



## A descriptive study to assess the knowledge and knowledge on practice regarding peripheral intravenous infusion among GNM (nursing) 3<sup>rd</sup> year students at AMT School, Bakshi Nagar, Jammu

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### Abstract

A Hospital is health care institution providing patient treatment with specialized medical and nursing staff and medical equipments. Intravenous cannulisation is the method of insertion of a flexible plastic device with a stylet available, inserted to the vein to administer medications, fluids and blood transfusions. The objective of the present study was to assess the demographic variables, the knowledge regarding peripheral intravenous infusion and the knowledge on practice regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students in AMT School Bakshi Nagar, Jammu. Descriptive research approach and Non Experimental research design was used. The sample consisted of 30 subjects. Socio-demographic profile was noted through a self structured questionnaire. Self structured questionnaires were used to assess the knowledge and knowledge on practices regarding peripheral intravenous infusion. Majority of the students 22(73.3%) were in the age group of 20-21 years followed by 08(26.7%) students in the age group of 18-19 years. 20(66.6%) of the students were from rural area and 10(33.3%) were from urban area. when considering confidence level, majority of the students 16(53.3%) were fully confident about IV infusion and only 14(46.7%) students were moderately confident about IV infusion. About the knowledge regarding peripheral intravenous infusion, majority 21(70%) were having adequate knowledge and 9(30%) were having moderately adequate knowledge. About the knowledge on practice regarding the peripheral intravenous infusion majority 19(63.3%) were had adequate knowledge on practice and few 11(36.7%) were had moderately knowledge on practice. The main conclusion drawn from present study is that majority of students were having adequate knowledge and practice regarding peripheral intravenous infusion but still there is need to improve the knowledge and practice by regular learning and regular supervision.

**Keywords:** peripheral intravenous infusion, knowledge and practice

### 1. Introduction

A Hospital is a health care institution providing patient treatment by specialist staff and the equipments. Hospital is a place where all people who are ill or injured are treated and taken care by doctors and nurses. The patients who come to the hospital are shifted to the specific wards such as general ward, ICU and emergency etc. according to their condition for the provision of the specific care and the treatment <sup>[1]</sup>.

Intravenous therapy in the process by which fluids are introduced directly into a vein <sup>[2]</sup>. It is one of the fastest way available to administer medicine. It is estimated that approximately 60% of hospital inpatients annually undergo peripheral IV cannulisation in order to receive therapeutic IV medication. Since the procedure involves breaching the skin and leaving a foreign body in the vein <sup>[3]</sup>. Intravenous therapy may be a quick as a single injection or a long term therapy. Peripheral Intravenous Infusion is most common procedure in all hospital settings. The nurses helps and plays a vital role during peripheral intravenous infusion <sup>[4]</sup>.

Each health personnel should know about their hospital policy about peripheral intravenous infusion therapy and should follow that strictly. Peripheral intravenous infusion or the aseptic procedure which has to be done in aseptic manner. If any contamination or error occur will leads to serious complication to the patient so every nurse should have adequate knowledge about Intravenous therapy.

### Objectives of Study

1. To assess the demographic variables.
2. To assess the knowledge regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students.
3. To assess the knowledge on practice regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students.

### 2. Material & Methods

For the study, Descriptive research approach and Non Experimental research design was used. The research setting was Government AMT School Bakshi Nagar, Jammu. The sample consisted of 30 subjects. Purposive sampling technique was used to select the sample. Prior to the data collection procedure the formal permission was obtained from the Principal of the Government AMT School Bakshi Nagar, Jammu.

Socio-demographic profile and self structured questionnaire were used to collect personal information. Socio-demographic profile included items like age (in years), residence and confidence level of subjects. Self structured questionnaire schedule was used to assess the knowledge and practices regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students.

Data collection was done in April 2017. Prior to giving the questionnaire to the girls, investigator gave self introduction to

the girls and explained the purpose of gathering information. A good rapport was established with the subjects. They were assured that their responses will be used kept confidential and the information will be used only for research purpose. Formal consent was taken from the subjects. The data gathered was analyzed and calculated by percentage, mean and standard deviation.

**Description of Tool**

**Part-1** It dealt with demographic variables such as age, residence and confidence level.

**Part-2** This section consists of structured knowledge questionnaire to assess the knowledge regarding peripheral intravenous infusion. It consists of 25 multiple-choice

questions with four alternatives out of which only one is correct.

**Part-3** This section consists of structured practice questionnaire to assess the knowledge on practice regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students. It consists of 15 questions with alternative response of “Yes” or “No”.

**Scoring Procedure**

**Part-2 Structured knowledge questionnaire**

The multiple choice questions are used to assess the knowledge regarding peripheral intravenous infusion among student nurses. It consists of 25 items for each right answer score is 1, wrong answer score is 0. Total score is 25.

**Table 1**

Level of Knowledge	Score	Percentage
Adequate Knowledge	17-25	65-100%
Moderately Adequate Knowledge	9-16	33-64%
Inadequate Knowledge	0-8	Less than 32%

**Part-3 Structured practice questionnaire**

It consists of 15 dichotomous questions. These are two

responses “Yes” or “No”. A score of one is allotted to correct response and zero to the wrong answer. Total score is 15.

**Table 2**

Level of Knowledge on Practice	Score	Percentage
Adequate Knowledge on practice	11-15	67-100%
Moderately Adequate Knowledge on practice	6-10	33-66%
Inadequate Knowledge on practice	0-5	Less than 33%

**3. Results**

**Table 3:** According to demographic variables of subjects

n=30

	Demographic Variables	Frequency	Percentage
I.	Age (in years)		
	18-19	08	26.7%
	20-21	22	73.3%
II.	Residence		
	Rural	20	66.6%
	Urban	10	33.3%
III.	Confidence Level		
	(i) Fully confident	16	53.3%
	Moderately confident	14	46.7%

Table 3 shows that majority of the students 22(73.3%) were in the age group of 20-21 years followed by 08(26.7%) students in the age group of 18-19 years. With relation to Residence, most of the students 20(66.6%) were from rural area and some

students 10(33.3%) were from urban area. when considering confidence level, majority of the students 16(53.3%) were fully confident about IV infusion and only 14(46.7%) students were moderately confident about IV infusion.

**Table 4:** Frequency and Percentage distribution of knowledge regarding peripheral intravenous infusion

n=30

Sr. No.	Level of Knowledge	Frequency	Percentage	Mean	Standard Deviation
1.	Adequate Knowledge (17-25)	21	70 %	10	±8.60
2.	Moderately adequate Knowledge (9-16)	9	30%		
3.	Inadequate Knowledge (0-8)	0	0		

Table 4 shows the knowledge regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students, majority 21(70%) were having adequate knowledge and 9(30%) were having moderately adequate knowledge. The

mean value and standard deviation regarding peripheral intravenous infusion were 10 and  $\pm 8.60$  respectively.

**Table 5:** Frequency and percentage distribution of level of knowledge on practice regarding peripheral intravenous infusion n=30

Sr. No.	Level of Knowledge	Frequency	Percentage	Mean	Standard Deviation
1.	Adequate Knowledge on Practice (11-15)	19	63.3%	10	$\pm 7.78$
2.	Moderately adequate Knowledge on Practice (6-10)	11	36.7%		
3.	Inadequate Knowledge on Practice (0-5)	0	0		

Table 5 shows the knowledge on practice regarding the peripheral intravenous infusion among the GNM (Nursing) 3<sup>rd</sup> year students, majority 19(63.3%) were had adequate knowledge on practice and few 11(36.7%) were had moderately knowledge on practice. The mean value and standard deviation regarding peripheral intravenous infusion were 10 and  $\pm 7.78$  respectively.

**Discussion**

The aim of the present study was to assess the knowledge and the knowledge on practice regarding peripheral intravenous infusion among GNM (Nursing) 3<sup>rd</sup> year students.

**Objective 1:-** To assess the demographic variables

The analysis of data revealed that majority of the students 22(73.3%) were in age group of 20-21 years and 08(26.7%) were in age group of 18-19 years. 20(66.7%) students were from rural areas and 10(33.3%) from urban areas. when considering confidence level, majority of the students 16(53.3%) were fully confident about peripheral intravenous infusion and only 14(46.7%) students were moderately confident about peripheral intravenous infusion. These findings are supported by study conducted for assessment knowledge, skill and attitude of oncology nurses in chemotherapy administration in tertiary hospital Pakistan [5].

**Objective 2:-** To assess the knowledge regarding the Peripheral Intravenous Infusion among GNM (Nursing) 3<sup>rd</sup> year students.

In the present study, the analysis of data reveals that majority 21(70%) were having adequate knowledge and 9(30%) were having moderately adequate knowledge which is consistent with the study conducted for assessment of level of knowledge and practice on Intravenous Cannulization among staff nurses of selected Tertiary care hospital of Dhaka city which showed that majority of 49.7% had good knowledge level followed by 25.5% had average knowledge and only 3.1% had poor knowledge [6].

**Objective 3:-** To assess the knowledge on practice regarding Peripheral Intravenous Infusion among GNM (Nursing) 3<sup>rd</sup> year students.

The present study reveals that majority 19(63.3%) had adequate knowledge on practice and few 11(36.7%) had moderate knowledge on practice of peripheral venous infusion which is consistent with the study conducted to assess the knowledge and practice of staff nurses regarding Intravenous Therapy and its complications in a selected hospital in New

Delhi which showed that majority 90% of staff nurses had above average knowledge on practice of peripheral venous infusion [7].

**4. Conclusion**

The main conclusion drawn from present study is that majority of students were having adequate knowledge and knowledge on practice regarding peripheral intravenous infusion but still there is need to improve the knowledge by regular learning. For better results in relation to practice of peripheral intravenous infusion and reduction in complications, regular supervision of practice should be conducted.

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