevent errors. Nurses play a major role in providing care to patients in all the phases of coronary angiogram including pre intra and post period. The enhancement of knowledge regarding coronary angiogram care is essential in preventing complications. Nurses are the first hand members who are around the clock with the patients and should have sufficient knowledge and practical skill in caring the patient and identifying complications as early as possible to prevent life threatening situations

for the patients. Nurses responsibility includes continuous cardiac monitoring assess the quality of the pulse, record vital signs, observe for any bleeding or hematoma, check for numbness or cold and clammy extremities, pain management thereby preventing complications.

When the nurse researcher was posted in MLB hospital, Jhansi she identified that there were more than two hundred cardiac patients is attending the outpatient department in a daily basis out of which nearly 80% of the patients were diagnosed with CAD. It was understood that there were nearly 5-8 patients were posted for CABG every day and nearly 10-15 coronary angiograms were performed in the catheterization lab on a daily basis where the study was conducted. As a cardiothoracic specialty nurse, the nurse researcher felt the need for enriching the staff nurses with recent updates of coronary angiogram by conducting a planned educational program. The literature review also highlighted the magnitude of the complications of improper coronary angiogram care by the health personnel and also the nurse investigator felt the needby her own observation in the clinical area. This led the nurse researcher to select the area of coronary angiogram for the present study.

2.1. Scope of the study:

This study will help the investigator to find out the knowledge about care after coronary angiogram practices. This study will help the investigator to find out the practices followed in about care after coronary angiogram this study will help the investigator to identify the need to provide education to the nurses

2.2. Problem statement:

“A pre-experimental study to assess the effectiveness of planned educational program on the knowledge and practices regarding coronary angiogram care among staff nurses at a selected hospitals.”

2.3. Objectives of the study:

To assess the pre and post-test level of knowledge and practice of the staff nursesregarding coronary angiogram care.

To correlate the post-test knowledge and practice of the staff nurses regardingcoronary angiogram care.

To assess the effectiveness of planned educational program on knowledge andpractice of the staff nurses regarding coronary angiogram care.

3. Operational definition:

Effectiveness- Refers to the degree to which the objectives are achieved in enhancing the cognitive andconative skills of staff nurses regarding coronary angiogram care.

Planned educational program-Refers to systematically planned and developed teaching module designed for staff nurses, which included general aspects of coronary angiogram, indications, contraindications, pre and post coronary angiogram care, complications using power point presentation.

Knowledge-Refers to the awareness and understanding of staff nurses regarding the various aspects ofcoronary angiogram care which was measured with the help of structured self-administered questionnaire.

Practice. Refers to procedural steps followed by staff nurses during pre and post coronary angiogramcare which was assessed with the help of an observational checklist.

Coronary angiogram care-Refers to the care given by the staff nurses during pre and post coronary angiogram phases, provided for the safety and best quality care of the patient.

Staff Nurse-Refers to qualified and registered staff nurses working in cardiac unit of MLB hospital, Jhansi.

3.1. Hypothesis:

NH1: There is no significant relationship between the post-test knowledge and practice of staffnurses regarding coronary angiogram care.

NH2: There is no significant difference in pre and post-test level of knowledge and practice ofstaff nurses regarding coronary angiogram care.

NH3: There is no significant association of mean differed level of knowledge and practice of thestaff nurses with their selected demographic variables.

3.2. Assumption:

1. The patient undergoing coronary angiogram is prone to develop complications.
2. Staff nurses need adequate information on coronary angiogram care.
3. Planned educational program enriches the knowledge of staff nurses and which help them topractice better coronary angiogram care.
4. Protocol guides the nurses to perform standard care and helps to omit errors.

3.3. Delimitaion:

1. Study is delimited to a period of four weeks of data collection.
2. Study is delimited with the staff nurses in MMM hospital.

4. Conceptual framework:

The conceptual framework designed for this study is based on Imogene King's "Goal attainment theory". In 1981 she refined her ideas in A Theory for Nursing: systems, concept and process. King proposes an open system framework as a theory for goal attainment. Her vision of the nursing process had a strong emphasis on interpersonal process. King bases her theory on general system theory, the behavioural sciences, deductive and inductive reasoning.

4.1. Application of modified Imogene kings's goal attainment theory for the present study:

The conceptual system composed of three interacting system; the personal system, the interpersonal system, and social system.

4.2. Personal system:

Each personal system represents an individual. When individuals interact with each other it forms an interpersonal system or interacting system. Nurse researcher has her own perception, values, beliefs and judgement and she experience each system in a unique manner. Each staff nurse is a personal system having their own perception, values, and judgement and they come together for a purpose and makes judgment.

4.3. Interpersonal system:

The members of the interpersonal system interact with each other by means of verbal and non-verbal behavior and transmit information from one person to another either directly or indirectly for a purpose of goal attainment. Each one is expected to perform goal specific action to their position. Here the nurse researcher and the staff nurse interact with each other for transmitting the information.

4.4. Perception and judgment:

During the process of interaction the nurse researcher by means of pre-test and assessment perceives that nurses working in cardiac unit need to be updated with the knowledge regarding

coronary angiogram care and decides that planned educational programme can only update the knowledge of staff nurses. The staff nurse working in cardiac unit also perceives the reality of need for updating of knowledge and skill on coronary angiogram care and decides that continuous learning can only help them to update the current trends in coronary angiogram.

4.5. Action and reaction:

Action is the mental and physical preparation of the individual to bring out desirable changes in the behavior. A nurse researcher mentally prepares to educate the nurses and prepare material for planned educational programme. Staff nurses prepare mentally to show their consent and readiness for learning the information.

4.6. Interaction:

Interaction is characterized by values, mechanisms being influenced by perceptions which contains the verbal and non-verbal communication. It is the observable behavior of two or more persons in mutual presence. Here the researcher and nurse mutually set goal in gaining adequate knowledge and practice regarding coronary angiogram.

Research methodology is an overall plan for addressing the research problem it cover multiple aspects of the study structure. It includes the description of the research approaches, research design, variables, sampling techniques, tool for data collection and planned format for data collection and a plan for data analysis. Criteria for article selection

5. Research approach:

A research approach is an applied form of research that involves finding out how a specific program, practice, procedure or policy is working well (Polit & Hungler).

The approach used in the study was quantitative approach.

5.1. Research Design:

It refers to the overall plan for obtaining answer in the research questions for testing the research hypothesis (Polit & Hungler)

The research design selected for the study was pre experimental one group pre- test and post-test design.

Day 1	Day 1	Day 7

O_1	x	O_2
Pre-test	Intervention	Post-test

The design used for this study is represented as O_1 – Pre-test assessment of knowledge and practice regarding coronary angiogram care among staffnurses.

x – Administration of planned educational program on coronary angiogram care.

O_2 – Post-test assessment of knowledge and practice regarding coronary angiogram care among staff nurses.

In pre experimental one group pre-test and post-test design, the dependent variable is measured before the independent variable is introduced. After a period of seven days the dependent variable is measured again to obtain the effect of independent variable.

5.2. Variables:

5.2.1. Independent variable:

Planned educational program on coronary angiogram care.

5.2.2. Dependent variable:

Knowledge and practice on coronary angiogram care.

5.2.3. Demographic variable:

Age, gender, educational level, total experience, work experience in cardiac unit andattendance at any class on coronary angiogram care.

6. Population:

Target Population: - Staff nurses working in cardiac units all over hospitals.

6.1.1. Accessible population:

Staff nurses working in cardiac units of MLB hospital.

6.1.2. Sample:

Staff nurses who fulfilled the sample selection criteria.

6.1.3. Sample size:

The sample size for the study was 60.

6.2. Sampling technique:

Sampling technique refers to the process of selecting a group of people, events and otherelements that are representative of the population being studied (Polit & Hungler).

The sampling technique adopted for this study was non probability purposive sampling.

6.3. Criteria for sample selection:

6.3.1. Inclusion criteria:

1. Staff nurse with less than two years of experience.
2. Staff nurse available at the time of data collection.

6.3.2. Exclusion criteria:

3. Those who were not willing to participate.
4. Those who were working in other than cardiac unit.

7. Findings and interpretation:

7.1. Organization of the data:

Data collected were organized under the following sections.

Section A: Assessment of demographic variables of the staff nurses

Section-A:

7.2. Assessment of Demographic variables of the staff nurses:

Table. 4.1: Frequency and percentage distribution of demographic variables of staff nurses N = 60

Demographic Variables	***Characteristics***	***No.***	***%***
Age in years	21 – 23	56	93.33
	24 – 26	4	6.67
	27 – 28	0	0
	>28	0	0
Gender	Male	0	0

	Female	60	100.0
Educational level	General Nursing	3	5.0
	B.Sc. Nursing	57	95.0
	Post Basic Nursing	0	0
Total years of experience	0 - 6 months	47	78.34
	7 months - 1 year	9	15.0
	1 – 1½ years	2	3.33
	1½ - 2 years	2	3.33
Work experience in cardiac unit	0 - 6 months	48	80.0
	7 months - 1 year	10	16.67
	1 – 1½ years	2	3.33
	1½ - 2 years	0	0.0
Attendance at any class on coronary angiogram care	Yes	13	21.67
	No	47	78.33

The above Table. 4.1 shows frequency and percentage distribution of demographic variables of staff nurses.

With regard to age in years, majority 56(93.33%) of the samples were in age group of 21 –23 years, and only 4 (6.67%) of them were in the age group of 24 – 26 years and none of the samples falls in the age group of 27 – 28 and more than 28 years. With respect to gender all 60(100%) of the samples were females. Regarding the educational level, majority 57(95%) of the samples were educated up to B.Sc. Nursing, and a few 3(5%) were general nursing and none of the samples fall under post basic nursing category.

Considering the total years of the experience mostly 47(78.34%) of the samples had 0 – 6 months of experience as staff nurse and 9(15%) of the samples had 7 months to 1 year of experience. Regarding work experience in cardiac unit 48(80%) of the sample had work experience of 0 – 6 months and 10(16.67%) of the sample had 7 months to 1 year of experience. Most of the 47(78.33%) of the samples had not attended any class on coronary angiogram care.

The study findings revealed that majority of the samples were young female nurses with B.Sc. Nursing qualification. And they had nearly 6 months of experience and many of them had not attended any classes on coronary angiogram care previously.

Section-B:

Section B: Assessment of pre-test and post-test level of knowledge and practice regarding coronary angiogram care among the staff nurses.

7.3. Assessment of pre-test and post-test level of knowledgeand practice regarding coronary angiogram care among the staff nurses:

Table. 4.2: Frequency and percentage distribution of aspects of pre-test level of knowledge regardingcoronary angiogram care among the staff nurses N = 60

Knowledge Domains	*Needs Improvement (<50%)*		*Moderately Adequate Knowledge (50 – 75%)*		*Adequate Knowledge (>75%)*	
	No.	%	No.	%	No.	%
General aspects	20	33.33	39	65.0	1	1.67
Coronary Angiogram	7	11.67	48	80.0	5	8.33
Pre-procedural care	47	78.33	12	20.0	1	1.67
Post-procedural	40	66.67	18	30.0	2	3.33
Complications	35	58.33	25	41.67	0	0
Overall	39	65.0	21	35.0	0	0

The above Table. 4.2 shows frequency and percentage distribution of aspects of pre-test level of knowledge regarding coronary angiogram care among the staff nurses Regarding the knowledge on general aspects, many 39(65%) of the samples had moderately adequate knowledge and 20(33.33%) of them needs improvement in their knowledge level and only one had adequate knowledge. With respect to knowledge on coronary angiogram, majority 48(80%) of the samples had moderately adequate knowledge, 7(11.67%) of them needs improvement and 5(8.33%) of them had adequate knowledge. With regard to knowledge on pre-procedural care, most 47(78.33%) of the samples needs improvement, 12(20%) had moderately adequate knowledge and only 1(1.67%) of them had adequate knowledge.

Considering the post procedural care knowledge, many of the samples 40(66.67%) needs improvement, 18(30%) had moderately adequate knowledge and 8(13.34%) had adequate knowledge. Analysing complications it revealed that many 35(58.33%) needs improvement and 25(41.67%) had moderately adequate knowledge. The overall pre-test level of knowledge

revealed that many 39(65%) needs improvement and 21(35%) had moderately adequate knowledge regarding coronary angiogram care, and none of the samples fall under the category of adequate knowledge.

When observed the knowledge score in the pre-test level majority of the staff nurses did not have adequate knowledge regarding coronary angiogram care. Nurses need improvement especially in the area of pre and post-procedural care and complications of coronary angiogram.

Table. 4.3: Frequency and percentage distribution of aspects of post-test level of knowledgeregarding coronary angiogram care among staff nurses N = 60

Knowledge Domains	*Needs Improvement (<50%)*		*Moderately Adequate Knowledge (50 – 75%)*		*Adequate Knowledge (>75%)*	
	No.	%	No.	%	No.	%
General aspects	0	0	13	21.67	47	78.33
Coronary Angiogram	0	0	29	48.33	31	51.67
Pre-procedural care	0	0	5	8.33	55	91.67
Post-procedural	4	6.67	13	21.66	43	71.67
Complications	4	6.67	12	20.0	44	73.33
Overall	0	0	1	1.67	59	98.33

The above Table. 4.3 shows frequency and percentage distribution of aspects of post-test level of knowledge regarding coronary angiogram care among staff nurses.Regarding the knowledge on general aspects, many 47(78.33%) of them had adequate knowledge and 13(21.67%) of them had moderately adequate knowledge regarding coronary angiogram care. With respect to knowledge to coronary angiogram, most 31(51.67%) had adequate knowledge and 29(48.33%) had moderately adequate knowledge. With regard to pre-procedural careknowledge, majority 55(91.67%) had adequate knowledge and 5(8.33%) had moderately adequate knowledge.

Considering the post-procedural care knowledge, 43(71.67) had adequate knowledge, 13(21.66%) had moderately adequate knowledge and 4(6.67%) needed improvement. On analysing the complications it revealed that most 44(73.33%) had adequate knowledge, 12(20.0%) had moderately adequate knowledge and 4(6.67%) needed improvement in their knowledge level. The overall post-test level of knowledge revealed that majority 59(98.33%)

had adequate knowledge and 1(1.67%) had moderately adequate knowledge regarding coronary angiogram care and none of them had inadequate knowledge.

When observed the knowledge score in the post-test level, majority of the staff nurses gained adequate knowledge regarding coronary angiogram care after the planned educational program. A few nurses need improvement in the post-procedural care and complications aspects of coronary angiogram.

Table.4.4: Mean and S.D of knowledge of the staff nurses in the pre and post-test period N = 60

Knowledge	Mean	S.D
Post-test	26.98	1.89

The above Table. 4.4 shows mean and S.D of knowledge of the staff nurses in the pre and post-test periodThe study revealed that the pre-test mean score of knowledge was 13.0 with the S.D of 3.71 where As in the post-test the mean score of knowledge was 26.98 with the S.D of 1.89.

The findings revealed that mean knowledge score is increased in the post-test which in turn indicate the effectiveness of planned educational program.

Table. 4.5: Frequency and percentage distribution of aspects of pre-test level of practice regarding coronary angiogram care among the staff nurses N = 60

Practice Domains	ls Improvement (<50%)		Fair Practice (50 – 75%)		Good Practice (>75%)	
	No.	%	No.	%	No.	%
Pre-procedural care	3	5.0	57	95.0	0	0
Post-procedural care	49	81.67	11	18.33	0	0
Overall	30	50.0	30	50.0	0	0

The above Table. 4.5 shows frequency and percentage distribution of aspects of pre-test level of practice regarding coronary angiogram care among the staff nurses

Regarding the practices on pre-procedural care, majority 57(95%) samples had fair practice and 3(5%) needed improvement on practice regarding coronary angiogram care. With respect to practice on post-procedural care, majority 49(81.67%) of samples needs improvement and 11(18.33%) had fair practice regarding coronary angiogram care. The overall pre-test level of practice revealed that 30(50%) had fair practice and30 (50%) needed improvement and none

of the samples had good practice regarding coronary angiogram care.

The study findings revealed that, none of the samples had good practice on pre- procedural care and post-procedural care regarding coronary angiogram care. Nurses need to improve their practices especially in the post procedural care aspect.

Table. 4.7: Mean and S.D of practices of staff nurses regarding coronary angiogram care in the preand post-test period N = 60

Practice	Mean	S.D
Pre-test	22.63	2.01
Post- test	40.75	1.51

The above Table. 4.7 shows mean and S.D of practices of staff nurses regarding coronary angiogram carein the pre and post-test

The study revealed that pre-test mean score of practice was 22.63 with the S.D of 2.01 whereas in the post-testthe mean score of practice was 40.75 with the S.D of 1.51.

The findings revealed that mean practice score is increased in the post-test which in turn indicate the effectiveness of planned educational program.

Section C:

Assessment of relationship between post-test knowledge and practice score regarding coronary angiogram care among the staff nurses.

Assessment of relationship between post-test knowledge andpractice score regarding coronary angiogram care among the staff nurses.

Table. 4.8: Relationship between post-test knowledge and practice score regarding coronary angiogram care among staff nurses N = 60

Variables	Mean	S.D	'r' Value
Knowledge	26.93	1.89	r = 0.371** p = 0.001 , S
Practice	40.75	1.51	

The above table 4.8 shows the relationship between post-test knowledge and practice score regarding coronary angiogram care among staff nurses

The findings revealed that the post-test mean knowledge score was 26.93 with the S.D of 1.89 and post-test mean practice score was 40.75 with the S.D of 1.51. The calculated 'r' test value

r = 0.371 showed a moderate positive correlation between post- test knowledge and practice score which was found to be statistically significant at p<0.01.

The study findings showed that when the knowledge of staff nurses regarding coronary angiogram increases their practice level also increases.

Section D:

Assessment of effectiveness of planned educational programme on level of knowledge and practice regarding coronary angiogram care among the staff nurses.

Table. 4.9: Comparison of pre-test and post-test level of knowledge regarding coronary angiogram care among staff nurses N = 60

Knowledge	Mean	S.D	Paired 't' Test
Pre-test	13.0	3.71	= 28.758*** p = 0.000 , S
Post-test	26.98	1.89	

***p 0.001, S – Significant

The above Table. 4.9 shows the comparison of pre-test and post-test level of knowledge regarding coronary angiogram care among staff nurses.

The findings revealed that the pre-test mean score of knowledge was 13.0 with the S.D of 3.71 whereasin the post-test the mean score of knowledge was 26.98 with S.D of 1.89. The calculated paired't' test value of t= 28.758 which was found to be higher than the table value at p<0.001 which proved high level of statistical significance.

The study findings revealed that planned educational programme given to the staff nurses was effectiveand nurses had significant improvement in their level of knowledge regarding coronary angiogram care.

Table. 4.10: Comparison of pre-test and post-test level of practice regarding coronary angiogram care amongstaff nurses N = 60

Practice	Mean	S.D	Paired 't' Test
Pre-test	22.63	2.01	= 57.933*** p = 0.001 , S
Post -test	40.75	1.51	

The above table 4.10 shows comparison of pre-test and post-test level of practice regarding coronary angiogram care among staff nurses

The findings revealed that the pre-test mean score of practice was 22.63 with the S.D of 2.01 whereasin the post- test the mean score of practice was 40.75 with the S.D 1.51. The calculated paired‘t’ test value t= 57.933 which was found to be higher than the table value at p<0.001 which proved high level of statistical significance.

The study findings revealed that planned educational programme given to the staff nurses was effectiveand nurses had significant improvement in their level of practice regarding coronary angiogram care.

8. Conclusion:

The study concluded that the planned educational program was effective in improving the knowledge and practice of staff nurses. It helps them to be more confident in their duty and to omit errors.

9. Recommendation:

(1) The study can be replicated with much more sample.

(2) The study can be conducted including all percutaneous coronary intervention procedures.

(3) The effect of the educational program can be evaluated on a long term basis.

(4) The study can be conducted even in the ICU settings

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