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A study to assess the level of knowledge regarding peripheral intravenous infusion therapy among GNM students at a selected college of nursing, Moradabad

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Abstract **Objectives**

1. To assess the level of knowledge regarding peripheral intravenous infusion therapy among GNM students at a selected college of nursing, Moradabad. U.P
2. To find out association between knowledge about peripheral infusion therapy with their selected demographic variables.

Methods: This study based on quantitative research approach. Convenient sampling technique was used to obtain a sample of 100 GNM 2nd year students. Structured knowledge questionnaire was prepared to collect the data which contain Part 1 –Demographic Data & Part 2- structured knowledge questionnaire. The content was validated by experts.

Findings: The data obtained was analyzed and interpreted in accordance of the objectives and hypothesis of the study. Descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (chi – square tests) were used to analyses the data for testing the hypothesis. In this study, majority of students were females (77%) & majority of the students were between the age group of 18-20 years. overall tests of knowledge, the mean score was 33.33%, and the standard deviation was 27.02. among the subjects, 32(32%) of the subjects had inadequate level of knowledge, while 61(61%) subjects had adequate level of knowledge and 7(7%) have good level of knowledge. The maximum level of knowledge regarding peripheral intravenous infusion therapy was adequate. There is no association between levels of knowledge regarding peripheral intravenous infusion therapy among students with their gender and there is a significant association between levels of knowledge regarding peripheral intravenous infusion therapy among students with their age.

Conclusion: As per the study findings, the knowledge of the students regarding peripheral intravenous infusion therapy was adequate 61(61%). The knowledge of the students was not influenced by their gender but influenced by their age.

Keywords: Moradabad, GNM, knowledge regarding

1. Introduction

The nurse practicing in today's era is faced with a myriad of duties and responsibilities involving specialized skills and techniques. She is accountable for all decision and performances associated with the delivery of a safe level of care (Josephson, 2003). Various types of procedures are done in hospitals during which a nurse have the major responsibilities to maintain a safe level of care. One of the most common procedure we see in the hospitals is Intravenous Therapy. Patient in the hospital need Intravenous (IV) Fluid Therapy to prevent or correct problems with their fluid and electrolyte balance, to administer blood as well as medications.

Nurses should have the crucial clinical skills; including the preparation and administration of intravenous drugs, peripheral venous access, acute and long term central venous and paediatric intravenous therapy. Staff must be competent in the use of devices and update their knowledge and skills through regular review and assessment of proficiency (Carlisle *et al* 1996, NMC 2004). The infusion nurse specialist needs to have the knowledge and skills necessary to recognize and counter appropriately when anaphylaxis occurs (scarlet, 2006).

Intravenous therapy is a way that infuses intravenous solutions, medications, blood or blood products directly into a vein (Perry, Potter & Ostendorf, 2014). Intravenous therapy is an effective and fast-acting method to administer fluid or medication treatment in an emergency

situation or for patients who are unable to take medications orally. Approximately 80% of all patients in the hospital setting received intravenous therapy during their hospitalization.

2. Methods and Material

Research approach for the present study is Quantitative Research Approach. A Research design is a blue print for conducting the study that maximizes control over factors that could interfere with the validity of the findings. The research design for this study is the descriptive research design. Setting refers to the physical location and condition in which data collection has to be done. The study has been conducted at Teerthanker Mahaveer College of Nursing Moradabad, U.P. GNM 2nd year students of Teerthanker Mahaveer College of Nursing and Teerthanker Parasvath College of Nursing. In this convenient sampling technique was used to obtain the sample. The sample of 100 GNM 2nd Year students on the basis of inclusion and exclusion criteria were selected. The tool used for the study was the structured knowledge questionnaire consisting of section I (Socio-demographic variables such as Age, Sex and section II (consisting of 30 items related to Knowledge regarding Peripheral intravenous infusion therapy). The content validity of structured questionnaire was ensured by submitting the tool to the experts in the field of (Department of Medical Surgical Nursing, Department of Mental Health Nursing, Department of Child Health Nursing, Department of Community Health Nursing). "The reliability is the degree of consistency or accuracy with which an instrument measures an attribute it is supposed to measure". for this study it is checked by spilt half method.

3. Results and Findings

Section – 1

Table 1: Frequency and percentage distribution according to gender

S.no	Gender	Frequency	Percentage
1	Male	23	23%
2	Female	77	77%
Total		100	100

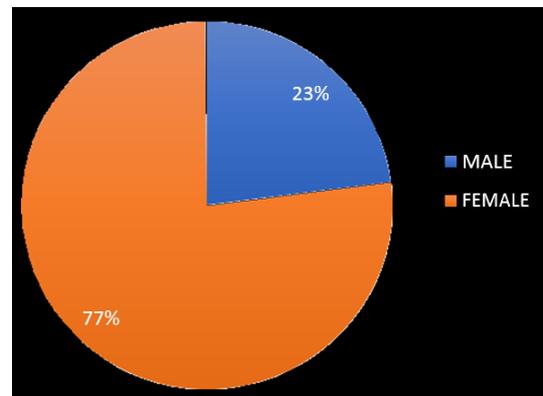


Fig 1: Pie diagram showing the distribution of subjects according to Gender the data represented in pie chart shows that 23(23%) of the samples were males, and 77(77%) were females

Table 2: Frequency and percentage distribution according to Age in years

s. no	Age (in years)	Frequency	Percentage %
1	18 -20	74	74%
2	21 -25	22	22%
3	More than 25	4	4%
Total		100	100%

The data in the table shows that in overall tests of knowledge, the mean score was 33.33%, and the standard deviation was 27.02.

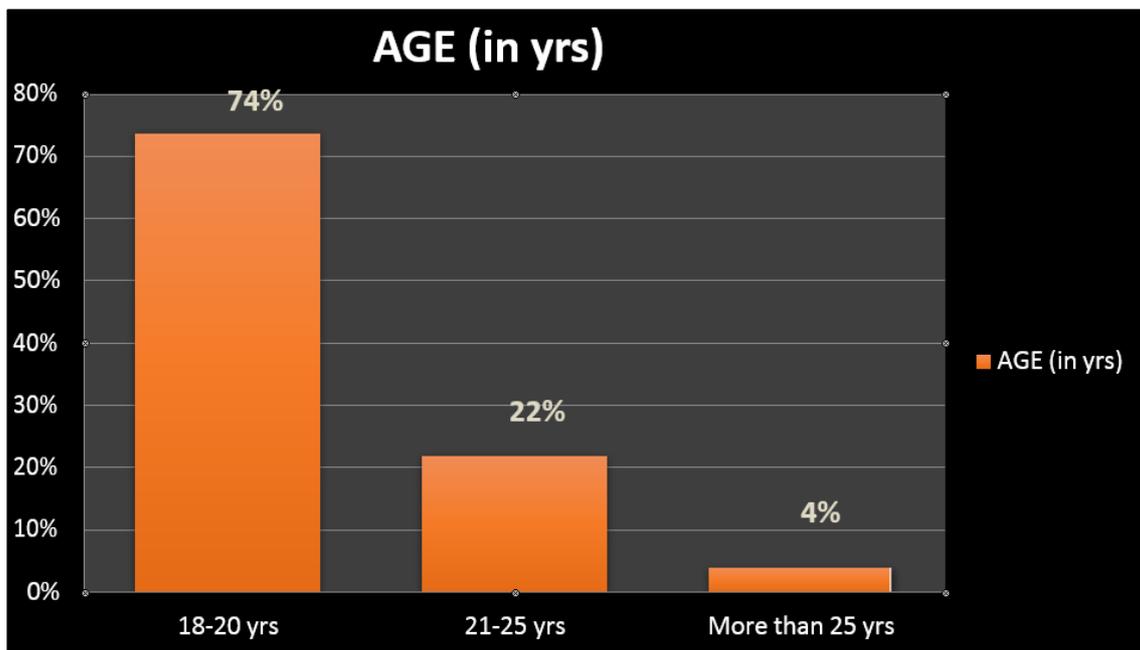


Fig 2: bar diagram showing the percentage distribution according to Age in years

The data represented in the fig shows that 74(74%) of them were 18-20yrs old, 22(22%) of them were 21-25 yrs., and 4(4%) of them were more than 25 yrs.

Section -2

Findings related to knowledge regarding peripheral intravenous infusion therapy on the basis of frequency, percentage, mean & standard deviation.

Table 3: Distribution of knowledge score

S. No	Level of knowledge	frequency	percentage	mean	Standard deviation
1	Inadequate	32	32%	33.33%	27.02
2	Adequate	61	61%		
3	Good	7	7%		

The data in the table shows that in overall tests of knowledge, the mean score was 33.33%, and the standard deviation was 27.02.

Section -3
n=100

Table 4: Frequency and percentage distribution according to level of knowledge

Level of knowledge	Frequency	Percentage
Inadequate	32	32%
Adequate	61	61%
Good	7	7%
Total	100	100%

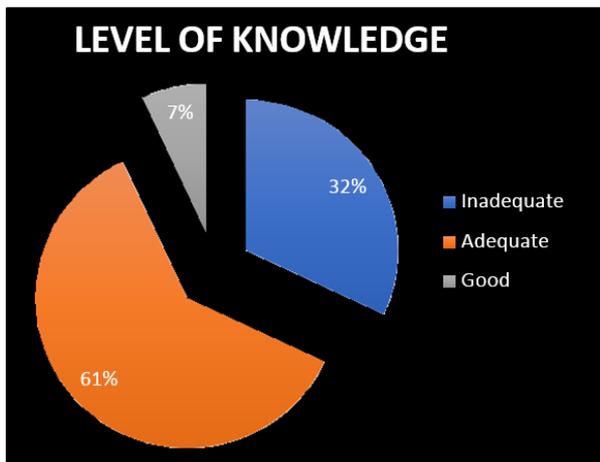


Fig 3: Pie diagram showing the percentage distribution of subjects according to the level of knowledge.

The data presented in the table show that the level of knowledge, 32(32%) of the subjects having inadequate knowledge regarding peripheral intravenous infusion therapy, 61(61%) of them having adequate knowledge and 7 (7%) having good level of knowledge regarding the peripheral intravenous infusion therapy.

Section - 4

Chi square value showing association between knowledge score and demographic variable

Table 5: Chi square association

S. No.	Demographic Variable	Knowledge score			DF	Chi square (x ²)
		Inadequate	Adequate	Good		
1	Gender	04	18	01	04	0.1257 (NS)
	Male					
2	Female	17	55	05	02	0.055 (S)
	Age (In yrs.) 18-20	14	55	05		
	21-25	07	13	02		
	>25	02	02	0		

Note-NS: Nothing significant, S: significant, df: degree of freedom

Table -4 shows that there is no association between level of knowledge regarding peripheral intravenous infusion therapy among students with their gender. And there is a significant association between levels of knowledge regarding peripheral intravenous infusion therapy among students with their age.

4. Discussion

A total of 100 students were selected for the study by using the convenient sampling technique. The data was collected by using structured questionnaire to assess the level of knowledge the structured questions were close ended and further divided into two parts. The first part was designed to gather demographic data and includes two questions related to gender and age. The second part was designed to assess the knowledge regarding peripheral intravenous infusion therapy among GNM 2nd year students. The gathered data was analysed by using descriptive and inferential statistics. The pie diagram shows that 77(77%) of the subjects were female and 23(23%) were males. thus, it can be interpreted that highest percentage was of female. The bar graph shows that 74 (74%) of the subjects were 18-20 years old, 22 (22%) of them were in the age group of 21-25 years, and 4(4%) of them were more than 25 years. thus, it can be interpreted that highest percentage was in the age group of 18-20years. The data in the table-3 shows that in overall tests of knowledge, the mean score was 33.33%

5. Conclusion

As per the study findings, the knowledge of the students regarding peripheral intravenous infusion therapy was adequate 61(61%). The knowledge of the students was not influenced by their gender but influenced by their age.

6. References

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