

A STUDY TO ASSESS THE PRACTICE ON INTRAVENOUS BOLUS INJECTION PROCEDURES AMONG NURSES IN ST. JAMES' HOSPITAL, CHALAKUDY.

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ABSTRACT

A descriptive study was conducted to assess the practice on intravenous bolus injection procedure among nurses in St. James' hospital, Chalakudy. Staff nurses who met the inclusion criteria were selected using non probability purposive sampling technique. The data was collected using structured observation checklist for a period of 1 week. The result reveals that for majority of the samples (67%) were having inadequate level of practice, (33%) were having satisfactory level of practice, none (0%) were having good level of practice. Descriptive and inferential statistical analysis of intravenous bolus procedure score discloses, most of nurses having inadequate level of practice (67%). There is no significant relationship between the demographic variables and the level of practice of intravenous bolus injection procedure among the staff nurses. Intravenous bolus injection procedure can be improved by teaching programs, supervision and guidance

Key words: Intravenous bolus injection procedure; Nurses.

INTRODUCTION

Background of the study

Injection is a technique for delivering drug by parenteral administration, that is, administration via route other than through digestive tract. Parenteral injection includes subcutaneous, Intra muscular, intravenous, Intra peritoneal, intra cardiac and intra articular injection. "The global burden of disease, due to unsafe injection use estimated by the World Health Organization (WHO) by probability model for the year 2008 was 3,40,000 human immunodeficiency virus (HIV) infections, 15 million hepatitis B virus (HBV) infections, 1 million hepatitis C virus (HCV) infections, 3 million bacterial infections and 8,50,000 injection site infections. This accounted for 14% of HIV, 25% HBV, 8% HCV and 5% of bacterial infections worldwide and for 28 million preventable disability

adjusted life years". The spread of blood borne viral diseases through sexual and vertical means is decreasing, while their transmission by unsafe injectable use is assumed to be increasing.

Objectives

- To assess the practice on intravenous bolus injection procedures among nurses in St James hospital.
- To find the association of practice on intravenous bolus injection procedures with selected socio demographic variables.

Definitions

Conceptual definition



Assessment:

To make judgment about whole evaluation of the activity.

Practice:

The determination of status of habitual action or performance.

Nurse:

Nurse is a person formally educated and trained in the care of the sick or infirm.

Intravenous bolus:

It involves a single injection of concentrated solution directly in to an intravenous line.

Operational definition**Assessment:**

In this study, assessment refers to the evaluation of practice on intravenous injection procedure among nurses.

Practice of intravenous bolus injection:

In this study, practice refers to sequential steps performed by the nurses during intravenous bolus injection procedures which includes preparation of patient, preparation of drug (ampule or vial), administration of drug, observation of patient after administration,

replacement of articles and documentation of procedure as assessed by observational checklist.”

Nurse:

A person who is qualified, eligible and responsible to administer intravenous bolus injection who are present during period of study in St. James' hospital.

Hypothesis

H₁: There is a significant association between the practice on intravenous bolus injection procedures and selected socio demographic variables among nurses in St. James' hospital.

Assumptions:

- The staff nurses may have varying level of practice on intravenous bolus injection.
- Demographic variables of the study have influence on practice of intravenous bolus injection procedure among nurses.

Delimitations

- The study is delimited to a small sample size of 60.
- The study is delimited to a short data collection period of one week.
- The study is delimited to nurses working in selected unit of one of the hospital only.

Table :1Socio Demographic Data

Variables	Characteristics	Frequency	Percentage
Age group (in years)	21-25	34	56.6
	26-30	16	26.6
	31-35	6	10
	36 and above	4	6.66
Educational qualification	General Nursing and Midwifery	27	45
	BSc Nursing	25	41.6
	Post Basic BSc nursing	8	13.33
	MSc Nursing	0	0
Area of previous clinical experience	Intensive care unit	12	20
	General wards	45	75
	Causality	2	3.33
	Operation theatre	1	1.66
	Others	0	0
Number of Patients Assigned	1-2	8	13.33
	3-4	8	13.33
	5 and above	44	73.33
Clinical experience	Below 1 year	13	21.66
	1-2 years	24	40
	3-4 years	9	15
	5 and above	14	23.33
Present working area	Medical ward	18	30
	Surgery ward	6	10



	Ortho ward	10	16.66
	Neuro ward	8	13.33
	MOS	6	10
	Gynae ward	1	1.66
	Causality	2	3.33
	Neuro ICU	3	5
	Post op ICU	3	5
	Medical ICU	2	3.33
	Coronary care unit	1	1.66

Table:2 Distribution of subjects by practice scores

Grade	Number	Percentage
31-40	0	0
21-30	20	33%
11-20	40	67%
0-10	0	0

Table:3 Association of level of practice and selected demographic variables

Variables	Categories	Practice				Chi square values Level of significance	
		Good	Satisfactory	Inadequate	Poor		
Age group	21-25	0	10	24	0	.056	16.92
	26-30	0	6	10	0		
	31-35	0	2	4	0		
	35 and above	0	2	2	0		
Educational Qualification	General Nursing and Midwifery	0	10	10	0	7.282	16.92
	BSc Nursing	0	8	8	0		
	PBBSc Nursing	0	2	2	0		
	MSc Nursing	0	0	0	0		
Previous clinical experience	Intensive care unit	0	4	8	0	3.06	21.03
	General wards	0	15	30	0		
	Causality	0	0	2	0		
	Operation theatre	0	1	0	0		
	Others	0	0	0	0		
Number of patients	1-2	0	3	5	0	3.33	12.59
	3-4	0	3	5	0		
	5 and above	0	14	30	0		
Clinical experience	Below 1	0	4	9	0	11.454	16.92
	1-2	0	5	19	0		
	3-4	0	4	5	0		
	Above 5	0	7	7	0		



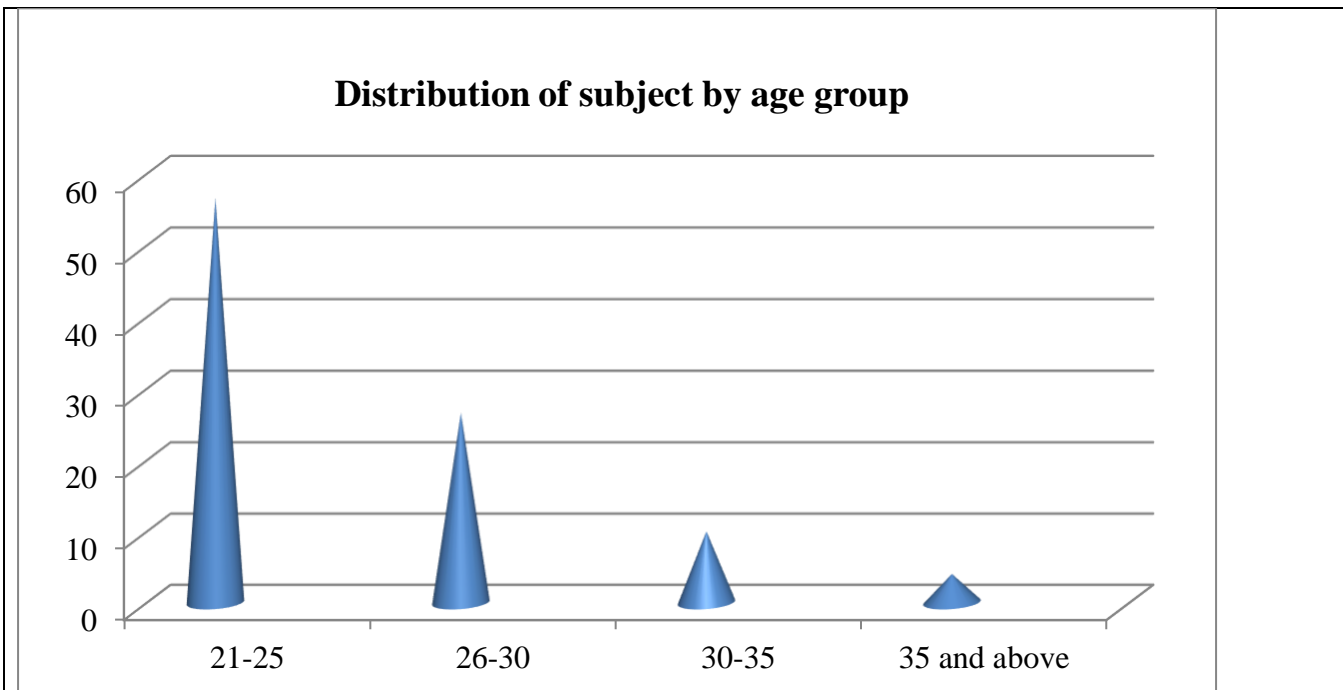


Figure:1 The above figure shows that most of the study participants [56.6%] are under age group of 21-25 years .26.6% were in age group of 26-30 years.10% were in the age group of 31-35 years and least participants [6.66%] are under age group above 36 years.

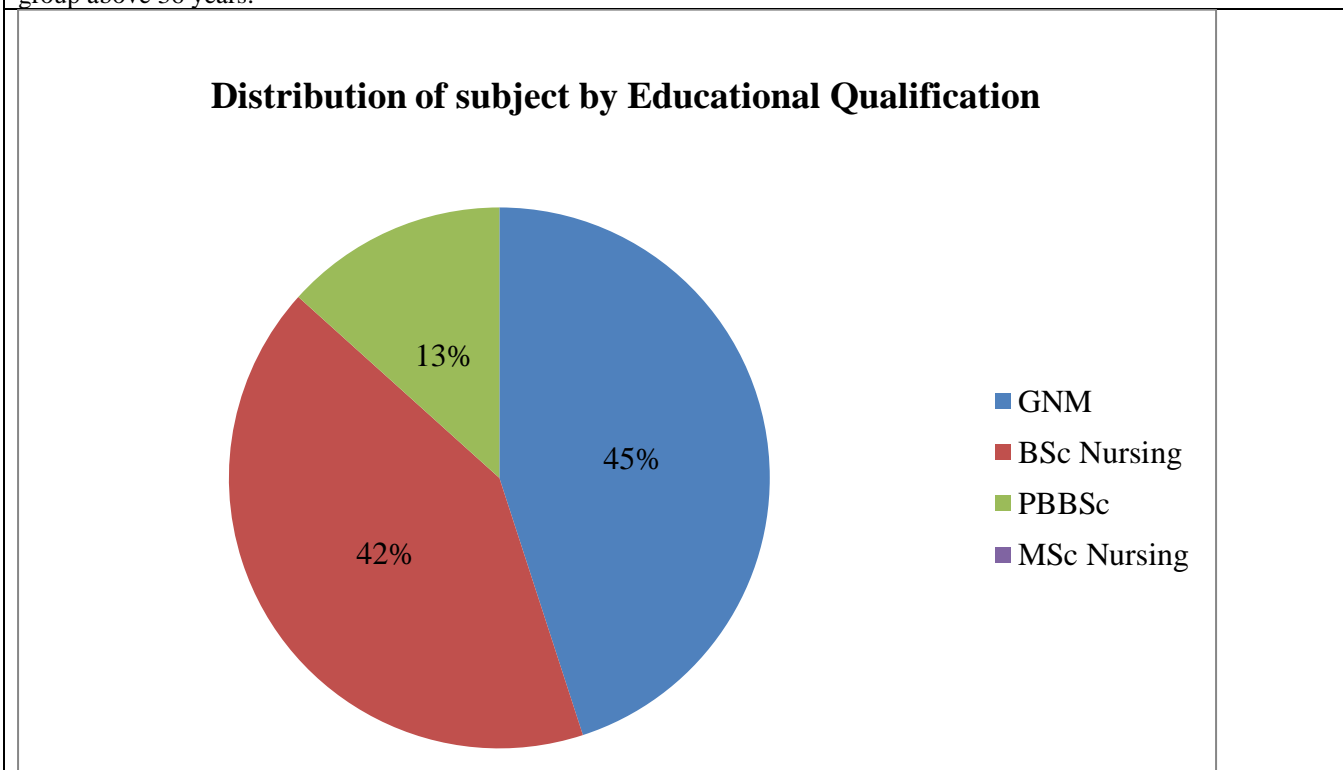


Figure:2 The above figure shows that almost samples have the educational qualification of General Nursing and Midwifery [45%]. The samples with educational qualification of B.Sc. nursing are 41.6% and post basic B.Sc. Nursing are 13.33%. There are no samples with educational qualification of M.Sc. nursing.

Distribution of subjects by area of previous clinical experience

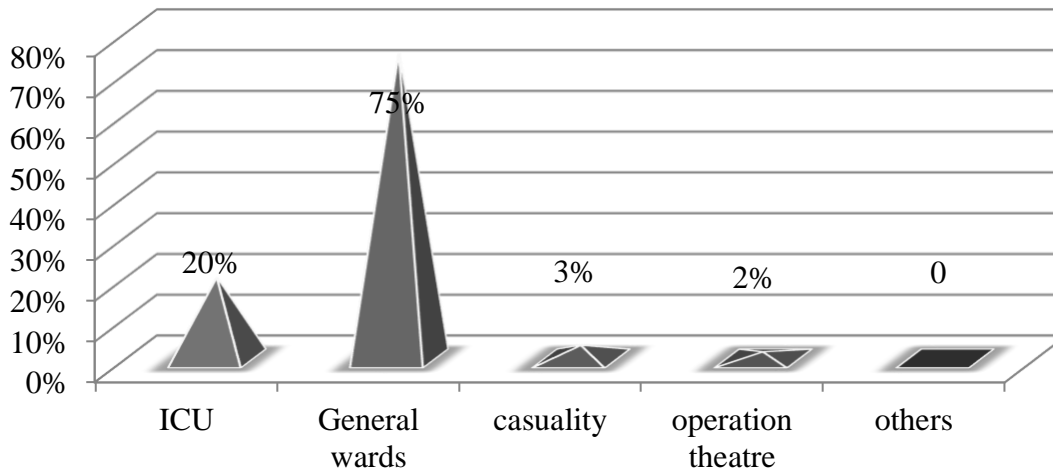


Figure:4. Most of the samples [75%] are having previous clinical experience in general wards. 20% of samples are having previous clinical experience in intensive care units. 3.33% of them have previous clinical experience in causality and 1.66% have previous clinical experience in operation theatre.

Distribution of subjects by number of patients assigned per day

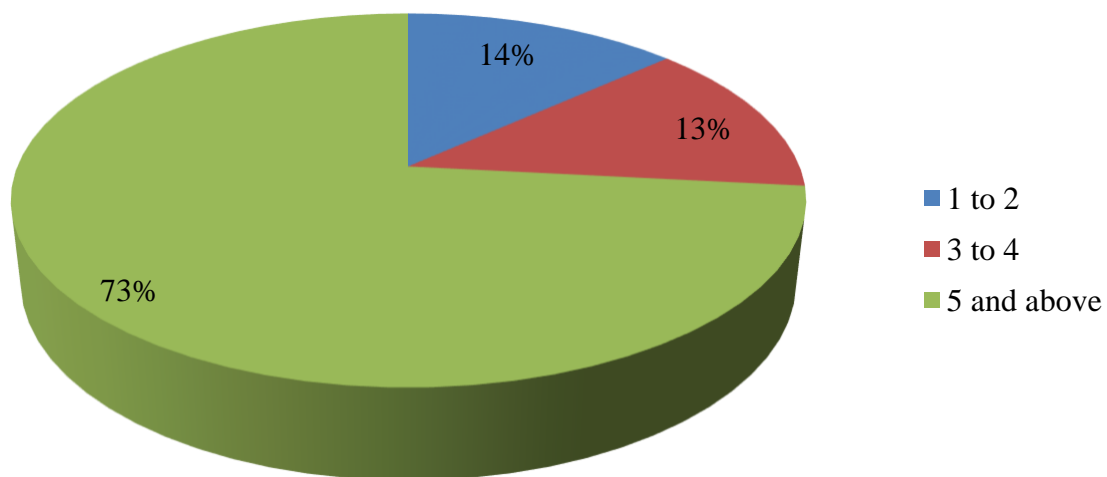


Figure:5 Most of the samples [73.3%] have 5 and above patient assignment per day and the samples with 1-2 patient assignment and 3-4 patient assignment are almost equal [13.33%].

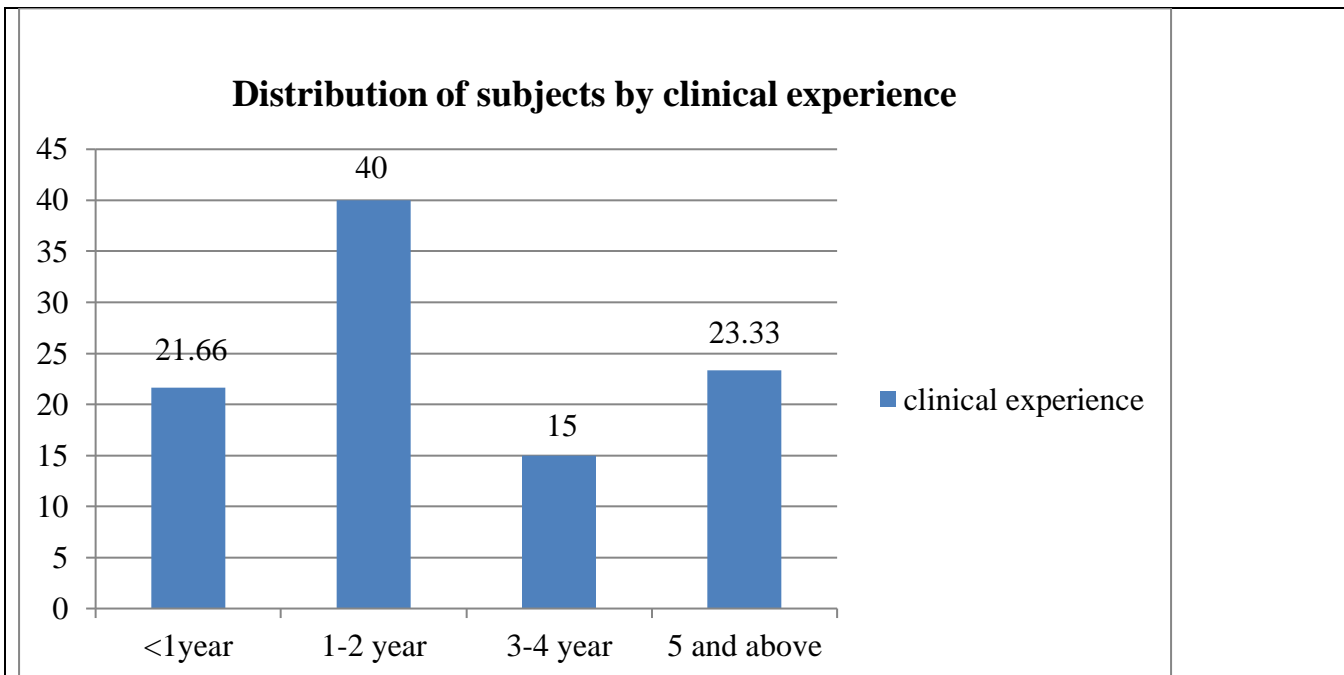


Figure : 6 Most of the samples [40%] have the clinical experience of 1-2 years.23.33% samples have the clinical experience of more than 5 years.21.66%have the clinical experience below 1 year and 15% have the clinical experience of 3-4 years.

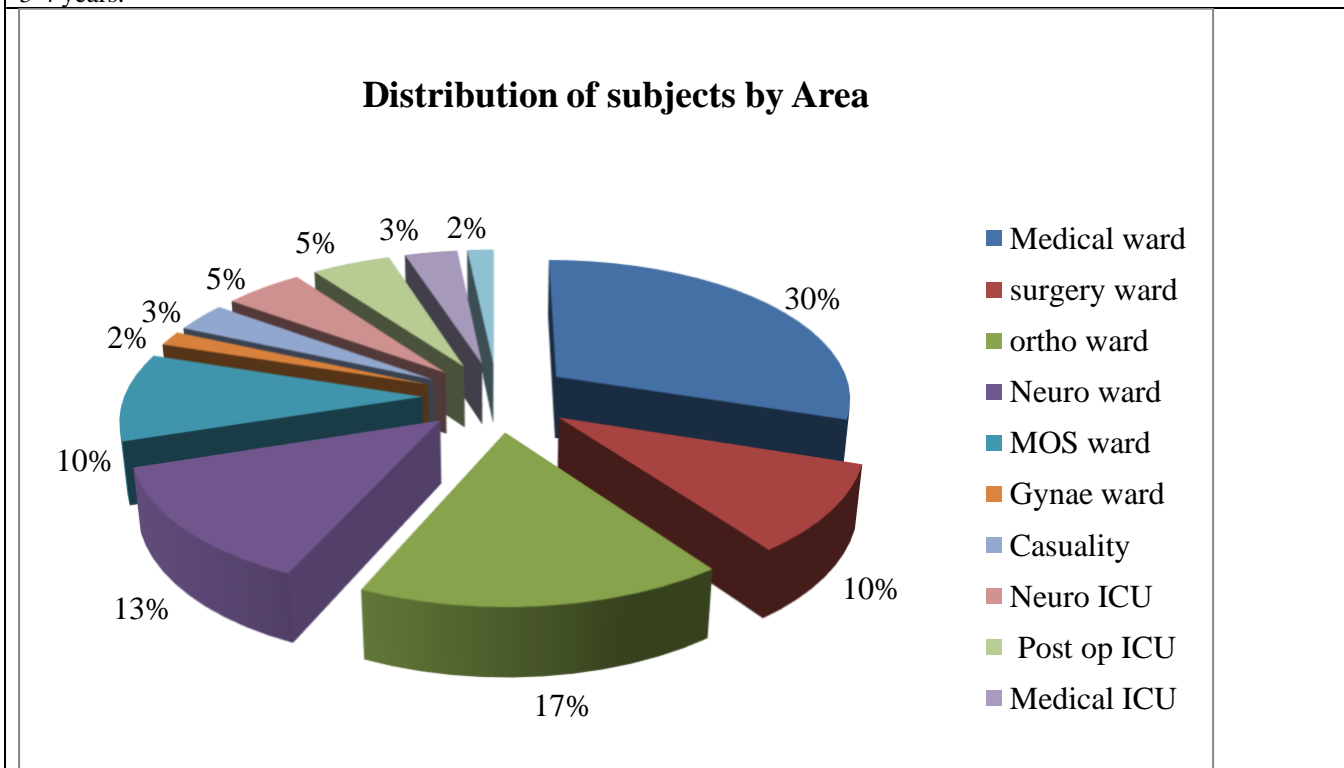
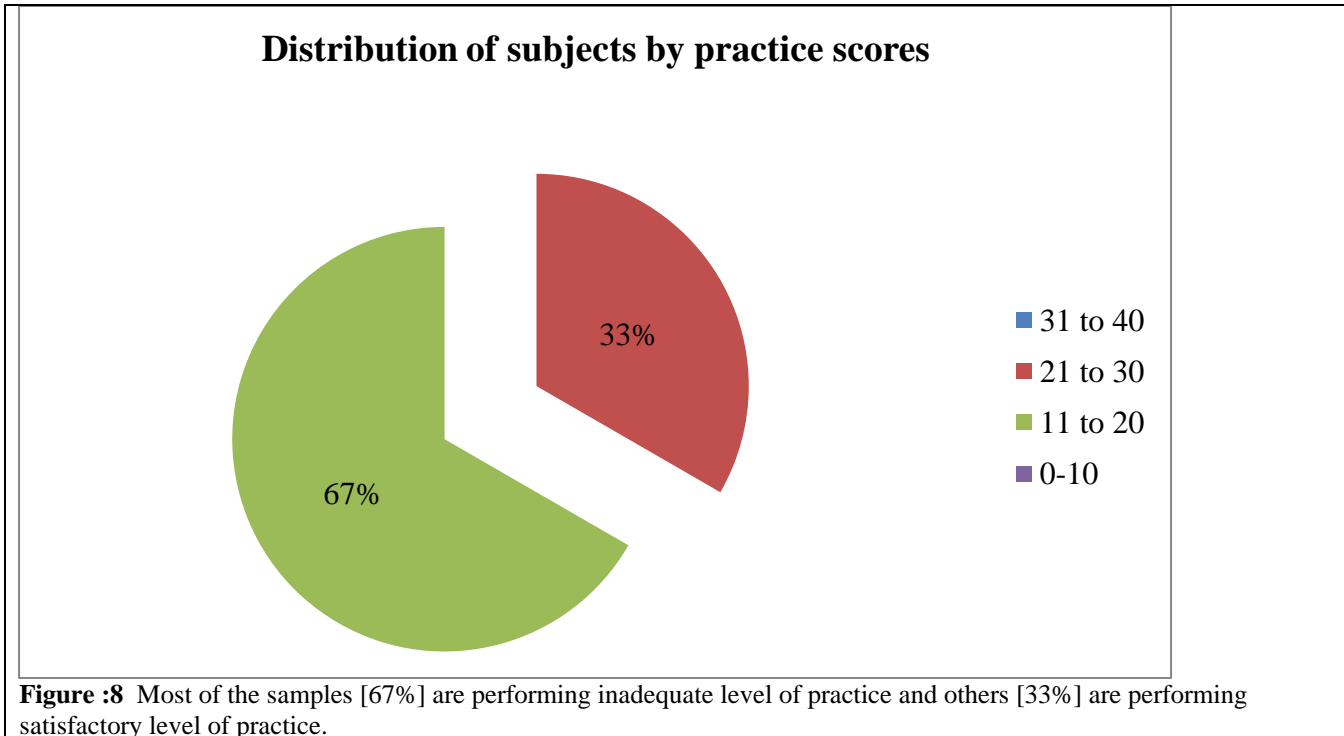


Figure : 7 Most of the samples [30%] are taken from medical ward.16.66% were taken from ortho ward.13.33% were taken from neuro ward.10% were taken from both surgery ward and MOS ward.5% were taken from both neuro ICU and post op ICU. 3.33% were taken from both causality and medical ICU and 1.66%were taken from both OBG ward and coronary care unit.



Influence of Socio Demographic Variables On Practice

Influence of socio demographic variables on level of practice was analyzed statistically and results are presented below.

- The chi square value ($\chi^2 = .945 < 16.92$) presented shows that there is no significant association between level of practice and age group regarding intravenous bolus injection procedure.
- The association between level of practice and educational qualification, the chi square value ($\chi^2 = 7.28 < 16.92$) is lower than table value at 0.05 levels. There is no significant association between level of practice and educational qualification.
- The association between level of practice and previous clinical experience, the chi square value ($\chi^2 = 3.06 < 21.03$) is lower than the table value at level of 0.05. There is no significant relation between level of practice and previous area of clinical experience.
- The association between level of practice and number of patient assignment, the chi square value ($\chi^2 = 33.13 < 12.59$) is lower than the table value there is no significant relation between level of practice and number of patient assignment.

The association between level of practice and clinical experience, the chi square value ($\chi^2 = 1.45 < 16.92$) is lower than the table value at level of 0.05. There is no significant relation between level of practice and clinical experience.

NURSING IMPLICATIONS

The implications of the study are vital to profession as it can be utilized in all areas of nursing research, practice and administration. The implications of the study are;

Nursing Practice;

- The nurses should practice strict aseptic techniques while administering intravenous bolus injections.
- Nurses should attend regular training programs regarding injection practice.
- Nurses should follow the guidelines recommended by world health organization (WHO) while administering injections.
- The nurses should assess the patency of cannula by administering normal saline before providing injection.

Nursing Administration;

- The nurse administrator should take initiative in conducting programs regarding safe intravenous injection practices.

Nursing Research

- Nurses can utilize the research findings to create awareness among themselves to improve the safe injection practice.

- Implement empowerment programs for staff nurses to maintain a safe injection practice.
- Implement practical skills for nurses to maintain confidence in administering intravenous injection procedure.

LIMITATIONS

Study was limited to:

- The study is delimited to a small sample size of 60.
- The study is delimited to a short data collection period of one week.
- The study is delimited to nurses working in selected unit of one of the hospital only

RECOMMENDATIONS

On the basis of findings of the study, the following recommendations offered for future research.

- Training programs should be conducted for nurses regarding intravenous bolus injection procedure.

- Improve the quality of practice on intravenous bolus injection procedure by following the standard principles.
- This study can be conducted in large sample size. Similar study can be replicated in different hospital settings to validate findings and make generalizations.

CONCLUSION

This study shows that most of the staff nurses are found to have inadequate practice on intravenous bolus injection procedure. The investigators understood that, the nurses need adequate teaching and training to improve the quality of practice on intravenous bolus injection procedure.

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