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"A COMPARATIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING NURSING CARE OF THE PATIENTS UNDERGOING CARDIAC CATHETERIZATION AMONG STAFF NURSES WORKING IN SELECTED PRIVATE AND GOVERNMENT HOSPITALS OF DISTRICT PATIALA, PUNJAB WITH A VIEW TO DEVELOP AN INFORMATIONAL BOOKLET."

Ms. Nitasha Choudhary[1], Mrs. Jaya Davidu Shirshetty[2]

1. Research Scholar Dept. of Medical Surgical Nursing, Adarsh College of Nursing, Patiala Punjab, India
2. Principal Dept. of Medical Surgical Nursing, Adarsh College of Nursing, Patiala Punjab, India.

Abstract: Cardiovascular disorders are the leading cause of death in the world. Cardiac catheterization is a common procedure done to diagnose a variety of heart problems. It may lead to several minor and more serious complications which may contribute to morbidity and mortality. The responsibility of the cardiac catheterization team is ensuring good patient care, safety without accidental harm as a result of a health care encounter.

METHODOLOGY: A quantitative research approach and Comparative research design was adopted to conduct the study. The convenience sampling technique was used to select 60 staff nurses (30 private hospital staff nurses and 30 government hospital staff nurses) from the selected hospitals of district Patiala, Punjab. The self-structured knowledge questionnaire was used to assess the knowledge among the staff nurses.

RESULT: Out of 60 subjects, majority of the staff nurses has average level of knowledge among government hospital was 18 (60%) and majority of the staff nurses has good level of knowledge among private hospital was 14(46.67%) which was followed by good level of knowledge 7(23.33%) among staff nurse of government hospital and average and excellent level of knowledge 7(23.33%) among staff nurses of private hospital, minimum level of poor knowledge was 5(16.67%) among staff nurses of government hospital and 2(6.67%) among staff nurses of private hospital.

CONCLUSION: It was concluded that the Knowledge level will be improved after distributing informational booklet among staff nurses of private and government hospital.

KEYWORDS: Assess, knowledge, cardiac catheterization, nursing care, staff nurses, private and government hospital.

Introduction

'Learning is a treasure that will follow its owner everywhere' - *Chinese Proverb*

The cardiovascular system refers to the heart, blood vessels and the blood. Blood contains oxygen and nutrients, which our body needs to survive. The main function of cardiovascular system is to maintain blood flow to all parts of the body. An estimated 17.9 million people died from cardiovascular disease in 2019, representing 32% of all global deaths. Over three quarters of cardiovascular disease deaths take place in low- and middle-income countries. Of these deaths, 85% were due to heart attack and stroke. In India, studies have reported increasing CHD prevalence over the last 60 years, from 1% to 9% in urban populations and <1% to 4%-6% in rural populations.

The heart receives blood supply from the coronary arteries. Two major coronary arteries branch off from the aorta near the point where the aorta and the left ventricle meet. Left Main Coronary Artery branches into Circumflex artery and Left Anterior Descending artery. The Circumflex artery supplies blood to the left atrium, side and back of the left ventricle and the Left Anterior Descending artery supplies the front and bottom of the left ventricle and the front of the septum. Right Coronary Artery branches into the Right marginal artery and Posterior descending artery. The right coronary artery supplies to Right atrium, Right ventricle, Bottom portion of both ventricles and back of the septum. The main portion of the right coronary artery provides blood to the right side of the heart, which pumps blood to the lungs.

Cardiac catheterization is widely used for diagnostic evaluation and therapeutic interventions in the management of patients with cardiac patients. Cardiac catheterization involves the insertion of a catheter into a vein or artery, usually from a groin or jugular access site, which is then guided into the heart. For cardiac catheterization procedure it requires arterial access, the two common sites used include the common femoral artery and radial artery. This procedure is performed for both diagnostic and interventional purposes.

The nurse's role in pre catheterization teaching and intra catheterization and post catheterization care is important. Preoperative care refers to care provided before a surgical operation. Patient preparation before the procedure is included in preoperative care. Post operative nursing interventions is to perform immediate assessment of the patient's airway, respiratory, and circulatory status, then focuses on a more thorough assessment. Immediate post-anesthesia nursing care focuses on maintaining ventilation and circulation, monitoring oxygenation and level of consciousness, preventing shock, and managing pain. The risk of major complications during diagnostic cardiac catheterization procedure is usually less than 1%, and the risk of mortality of 0.05% for diagnostic procedures. For any patient, the complication rate is dependent on multiple factors and is dependent on the demographics of the patient, vascular anatomy, co-morbid conditions, clinical presentation, the procedure being performed, and the experience of the operator. The complications can be minor as discomfort at the site of catheterization, to major ones like death.

NEED

Cardiac catheterization is an invasive procedure indicated in a wide variety of circumstances. It is used for diagnostic and therapeutic purposes in the management of patients with cardiac diseases. Patient safety in minimizing complications is increasingly recognized as essential in practice of coronary care unit. Individual have right to safe and effective quality of health care. Cardiac nurses are responsible for providing patient's safety and minimizing vascular complications after cardiac catheterization procedures. They should be aware about the guidelines for providing safety for the patient. Each nurse should know the high-risk patient, safe practices for handling and maintenance of homeostasis. Hence the investigator planned to conduct a study to assess the knowledge of cardiac nurses on safety practices after cardiac catheterization procedures in cardiac unit. To reduce the risk of complications, it is advised that specific management and vigilant monitoring is in place for early identification of problems. Healthcare professionals, specifically nurses, are in the best position to be able to identify complications and offer prompt care to patients.

Intessar Mohamed Ahmed (2015) conducted a descriptive study to assess Predictors of Post -Cardiac Catheterization Femoral Artery Hematoma and Bleeding at coronary care unit at the main university hospital, Alexandria University among 100 patients. The data collection tool was consisted of 3 parts Patients characteristics, information of Cardiac catheterization and risk factors. The result was found that hematoma occurred with 31% of the studied sample. The study concluded that Cardiac catheterization staff and nurses caring for these patients must work together to prevent complications, when possible, and treat complications when they occur. Nurses with specialized training are needed to assess, identify and manage complications after cardiac catheterization.

Cardiovascular diseases remain the leading cause of disease burden in the world. Cardiovascular diseases burden continues its decades-long rise for almost all countries outside high-income countries, and alarmingly, the age-standardized rate of cardiovascular diseases has begun to rise in some locations where it was previously declining in high-income countries.

PROBLEM STATEMENT

A Comparative study to assess the knowledge regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab with a view to develop an informational booklet.

OBJECTIVES

1. To assess the socio demographic variables staff nurses working in selected private and government hospitals of district Patiala, Punjab.
2. To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private hospitals of district Patiala, Punjab.
3. To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected government hospitals of district Patiala, Punjab.
4. To compare the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses of both private and government hospitals of district Patiala, Punjab.
5. To find out the association between knowledge score of staff nurses regarding nursing care of cardiac catheterization patient with their socio demographic variable.
6. To develop and provide an informational booklet regarding nursing care of the patients undergoing cardiac catheterization among staff nurses of selected private and government hospitals of district Patiala, Punjab.

ASSUMPTIONS

1.Staff nurses have some knowledge regarding nursing care of the patients undergoing cardiac catheterization.

2.Knowledge of staff nurses regarding nursing care of the patients undergoing cardiac catheterization will affect the management of cardiac catheterization.

3.The knowledge may vary according to the personal variables.

4. An informational booklet will be useful to enhance the knowledge.

REVIEW OF LITERATURE

The review of literature is a broad, comprehensive, in-depth, systematic and critical review of scholarly literature and summary of the written material that contains information relevant to the research topic was done to collect maximum information for laying the foundation of the new study. The process of review begins even before the selection of the topic and continues till the publication of the report.

The review of literature is discussed under the following headings: -

SECTION-A: Literature review related to knowledge regarding care of cardiac catheterization patients.

SECTION- B: Literature review related to complications of cardiac catheterization.

SECTION-A: Literature review related to knowledge regarding care of cardiac catheterization patients.

Adil Ali Hussein, Bager Dawood et.al (2022) conducted a descriptive study to assess nurses' Knowledge and Practice toward Post Cardiac Catheterization Patients' Safety at Al-SADER Teaching Hospital in Basra City. The study comprises of 30 nurses who work in the medical ICU and cardiac medical ward. A self-structured questionnaire was used to collect the data. The result of the study was that the mean of total knowledge was found to be good when contrasted to the poor mean of practice. This demonstrated that nurses are well-versed in post-cardiac catheterization complications. The study concluded that educational training programs for nurses who work in cardiac catheterization department pay more attention to cardiac catheterization and patient safety.

Saeeda Sania, Raja, Junaid Ali (2021) conducted a quasi-experimental study to evaluate the impact of educational training on nurses to improve knowledge about practices regarding patient safety after cardiac catheterization. Non convenience sampling technique was performed for the collection of data. The data was collected by utilizing the open-access structured tool of knowledge and practice. The result of the study was the majority of the participant had poor knowledge 30% and post-educational training, the knowledge level reached good knowledge 70.0 % and it was also found statistically significant p-value ≤ 0.001. The conclusion of the study was the implementation of the educational training for nurses improved knowledge about practices regarding patients' safety after cardiac catheterization.

SECTION- B Literature review related to complications of cardiac catheterization.

Huda Alwan Khudair, Khalida Mohammed Khadur (2021) conducted a quasi-experimental study to assess effectiveness of an educational program on nurses' knowledge regarding care of central venous catheter in AL Nasiriyah cardiac center. The study comprising of 60 staff nurses working in ICU department. The data was collected through three periods (pretest, posttest1 after one week of the implementation of educational program and posttest2 after two weeks of the implementation of educational

program). The result of the study was that nurses had low level of knowledge at pretest in both group more than three quarters of the participants, the mean score of posttest1 mean score is (0.84) for study group and (0.26) in control group, at posttest2 the mean score of knowledge for study group was (0.85), while mean score of knowledge in control group was (0.29). The study concluded that the educational program has an effectiveness in improve the nurses' knowledge regarding care of central venous catheter.

Mohammed Abdu al-Kareem Mustafa et.al (2020) Conducted pre-experimental study to assess effectiveness of Nursing Intervention on Early Complications for Patients undergoing Coronary Catheterization at AL Najaf center. The study comprising of 100 sample randomly divided into two groups of 50 patients of each. The data is collected through instrument construction the socio-demographic characteristics, the clinical characteristics, early complications' checklist. The results indicated that significant difference between the period of measurements of hematoma, back pain, urine discomfort, and vasovagal reflex in the patients of control group. The study concluded that the nursing intervention would be helpful to come up with a better nursing guideline for managing patients' hematoma, back pain, and vasovagal reflex after cardiac catheterization.

METHODOLOGY

Research methodology is the way to systematically solve the problem. Research methodology adopted for the study includes research design, description of setting, variables, population, sample and sampling technique, development and description of tools used for data collection, content validity and reliability of tool, pilot study, procedure for data collection and plan for data analysis.

The purpose of the study is to compare the knowledge regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

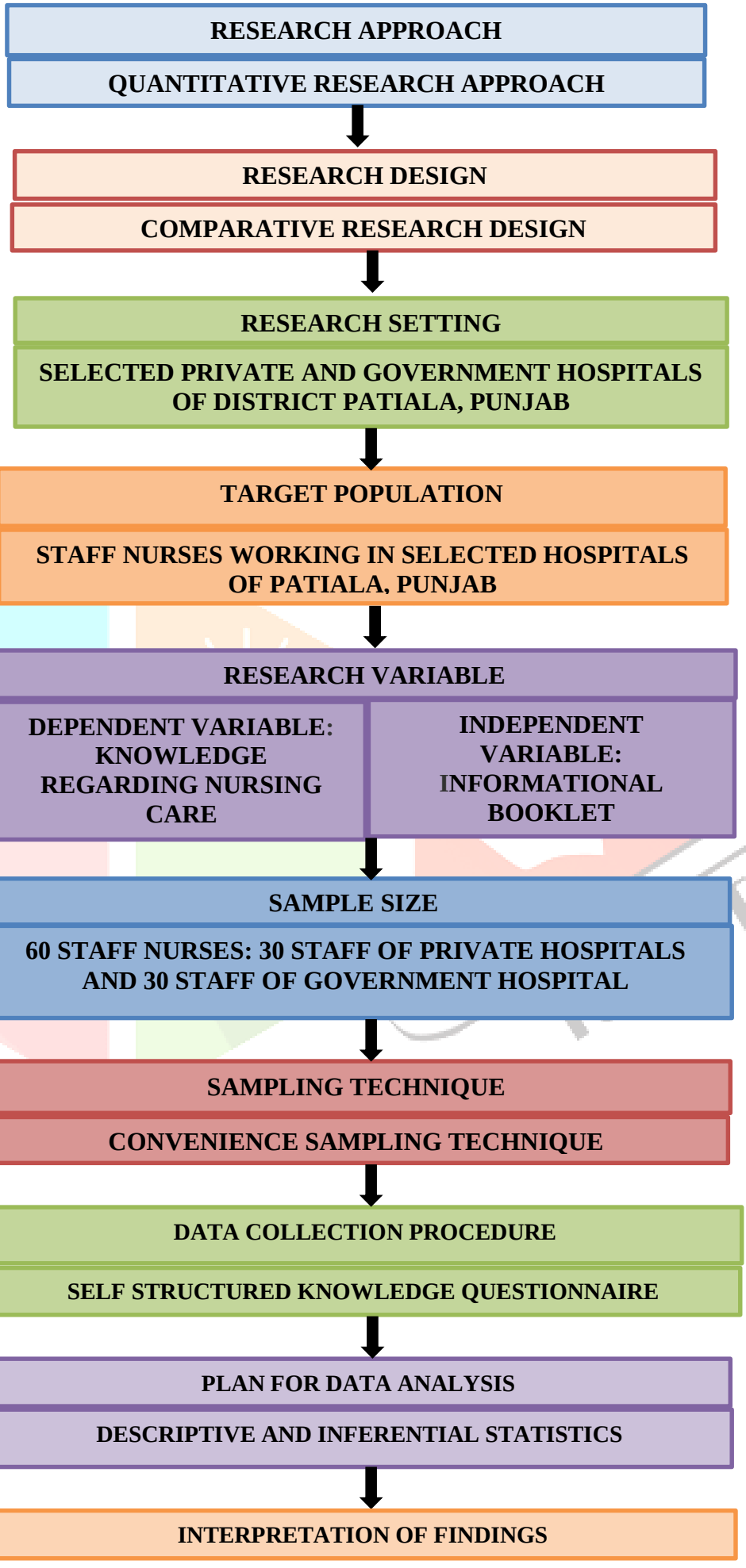


FIG: SCHEMATIC PRESENTATION OF RESEARCH METHODOLOGY

SELECTION AND DEVELOPMENT OF RESEARCH TOOL

The tool was developed on the basis of literature review and personal experience of the investigator in the medical surgical nursing.

The tool used for collecting the background information including age, gender, educational qualification, working experience, area of clinical posting, previous knowledge and source of knowledge regarding nursing care of patients undergoing cardiac catheterization.

The most important aspect of investigation is the collection of appropriate information which provides necessary data to answer the question that will be raised in the study. Self-structured knowledge questionnaire was administered as a tool for the present study. Tool was selected after reviewing the related literature and after the consultation with expert.

DESCRIPTION OF TOOL

Research tool comprises of two sections:

Section-A: This section is the first section seeking information in socio demographic data is age, gender, educational qualification, working experience, area of clinical posting, previous knowledge and source of knowledge regarding care of patient undergoing cardiac catheterization.

Section-B: Self-structured knowledge questionnaire regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

Scoring according to level of knowledge regarding nursing care among staff nurses of private and government hospitals

SCORE	LEVEL OF KNOWLEDGE
0-7	VERY POOR
8-14	POOR
15-21	AVERAGE
22-28	GOOD
29-35	EXCELLENT

MAX SCORE= 35 **MIN SCORE= 0**

DATA COLLECTION PROCEDURE:

1. A prior formal permission was obtained from the concerned authorities.
2. The purpose of the study was explained and consent was obtained from the subjects.
3. The investigator selected samples as per inclusion and exclusion criteria.
4. Socio-demographic data was assessed
5. Knowledge regarding nursing care of the patients undergoing cardiac catheterization, was assessed by self- structured knowledge questionnaire before administration of informational booklet.

6. Informational booklet was distributed.

7. After collecting the data, answers obtained was analysed and calculated.

ETHICAL CONSIDERATION:

- Prior to the study, ethical clearance was obtained from the concerned authorities to conduct the study in selected hospitals of district Patiala, Punjab and also from ethical research committee of Adarsh College of Nursing, Patiala.
- Informed consent was taken from study subjects.
- Anonymity and Confidentiality of the study participants was maintained.

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the description of samples, analysis and interpretation of data collected from staff nurses working in private and government hospitals of district patiala, punjab. data analysis enables the researcher to reduce, summarize, organize, interpret, and communicate numerical information. (polit and hungler 1995).

Kerlinger 1973, described analysis as the categorizing, ordering, manipulating and Summarizing data to reduce it to a tangible and interpretable from so that research problem can be studied and tested including the relationship between the variables. The data analysis was done accordance with the objectives of the study. The data was analyzed by calculating the frequency, percentage, distribution, mean, standard deviation, unpaired t- test and chi-square test.

OBJECTIVES OF THE STUDY

1. To assess the socio demographic variables staff nurses working in selected private and government hospitals of district Patiala, Punjab.
2. To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private hospitals of district Patiala, Punjab.
3. To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected government hospitals of district Patiala, Punjab.
4. To compare the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses of both private and government hospitals of district Patiala, Punjab.
5. To find out the association between knowledge score of staff nurses regarding nursing care of cardiac catheterization patient with their socio demographic variable.
6. To develop and provide an informational booklet regarding nursing care of the patients undergoing cardiac catheterization among staff nurses of selected private and government hospitals of district Patiala, Punjab.

SECTION A

OBJECTIVES -1

1. To assess the socio demographic variables staff nurses working in selected private and government hospitals of district Patiala, Punjab.

Frequency and percentage distribution of the selected socio demographic variables of staff nurses of private and government hospitals.

Group A: Government Hospital
Group B: Private Hospital

Sr.no	Socio Demographic variables	Group A		Group B	
		F	%	F	%
1.	Age group (years)				
	A. 25-30 years	19	63.33%	18	60%
	B. 31-35 years	6	20%	9	30%
	C. 36-40 years	3	10%	3	10%
	D. more than 40 years	2	6.67%	0	0%
2.	Gender				
	a. Male	4	13.33%	10	33.33%
	b. Female	26	86.67%	20	66.67%
	c. Transgender	0	0%	0	0%
3.	Educational qualification				
	a. GNM	11	36.67%	7	23.33%
	b. Post B.Sc Nursing	7	23.33%	10	33.33%
	c. B.Sc Nursing	11	36.67%	11	36.67%
	d. M.Sc Nursing	1	3.33%	2	6.67%
4.	Working experience				
	a. Less Than Five Years	23	76.67%	14	46.67%
	B. Less Than 10 Years	3	10%	14	46.67%
	C. More Than 10 Years	2	6.67%	2	6.67%
	D. More Than 15 Years	2	6.67%	0	0%

5.	Area of clinical posting				
	a. cath lab	1	3.33%	3	10%
	b. CCU	6	20%	10	33.33%
	c. ICU	14	46.67%	9	30%
	d. ward (medical & surgical)	9	30%	8	26.67%
6.	Previous knowledge				
	a.Yes	22	73.33%	26	86.67%
	b. No	8	26.67%	4	13.33%
7.	Source of knowledge				
	a.Internet	6	20%	12	40%
	b. Journal	6	20%	0	0%
	c. working experience	18	60%	18	60%
	d.Other	0	0%	0	0%

Table1 :Shows the percentage distribution of staff nurses working in private and government hospitals.

In this study majority of staff nurse age represents that 63.33% staff between the age group 25-30 among government hospital and 60% among private hospital followed by 20% of government and 30% of private hospital under the age group of 31-35. The age of staff between age group of 36-40 was alike among staff nurses of government and private hospitals. The age of staff, 6.67% and 0% between the age group of >40 among staff nurses of government and private hospitals respectively.

The study result revealed that majority of staff nurses, 86.67% of staff are female gender of government hospital and 66.67% of private hospital, 13.33% staffs are male gender in government hospitals and 33.33% are in private hospitals, whereas the third category transgender has the same percentage 0% among both government and private hospital.

The study findings revealed that majority of staff nurses' educational qualification is B.Sc nursing 36.67% in both government and private hospitals, whereas GNM qualification in government is 36.67% and in private hospital 23.33%. Post B.Sc. nursing qualification in government hospital is 23.33% and 33.33% in private hospitals and M.Sc. nursing qualification in government hospital is 3.33% and 6.67% in private hospitals.

The study findings revealed that majority of staff nurses having the working experience is less than 5 years in government hospital is 76.67% and 46.67% in private hospitals, whereas 10% of employee has less than 10-year experience in government hospital and 46.67% in private hospital. More than 10-year experience in both government and private hospital is 6.67%. More than 15 years of experience of government hospital employee is 6.67% whereas 0% in private hospital.

The study findings revealed that majority of staff nurses posted in ICU is 46.67% in government hospital whereas in private hospital 33.33% of staff nurses are posted in CCU. Staff nurses posted in cath lab has 3.33% in government and 10% in private hospital, whereas staff nurses posted in wards has 30% in government and 36.67% in private hospital.

The study findings revealed that majority of government employee ie, 73.33% and private employee ie, 86.67% has previous knowledge regarding cardiac catheterization, whereas 26.67% of government and 13.33% of private hospital employee has no previous knowledge regarding cardiac catheterization.

Majority of sample has 60% source of information from working experience in both government and private hospital followed by 20% information obtained from internet among government and 40% among private hospital. Information obtained from journals was 20% among government employee and 0% among private hospital employee.

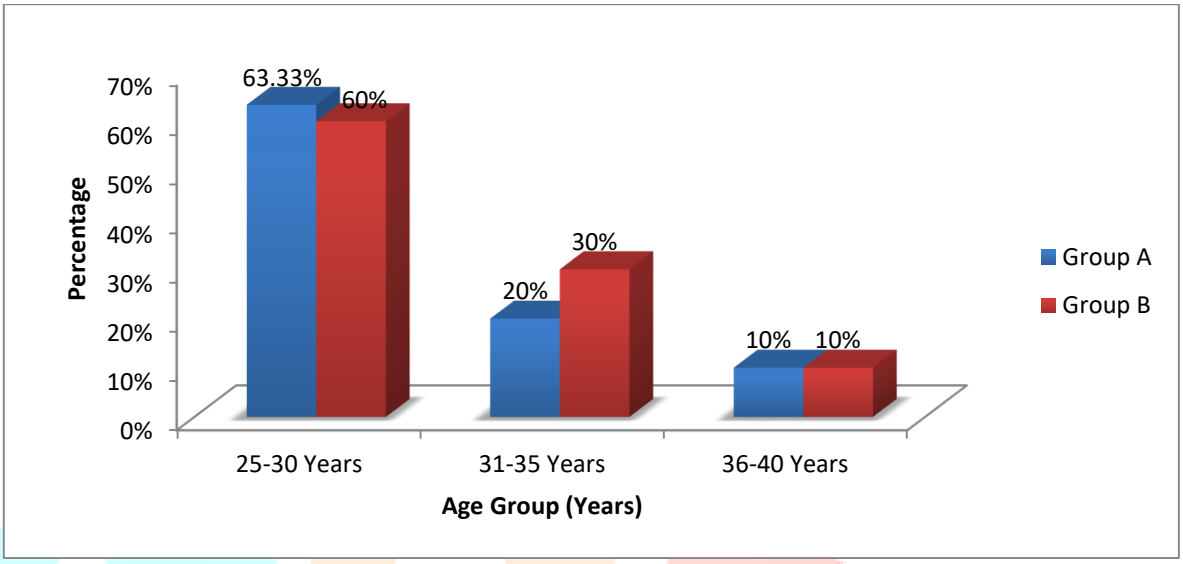


Table No.1 & Figure No.1.1 Bar graph showing percentage and frequency distribution of age (in years) among staff nurses of private and government hospital.

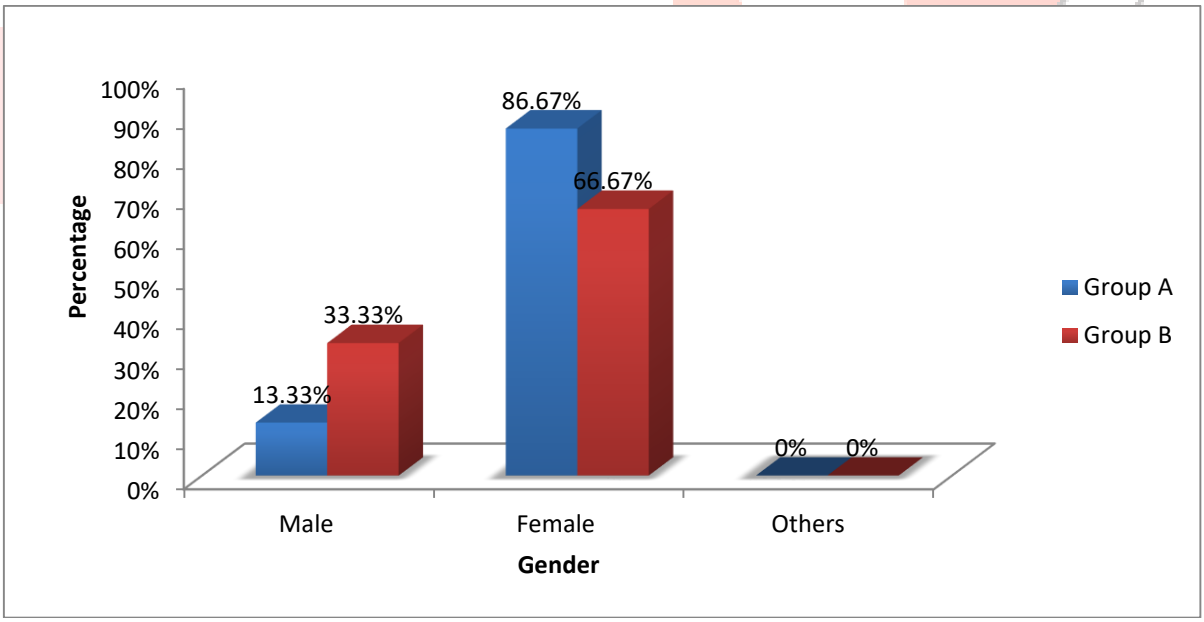


Table.No 1 & Figure No.1.2 Bar graph showing percentage and frequency distribution of gender among staff nurses of private and government hospital.

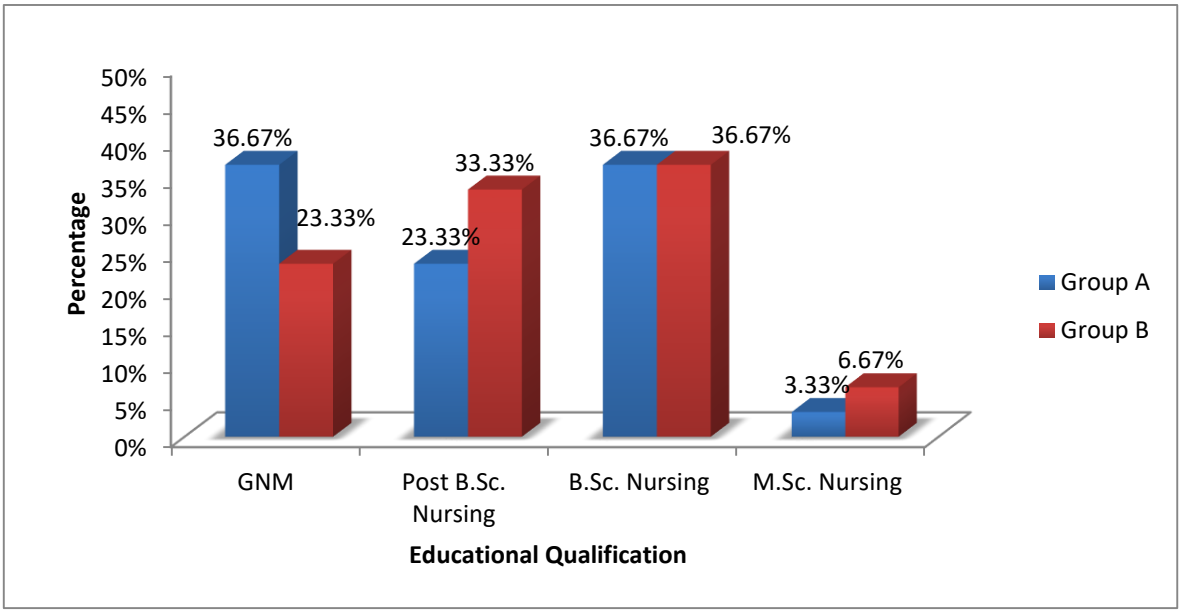
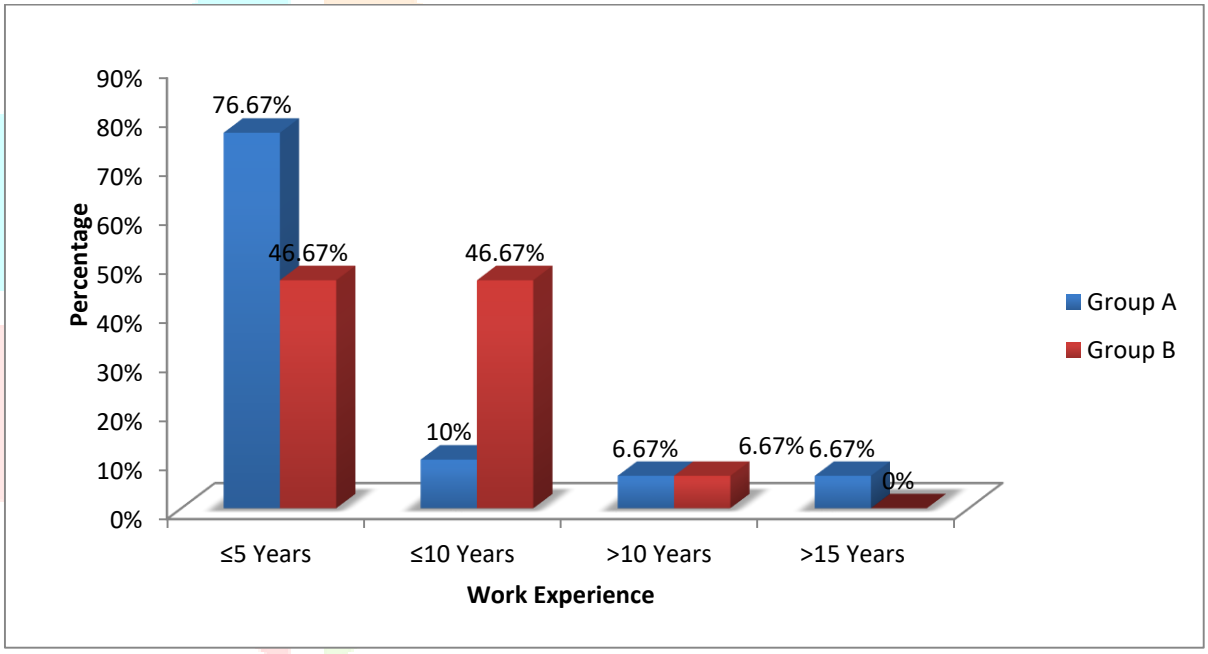


Table No.1 & Figure 1.3 Bar graph showing percentage and frequency distribution of educational qualification among staff nurses of private and government hospital.



Table

No.1 & Figure 1.4 Bar graph showing percentage and frequency distribution of working experience among staff nurses of private and government hospital.

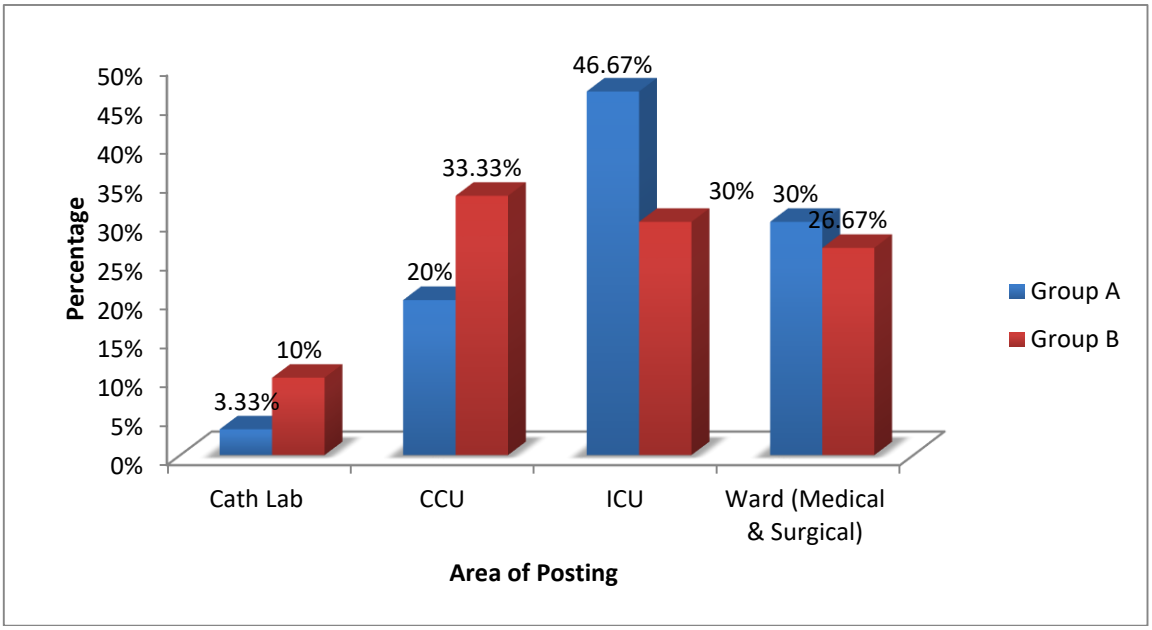


Table No.1 & Figure No. 1.5 Bar graph showing percentage and frequency distribution of area of posting among staff nurses of private and government hospital.

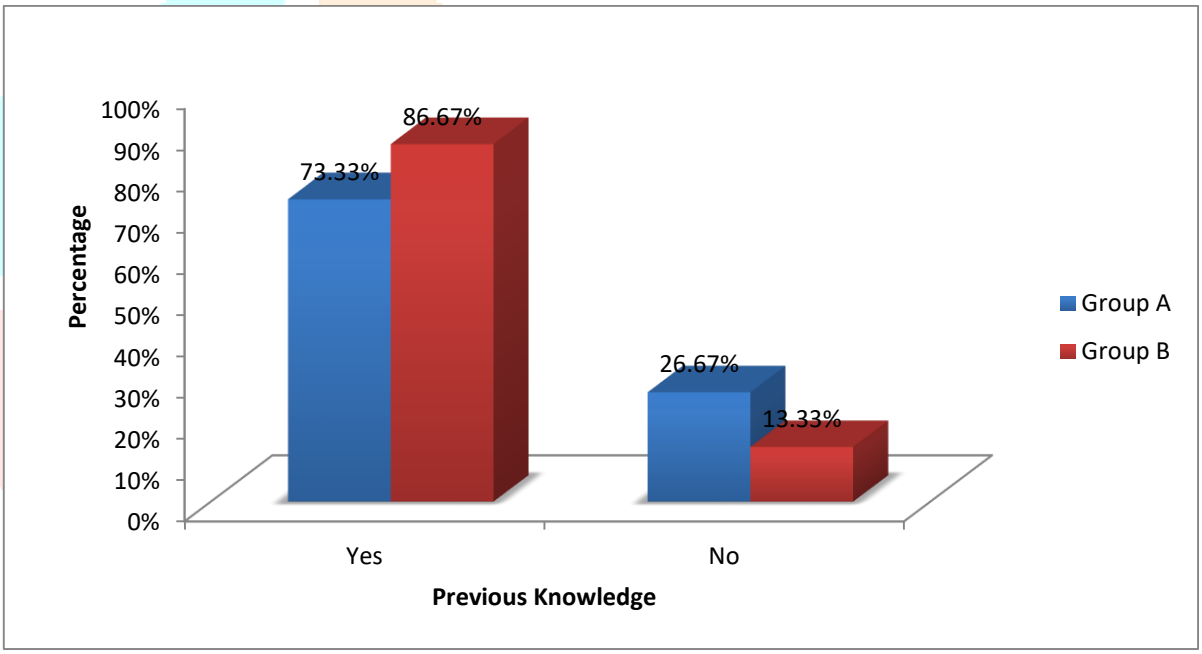


Table No.1 & Figure No. 1.6 Bar graph showing percentage and frequency distribution of previous knowledge among staff nurses of private and government hospital.

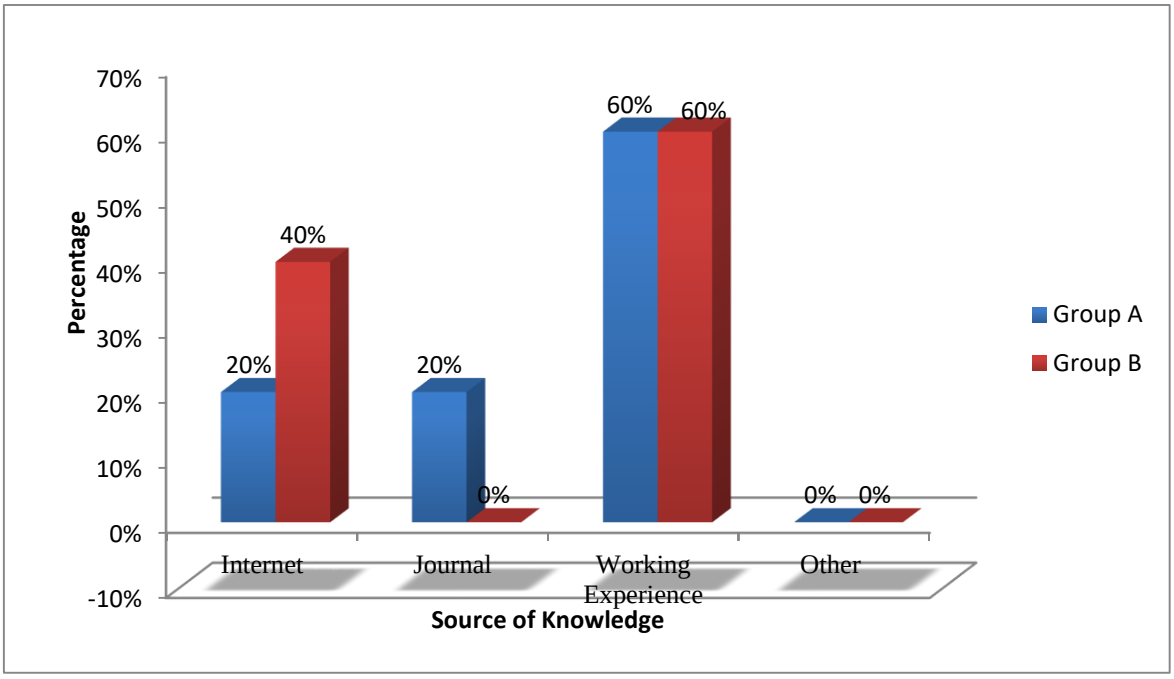


Table No.1 & Figure No. 1.7 Bar graph showing percentage and frequency distribution of source of knowledge among staff nurses of private and government hospital.

SECTION –B

Objective 2

To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private hospitals of district Patiala, Punjab.

Percentage and frequency distribution of level of knowledge among staff nurses of private hospital

Level of knowledge	Score	Frequency (f)	Percentage (%)
Very Poor	0-7	0	0%
Poor	8-14	2	6.67%
Average	15-21	7	23.33%
Good	22-28	14	46.67%
Excellent	29-35	7	23.33%

Table 2 shows that majority of good level of knowledge 46.67% among staff nurses followed by 23.33% excellent and average level of knowledge and 6.67% poor level of knowledge among staff nurses of private hospital.

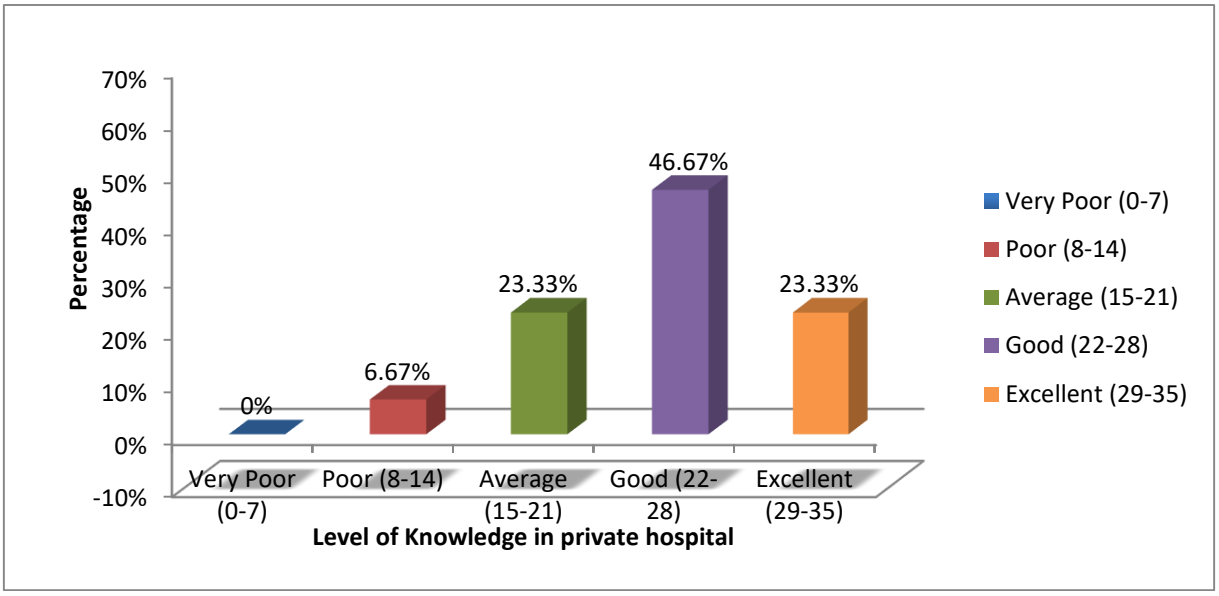


Table No. 2 & Figure No. 2.8 Bar graph showing percentage and frequency distribution of level of knowledge among staff nurses of private hospital.

Mean level of knowledge score among staff nurses of private hospital

Table no. 4.3 N=30

	Mean	SD	Median	Range	Minimum	Maximum	Mean Percentage
Private hospital	23.83	5.02	24.00	20	12	32	74.47

Table no. 3 shows the Mean, S.D, Median, Range of level of knowledge among staff nurses of private hospital regarding nursing care of patients undergoing cardiac catheterization. The mean knowledge score was 23.83, standard deviation score was 5.02 with median 24.00 and range 20.00. The minimum marks obtained was 12, maximum mark obtained was 32 out of the total possible score of 35.

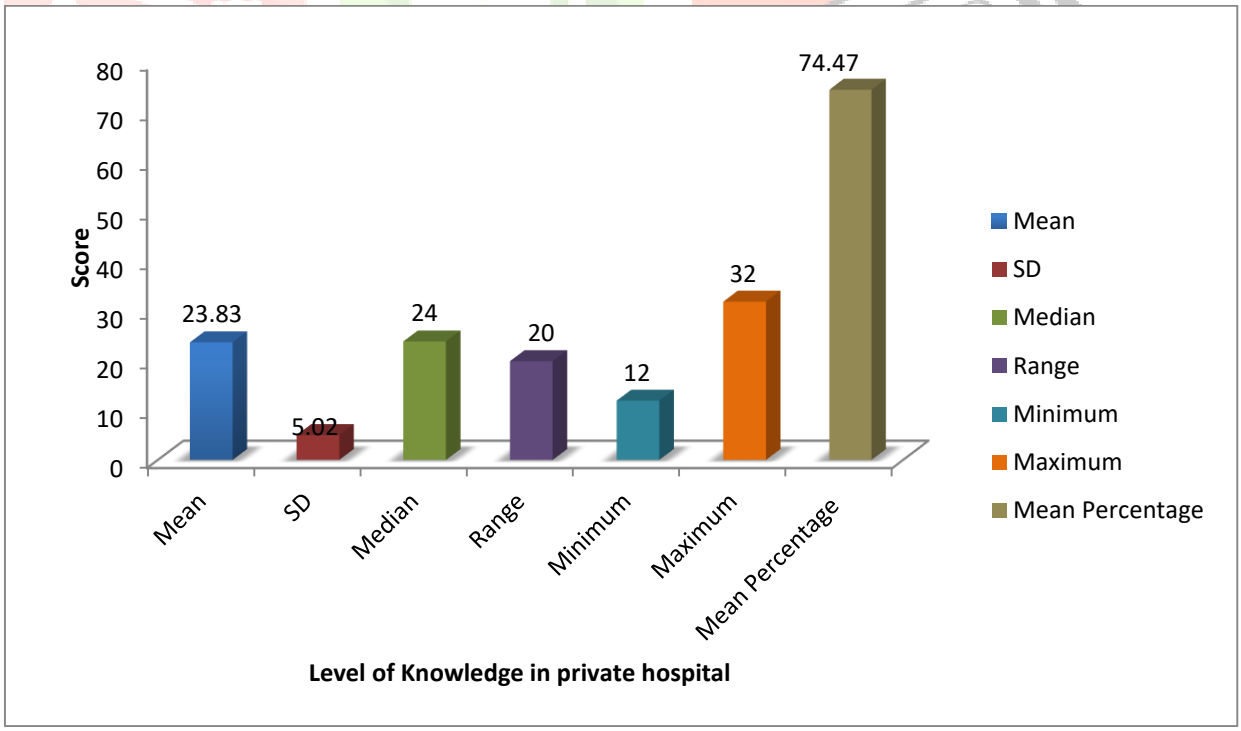


Table no. 3 & figure no. 3.9 Bar graph showing percentage distribution of mean level of knowledge score among staff nurses of private hospital.

Objective 3

To assess the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected government hospitals of district Patiala, Punjab.

Percentage and frequency distribution of level of knowledge among staff nurses of government hospital.

Level of knowledge	Score	Frequency (f)	Percentage (%)
Very Poor	0-7	0	0%
Poor	8-14	5	16.67%
Average	15-21	18	60%
Good	22-28	7	23.33%
Excellent	29-35	0	0%

Table 4 Shows that majority of average level of knowledge 60% among staff nurses followed by 23.33% good level of knowledge and 16.67% poor level of knowledge among staff nurses of government hospital.

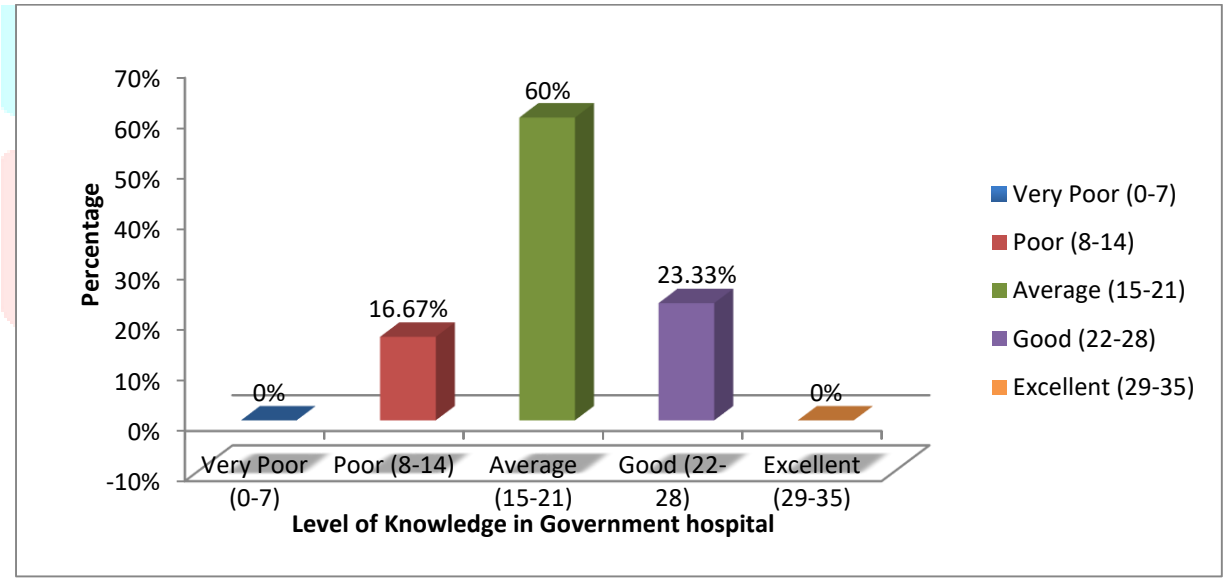


Table No.4 & Figure No. 4.10 Bar graph showing percentage and frequency distribution of level of knowledge among staff nurses of government hospital.

Mean level of knowledge score among staff nurses of government hospital

Table no. 4.5 N=30

	Mean	SD	Median	Range	Minimum	Maximum	Mean Percentage
Government hospital	19.00	4.41	19.00	18.00	8	26	73.08

Table no. 5 shows the Mean, S.D, Median, Range of level of knowledge among staff nurses of government hospital regarding nursing care of patients undergoing cardiac catheterization. The mean knowledge score was 19.00, standard deviation score was 4.41 with median 19.00 and range 18. The minimum marks obtained was 8, maximum mark obtained was 26 out of the total possible score of 35.

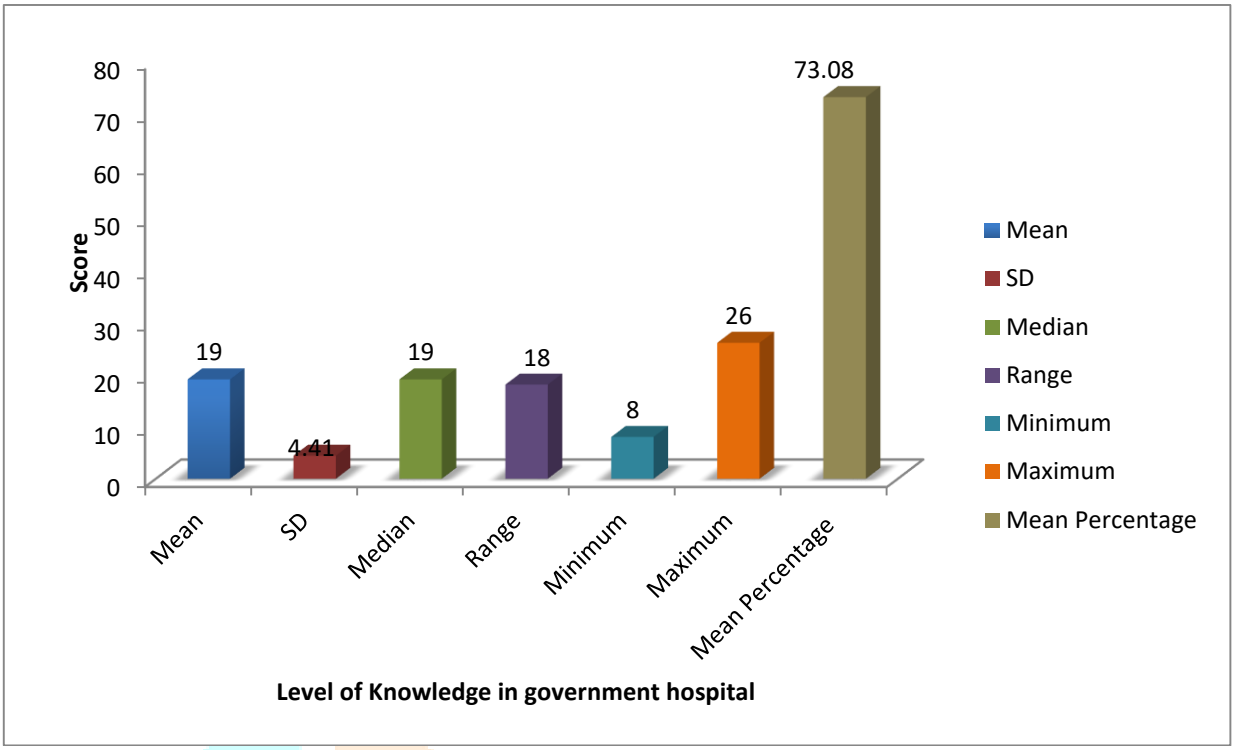


Table no. 5 & figure no. 5.11 Bar graph showing percentage distribution of mean level of knowledge score among staff nurses of government hospital.

Objective 4 To compare the knowledge scoring regarding nursing care of the patients undergoing cardiac catheterization among staff nurses of both private and government hospitals of district Patiala, Punjab.

Comparison of level of knowledge among staff nurses of government and private hospital.

Level of Knowledge	Score	Government hospital		Private hospital	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Very Poor	0-7	0	0%	0	0%
Poor	8-14	5	16.67%	2	6.67%
Average	15-21	18	60%	7	23.33%
Good	22-28	7	23.33%	14	46.67%
Excellent	29-35	0	0%	7	23.33%

Table no. 6 Shows the frequency and percentage of the level of knowledge among staff nurses of government and private hospital. Majority of the staff nurses has average level of knowledge among government hospital was 18 (60%) and majority of the staff nurses has good level of knowledge among private hospital was 14(46.67%) which was followed by good level of knowledge 7(23.33%) among staff nurse of government hospital and average and excellent level of knowledge 7(23.33%) among staff nurses of private hospital, minimum level of poor knowledge was 5(16.67%) among staff nurses of government hospital and 2(6.67%) among staff nurses of private hospital.

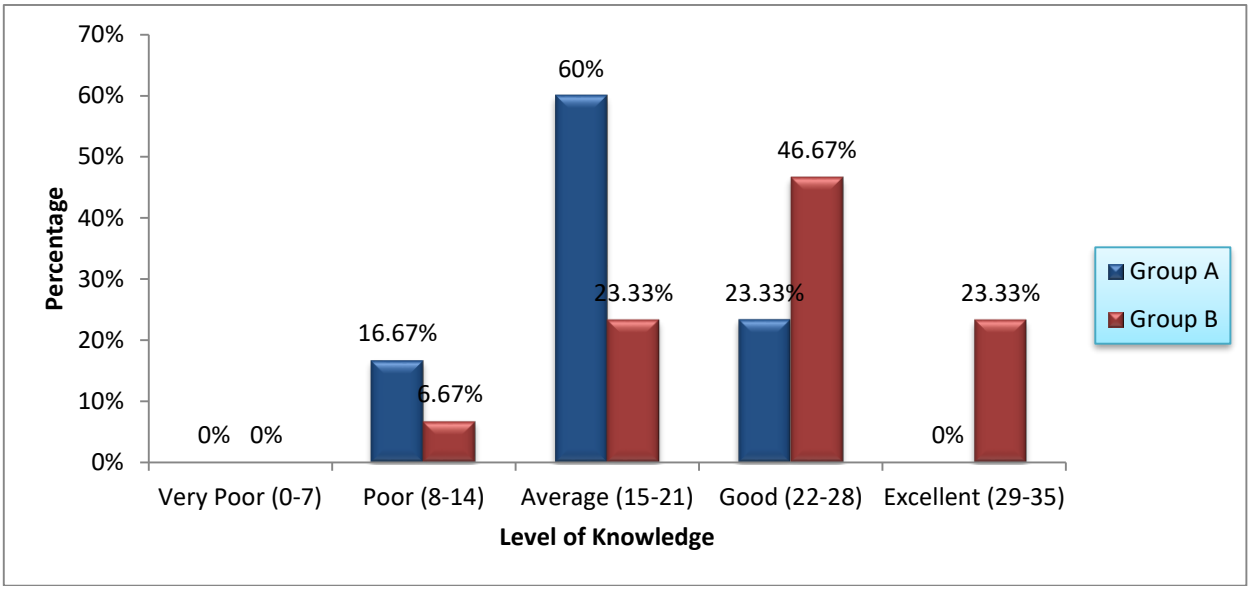


Table no. 6 & Figure no. 6.12 Bar graph showing percentage distribution of comparison of level of knowledge among staff nurses of government and private hospital.

Mean level of knowledge score among staff nurses of government and private hospital

Table no. 7 **N= 60**

Unpaired t-test		Mean score	S.D	N	Mean%	Unpaired t-test	P value	Table value	Result
Level of knowledge	Govt. hospital	19.00	4.41	30	73.08	3.960	0.001	1.672	**Significant**
	Private hospital	23.83	5.02	30	74.47				

Table no. 7 shows the unpaired t-test score value is 3.960, higher than table value that is 1.672 at the 0.05 level of significance with p value 0.001. The mean of the level of knowledge score of government hospital is 19.00 and mean level of knowledge score of private hospital is 23.83. there is significant difference in the level of knowledge among staff nurses regarding nursing care of patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

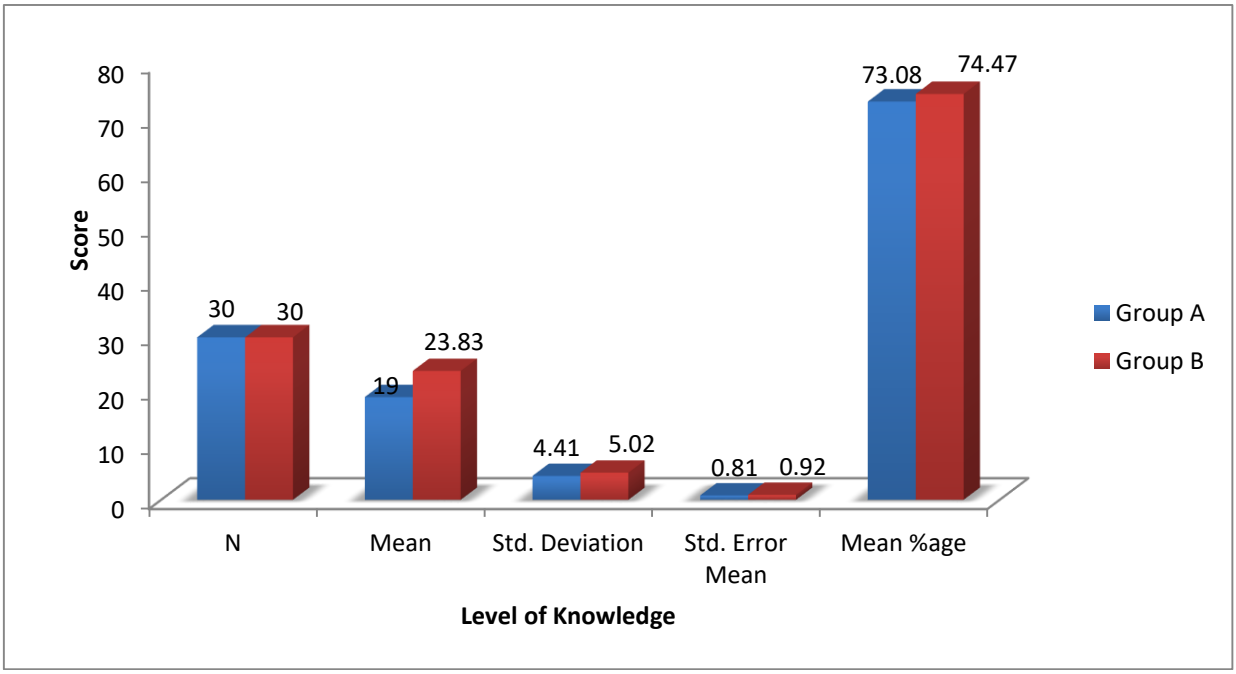


Table no. 7 & figure no. 7.13 Bar graph showing percentage of mean level of knowledge score among staff nurses of government and private hospital.

Objective 5

To find out the association between level of knowledge score of staff nurses regarding nursing care of cardiac catheterization patient with their socio demographic variable.

Association of level of knowledge score with their selected socio demographic variables among staff nurses of government hospital.

Socio Demographic variable		Very Poor	Poor	Average	Good	Excellent	X^2	p value	Df	Table value
Age Group (Years)	25-30 Years	0	3	12	4	0	9.868	0.130 (NS)	6	12.592
	31-35 Years	0	2	3	1	0				
	36-40 Years	0	0	3	0	0				
	>40 Years	0	0	0	2	0				
Gender	Male	0	1	3	0	0	1.442	0.486 (NS)	2	5.991
	Female	0	4	15	7	0				
	Others	0	0	0	0	0				
Educational Qualification	GNM	0	2	7	2	0	5.756	0.451 (NS)	6	12.592
	Post B.Sc. Nursing	0	1	4	2	0				
	B.Sc. Nursing	0	1	7	3	0				
	M.Sc. Nursing	0	1	0	0	0				
Work Experience	≤5 Years	0	4	15	4	0	3.396	0.758 (NS)	6	12.592
	≤10 Years	0	1	1	1	0				
	>10 Years	0	0	1	1	0				
	>15 Years	0	0	1	1	0				

Area of Posting	Cath Lab	0	0	1	0	0	12.740	0.121 (NS)	8	15.507
	CCU	0	1	4	1	0				
	ICU	0	2	10	2	0				
	Ward (Medical & Surgical)	0	2	3	4	0				
Previous Knowledge	Yes	0	2	15	5	0	3.774	0.151 (NS)	2	5.991
	No	0	3	3	2	0				
Source of Knowledge	Internet	0	2	3	1	0	2.048	0.727 (NS)	4	9.488
	Journal	0	1	3	2	0				
	Working Experience	0	2	12	4	0				
	Other	0	0	0	0	0				

NS= Non-significant *** = Significant**

Table 8 shows the association between the level of knowledge score with their selected socio demographic variables among staff nurses of government hospital. It was obtained the chi-square value for age of staff nurses (chi-square value=9.868 is less than table value 12.592, df=6), gender of staff nurses (chi-square value=1.442 is less than table value=5.991, df=2), educational qualification (chi-square value=5.756 is less than table value=12.592, df=6), work experience (chi square value= 3.396 less than table value=12.592,df= 6), area of posting (chi- square value=12.740 less than table value=15.507, df=8), previous knowledge (chi-square value=3.774less than table value=5.991, df=2), source of knowledge (chi-square value=2.048 less than table value=9.488, df=4) which indicates non significant association between the level of knowledge with their selected socio demographic variables among staff nurses of government hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

Association of level of knowledge score with their selected socio demographic variables among staff nurses of private hospital

Socio Demographic variable		Very Poor	Poor	Average	Good	Excellent	X^2	p value	Df	Table value
Age Group (Years)	25-30 Years	0	2	6	8	2	9.868	0.130 (NS)	6	12.592
	31-35 Years	0	0	1	5	3				
	36-40 Years	0	0	0	1	2				
	>40 Years	0	0	0	0	0				
Gender	Male	0	0	1	7	2	3.964	0.265 (NS)	3	7.815
	Female	0	2	6	7	5				
	Others	0	0	0	0	0				
Educational Qualification	GNM	0	1	2	2	2	10.778	0.291 (NS)	9	16.919
	Post B.Sc. Nursing	0	0	2	7	2				
	B.Sc. Nursing	0	1	3	5	3				
	M.Sc. Nursing	0	0	0	0	0				
	≤5 Years	0	2	4	7	1	6.122		6	

Work Experience	≤10 Years	0	0	3	6	5		0.410 (NS)		12.592
	>10 Years	0	0	0	1	1				
	>15 Years	0	0	0	0	0				
Area of Posting	Cath Lab	0	0	0	1	2	5.842	0.441 (NS)	9	16.919
	CCU	0	0	2	3	5				
	ICU	0	0	4	5	0				
	Ward (Medical & Surgical)	0	2	1	5	0				
Previous Knowledge	Yes	0	2	6	11	7	2.184	0.535 (NS)	3	7.815
	No	0	0	1	3	1				
Source of Knowledge	Internet	0	1	2	8	1	4.107	0.250 (NS)	3	7.815
	Journal	0	0	0	0	0				
	Working Experience	0	1	5	6	6				
	Other	0	0	0	0	0				

NS= Non-significant

Table 9 shows the association between the level of knowledge score with their selected socio demographic variables among staff nurses of private hospital. It was obtained the chi-square value for age of staff nurses (chi-square value=9.868 is less than table value 12.592, df=6), gender of staff nurses (chi-square value=3.964is less than table value=7.815, df=3), educational qualification (chi-square value=10.77 is less than table value=16.919, df=9), work experience (chi square value= 6.122 less than table value=12.592,df= 6), area of posting (chi- square value=5.842 less than table value=16.919, df=9), previous knowledge (chi-square value=2.184 less than table value=7.815, df=3), source of knowledge (chi-square value= 4.107 less than table value= 7.815, df= 3) which indicates non-significant association between the level of knowledge with their selected socio demographic variables among staff nurses of private hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

DISCUSSION

This chapter deals with the finding in accordance with the objectives of the present study, A comparative study to assess the knowledge regarding nursing care of the patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab with a view to develop an informational booklet**.**

The discussion is done under the following categories:

According to age: In this study majority of staff nurse age represents that 63.33% staff between the age group 25-30 among government hospital and 60% among private hospital followed by 20% of government and 30% of private hospital under the age group of 31-35. The age of staff between age group of 36-40 was alike among staff nurses of government and private hospitals. The age of staff, 6.67% and 0% between the age group of >40 among staff nurses of government and private hospitals respectively.

According to gender: The study result revealed that majority of staff nurses, 86.67% of staff are female gender of government hospital and 66.67% of private hospital, 13.33% staffs are male gender in government hospitals and 33.33% are in private hospitals, whereas the third category transgender has the same percentage 0% among both government and private hospital.

According to educational qualification: The study findings revealed that majority of staff nurses educational qualification is B.Sc nursing 36.67% in both government and private hospitals, whereas GNM qualification in government is 36.67% and in private hospital 23.33%. Post B.Sc nursing qualification in government hospital is 23.33% and 33.33% in private hospitals and M.Sc nursing qualification in government hospital is 3.33% and 6.67% in private hospitals.

According to work experience: The study findings revealed that majority of staff nurses having the working experience is less than 5 years in government hospital is 76.67% and 46.67% in private hospitals, whereas 10% of employee has less than 10-year experience in government hospital and 46.67% in private hospital. More than 10-year experience in both government and private hospital is 6.67%. More than 15 years of experience of government hospital employee is 6.67% whereas 0% in private hospital.

According to area of posting: The study findings revealed that majority of staff nurses posted in ICU is 46.67% in government hospital whereas in private hospital 33.33% of staff nurses are posted in CCU. Staff nurses posted in Cath lab has 3.33% in government and 10% in private hospital, whereas staff nurses posted in wards has 30% in government and 36.67% in private hospital.

According to previous knowledge: The study findings revealed that majority of government employee ie, 73.33% and private employee ie, 86.67% has previous knowledge regarding cardiac catheterization, whereas 26.67% of government and 13.33% of private hospital employee has no previous knowledge regarding cardiac catheterization.

According to source of knowledge: Majority of sample has 60% source of information from working experience in both government and private hospital followed by 20% information obtained from internet among government and 40% among private hospital. Information obtained from journals was 20% among government employee and 0% among private hospital employee.

Frequency and percentage of the level of knowledge among staff nurses of government and private hospital. Majority of the staff nurses has average level of knowledge among government hospital was 18 (60%) and majority of the staff nurses has good level of knowledge among private hospital was 14 (46.67%) which was followed by good level of knowledge 7(23.33%) among staff nurse of government hospital and average and excellent level of knowledge 7(23.33%) among staff nurses of private hospital, minimum level of poor knowledge was 5(16.67%) among staff nurses of government hospital and 2(6.67%) among staff nurses of private hospital.

Mean level of knowledge score among staff nurses of both government and private hospital

unpaired t-test score value is 3.960, higher than table value that is 1.672 at the 0.05 level of significance with p value 0.001. the mean of the level of knowledge score of government hospital is 19.00 and mean level of knowledge score of private hospital is 23.83. there is significant difference in the level of knowledge among staff nurses regarding nursing care of patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

Association of level of knowledge score with their selected socio demographic variables among staff nurses of government and private hospital. The association between the level of knowledge score with their selected socio demographic variables among staff nurses of government hospital. It was obtained the chi-square value for age of staff nurses (chi-square value=9.868 is less than table value 12.592, df=6), gender of staff nurses (chi-square value=1.442 is less than table value=5.991, df=2), educational qualification (chi-square value=5.756 is less than table value=12.592, df=6), work experience (chi square value= 3.396 less than table value=12.592,df= 6), area of posting (chi- square value=12.740 less than table value=15.507, df=8), previous knowledge (chi-square value=3.774less than table value=5.991, df=2), source of knowledge (chi-square value=2.048 less than table value=9.488, df=4) which indicates non-

significant association between the level of knowledge with their selected socio demographic variables among staff nurses of government hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

The association between the level of knowledge score with their selected socio demographic variables among staff nurses of private hospital. It was obtained the chi-square value for age of staff nurses (chi-square value= 9.868 is less than table value 12.592, df= 6), gender of staff nurses (chi-square value= 3.964is less than table value= 7.815, df=3), educational qualification (chi-square value=10.77 is less than table value= 16.919, df= 9), work experience (chi square value= 6.122 less than table value= 12.592,df= 6), area of posting (chi- square value= 5.842 less than table value= 16.919, df= 9), previous knowledge (chi-square value= 2.184 less than table value= 7.815, df= 3), source of knowledge (chi-square value= 4.107 less than table value= 7.815, df= 3) which indicates non-significant association between the level of knowledge with their selected socio demographic variables among staff nurses of private hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

CONCLUSION

Out of 60 subjects, majority of the staff nurses has average level of knowledge among government hospital was 18 (60%) and majority of the staff nurses has good level of knowledge among private hospital was 14(46.67%) which was followed by good level of knowledge 7(23.33%) among staff nurse of government hospital and average and excellent level of knowledge 7(23.33%) among staff nurses of private hospital, minimum level of poor knowledge was 5(16.67%) among staff nurses of government hospital and 2(6.67%) among staff nurses of private hospital.

IMPLICATIONS

The findings of the study have several implications which are discussed in three areas:

- Nursing education
- Nursing service
- Nursing administration
- Nursing research

Implications in nursing education

Nursing education should offer short-term continuing nursing education on nursing care of patients undergoing cardiac catheterization. An awareness needs to be created on importance of the care of patients undergoing cardiac catheterization so as to prevent its complications. Teaching strategies such as demonstrations, video shows, procedure manuals and computer assisted interventions on care of patients undergoing cardiac catheterization can be incorporated in the curriculum.

Implications in nursing practice

Nurses working in intensive care unit, cardiac care unit, Cath lab unit should have commitment to attend any form of education program to provide quality nursing care and update their knowledge. Nurses needs to be equipped with knowledge regarding care of patients undergoing cardiac catheterization. They can update their knowledge by attending continuing education program, seminar, workshops, symposium and by in service education. Knowledge regarding nursing of patients before and after cardiac catheterization procedure will improve the quality of nursing care and helps in preventing complications in the early period. Hospital policies should be reviewed to enhance in service program on the care of patients undergoing cardiac catheterization.

Implication in nursing administration

The nurse administrator should make arrangement for training the staff nurses on various care techniques. The nurse administrator may help in organizing well with procedure manuals, textbooks and journals on care of patients undergoing cardiac catheterization and prevention of the complications after cardiac catheterization. The nurse administrator can take initiation in organizing continuing nursing education program based on current guidelines.

Implications in nursing research

The nurse researcher can encourage clinical nurses to apply the findings in their daily nursing care. The nurse can promote more research with regard to knowledge regarding care of patients undergoing cardiac catheterization.

1. The findings need to be disseminated through conference, seminars and published in professional journals and world wide web will make the application of the research findings to be effectively used in practice.
2. The findings of the research study will help in building and strengthening the body of knowledge in the discipline of nursing.

Major findings

Analysis of data was done according to the objectives of the study. Findings related to level of knowledge regarding nursing care of patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab are as following;

Out of 60 subjects, majority of the staff nurses has average level of knowledge among government hospital was 18 (60%) and majority of the staff nurses has good level of knowledge among private hospital was 14(46.67%) which was followed by good level of knowledge 7(23.33%) among staff nurse of government hospital and average and excellent level of knowledge 7(23.33%) among staff nurses of private hospital, minimum level of poor knowledge was 5(16.67%) among staff nurses of government hospital and 2(6.67%) among staff nurses of private hospital. It reveals that there is significant difference in the level of knowledge among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

Range of the level of knowledge, the unpaired t-test score value is 3.960, higher than table value that is 1.672 at the 0.05 level of significance with p value 0.001. The mean of the level of knowledge score of government hospital is 19.00 and mean level of knowledge score of private hospital is 23.83. there is

significant difference in the level of knowledge among staff nurses regarding nursing care of patients undergoing cardiac catheterization among staff nurses working in selected private and government hospitals of district Patiala, Punjab.

The association between the level of knowledge score with their selected socio demographic variables among staff nurses of government hospital. It was obtained the chi-square value for age of staff nurses (chi-square value=9.868 is less than table value 12.592, df=6), gender of staff nurses (chi-square value=1.442 is less than table value=5.991, df=2), educational qualification (chi-square value=5.756 is less than table value=12.592, df=6), work experience (chi square value= 3.396 less than table value=12.592,df= 6), area of posting (chi- square value=12.740 less than table value=15.507, df=8), previous knowledge (chi-square value=3.774less than table value=5.991, df=2), source of knowledge (chi-square value=2.048 less than table value=9.488, df=4) which indicates non-significant association between the level of knowledge with their selected socio demographic variables among staff nurses of government hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

On the other hand, the association between the level of knowledge score with their selected socio demographic variables among staff nurses of private hospital. It was obtained the chi-square value for age of staff nurses (chi-square value= 9.868 is less than table value 12.592, df= 6), gender of staff nurses (chi-square value= 3.964is less than table value= 7.815, df=3), educational qualification (chi-square value=10.77 is less than table value= 16.919, df= 9), work experience (chi square value= 6.122 less than table value= 12.592,df= 6), area of posting (chi- square value= 5.842 less than table value= 16.919, df= 9), previous knowledge (chi-square value= 2.184 less than table value= 7.815, df= 3), source of knowledge (chi-square value= 4.107 less than table value= 7.815, df= 3) which indicates non-significant association between the level of knowledge with their selected socio demographic variables among staff nurses of private hospital with their age, gender, educational qualification, working experience, area of posting, previous knowledge and source of knowledge.

RECOMMENDATION

Based on the study, the following recommendations are put forward for the future research

1. A study can be conducted to assess practice of staff nurses working in hospital regarding care of patients undergoing cardiac catheterization.

2. A study can be replicated with a large number of samples in different setting for better generalization.

3. A comparative study can be conducted to assess the knowledge regarding care of patients undergoing cardiac catheterization among staff nurses working in private and government hospitals.

REFERENCES

1. Circulatory system - Better Health Channel [Internet]. [cited 2022 May 8]. Available from: https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/circulatory-system

2. Hoffman M, MD. The Heart (Human Anatomy): Picture, Definition, Location in the Body, and Heart Problems [Internet]. WebMD. [cited 2022 May 7]. Available from: https://www.webmd.com/heart/picture-of-the-heart

3. Prevalence rate, trends in coronary heart disease epidemiology in India [cited 2022 May7] https ://pubmed.ncbi.nlm.nih.gov/27372534/

4. What Are Your Coronary Arteries? [Internet]. Cleveland Clinic. [cited 2022 May 7]. Available from: https://my.clevelandclinic.org/health/articles/17063-coronary-arteries

5. Clinical Guidelines (Nursing): Care of the patient post cardiac catheterization [Internet]. [cited 2022 May 7]. Available from: https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Care_of_the_patient_post_cardiac_catheterisation/

6. By Hariprasath P, a textbook of cardiovascular & thoracic nursing, edition 1st, published by jaypee brothers' medical publishers (p) Ltd, page no: 96

7. Preoperative care. In: Wikipedia [Internet]. 2022 [cited 2022 May 7]. Available from: https://en.wikipedia.org/w/index.php?title=Preoperative_care&oldid=1067511862

8. By Hariprasath P, a textbook of cardiovascular & thoracic nursing, edition 1st , published by jaypee brothers' medical publishers (p) Ltd, page no: 96-97

9. cardiac catheterization femoral artery hematoma [cited 2022 may20] Available from https://www.semanticscholar.org/paper/Predictors-of-Post-Cardiac-CatheterizationFemoral-Ahmed/bd8dc542b1cbf6b2a8eae06db9b0c613f19cbb60

10. A A Hussein nurses' knowledge and practice towards post cardiac catheterization. Available from https://www.healthsciencesbulletin.com/volume/BNIHS/140/01/nurses-knowledge-and-practice-toward-post-cardiac-catheterization-patients-safety-62568117e6a8e.pdf

11. S Sania, Educational training on nurses about practices regarding patients' safety after cardiac catheterization. Available from https://thejas.com.pk/index.php/pjhs/article/view/303

12. Huda Alwan Khudair, Khalida Mohammed Khadur/[cited 2022 may 12]/ available from https://www.annalsofrscb.ro/index.php/journal/article/view/7339

13. Maalk Mustafa, effectiveness of nursing intervention available from https://nurs.uokufa.edu.iq/wpcontent/uploads/2022/03/2020%D9%85%D8%AD%D9%85%D8%AF%D8%B9%D8%A8%D8%AF%D8%A7%D9%84%D9%83%D8%B1%D9%8A%D9%85.pdf