

A Descriptive Study to Assess the Level of Knowledge of Intra Venus Cannulation among I Year BSc Nursing Students at Selected College in Coimbatore

R. Jaya¹, Prasanna K²

¹Nursing Tutor, Ganga College of Nursing affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India
Email: gayuvasanth146[at]gmail.com

²Nursing Tutor, Ganga College of Nursing affiliated to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India
Email: prasannapras1778[at]gmail.com.

Abstract: *Aim and Objectives:* To assess the knowledge on IV cannulation among selected I Year BSc nursing students. **Methodology:** Descriptive Research Design was adopted in order to assess the knowledge regarding specific procedure of IV cannulation, safe techniques. The dependent variable was individual knowledge on methods of inserting IV cannula, Independent valuable was insertion of IV cannula. The study was conducted for selected I Year B.Sc nursing students at Ganga college of nursing in Coimbatore. The sample size consisted of 100 students (who fulfilled the inclusion and exclusion criteria). I year B.Sc. Nursing students were included in the study. All other Nursing batch students are excluded from the study, selected by a convenient sampling technique. **Result:** This study is aimed to assess the level of knowledge regarding IV cannulation procedure and prevention of complication among selected I year B.Sc. Nursing students and also to teach the methods of confirming correct placement of the IV cannula, and proper care to prevent the infection and misplacement while inserting IV cannula Among selected 100 BSc nursing I year students. 40% of students were having moderate knowledge (51-74%), 10 % of students were having inadequate knowledge ($\leq 50\%$), 50% of students were having adequate knowledge regarding IV cannulation. **Conclusion:** The study was aimed to enhance their knowledge on IV cannulation and also make them to gain knowledge about procedures, techniques, methods to find out the proper placement of cannula, position, different types, size and color of IV cannula, immediate management, Do's and Dont's, importance of personal productive equipment, This study has important implications, to prevent the risk of infection and complication, and to enhance the selected nursing students knowledge in administration of medication through IV cannula, maintenance of medication record, prevention of infection and complication.

Keywords: IV cannulation, procedure, maintenance of medication record, prevention of infection and complication

1. Introduction

Intravenous cannulation is a medical procedure used to insert plastic catheter in to a vein for administering fluid, medication, blood transfusion and other treatment.

1.1 Statement of the Problem

“A Descriptive Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge and Practice of IV cannulation to Adult Patient among I Year, BSc. Nursing students”

1.2 Objectives of the Study

- To assess the knowledge and practice regarding Intravenous cannulation among nursing students.
- To evaluate the effectiveness of Structured teaching programme regarding Intravenous cannulation among nursing students.
- To associate the selected demographic variables with mean different level of knowledge scores regarding procedure and prevention of complication among, I year B.Sc. Nursing students at selected college in Coimbatore.

2. Materials and Methods

Descriptive Research design was adopted in order to assess the knowledge regarding Intravenous cannulation procedure and prevention of infection and complication among selected I, year B.Sc. Nursing students.

The sample size consisted of 100 I year B.Sc. Nursing students present studying at Ganga College of nursing in Coimbatore.

(Who fulfil the inclusion and exclusion criteria) selected by convenient sampling technique.

The tool consists of two parts

- A) Data collection tool
- B) Awareness Promotion / Safe technique / live demonstration

- a) The data collection tool was self- structured Questionnaire, consists of knowledge assisted questions, about Intravenous cannulation insertion methods, indication, and complication.

Scoring key: About knowledge on intravenous cannulation insertion methods.

Correct answer	1
Wrong answer	0

Scoring interpretation:

Scores	Level of Knowledge
≤50%	Inadequate Knowledge
51-74%	Moderately adequate knowledge
75-100%	Adequate knowledge

b) Awareness Promotion / Safe technique by slide presentation / video showed 15 minutes/ live demonstration

- Aseptic techniques
- Selections of appropriate size of IV cannula
- Importance of personal productive equipment
- Causes of infection
- Reason for insertion
- Importance of following principles
- Techniques to find out the proper placement of IV cannula
- Method of administer the fluid and medication

2.1 Ethical Consideration:

The formal administrative approval was obtained from the Ganga College of Nursing Ethical committee and approval from dean cum principal of Ganga college of nursing. The researcher has followed the fundamental ethical principle like the right to freedom from the harm and discomfort,

respect to human dignity. The researcher gave freedom to all the participants to decide voluntarily whether to participate in the study or withdraw from the study and rights to ask questions at any-time during the study period. The investigator has maintained the study participant privacy throughout the study.

2.2 Statistical Analysis

Demographic variables were described by using descriptive statistics one way ANOVA/ Unpaired test was used to analyse the knowledge regarding safe techniques on

3. Result

This study is aimed to assess the level of knowledge regarding Intravenous cannulation procedure and prevention of infection and complication among selected I year B.Sc. Nursing students and also to teach the methods of confirming correct placement of the catheter into a vein , and proper care to prevent the infection while IV cannulation and administration of medication. Among selected 100 BSc nursing I year students 40% of students were having moderate knowledge (51-74%), 10 % of students were having inadequate knowledge (≤50%), 50% of students were having adequate knowledge regarding Intravenous cannulation.

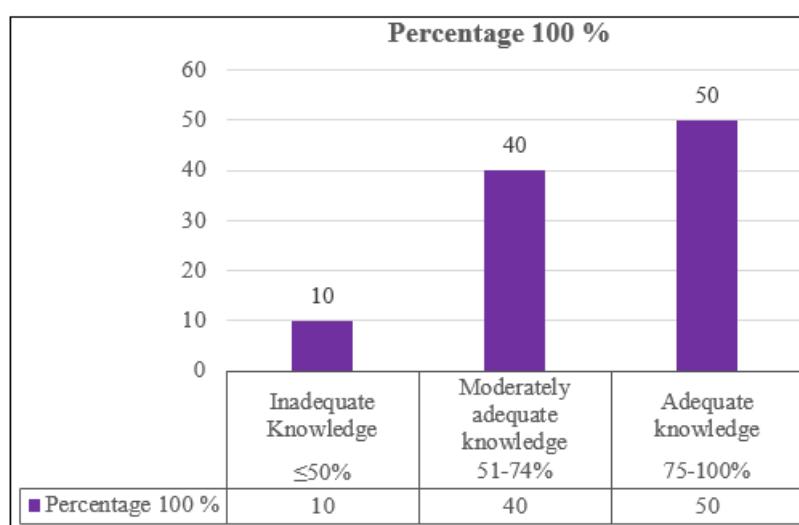


Figure 1: Percentage distribution of knowledge on intravenous cannulation

4. Discussion

The study finding showed that an intervention administered for the same day states that there will be effective difference on their knowledge regarding intravenous cannulation.

5. Limitations

Difficult to get sample at same day/ time.

4. Conclusion

The study was aimed to enhance their knowledge on Intravenous cannulation, and also make them to gain

knowledge about procedures, techniques, methods to find out the proper placement of IV cannula, different types, size and color of IV cannula, importance of personal productive equipment. This study has important implications, to prevent the risk of infection and complication, and to enhance the selected nursing students knowledge in administration of IV fluid prevention of infection and complication.

Author Contribution Statement

Conceived and designed this study let the overall research proceed and provided critical revision to the manuscript, responsible for methodology and writing of the result and discussion, selection of the study conducted literature review, contributed to the survey design, Dean Cum

Principal Dr. Esther Rakel assisted in final editing and ensured that relevant ethical consideration were addressed throughout this study.

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References

- [1] Hepsi BJ, Aruna VM. Practice of Intravenous Cannulation Care of Clients. GJRA - global journal for research analysis. 2016;5(5):58-59.
- [2] Makafi SA, Marfega MACM. Peripheral Intravenous Catheter (PIVC) Related Local Complications among Patients in KFCH Jizan. Journal of Advanced Practices in Nursing. 2017;2(3):1000138.
- [3] Ahmed B, Khan IM, Atif Beg M. Frequency of Central Venous Catheter Related Infections and their Culture and Sensitivity Pattern. Journal of Islamabad Medical & Dental College. 2016;5(2):63-66.
- [4] Sharma LS, Mohammad I. The knowledge and practice regarding intravenous cannulation and its complications: A narrative review. International Journal of Advance Scientific Research. 2019;4(4):78 81.
- [5] Hepsi BJ, Aruna VM. Practice of Intravenous Cannulation Care of Clients. GJRA - global journal for research analysis. 2016;5(5):58-59.
- [6] Makafi SA, Marfega MACM. Peripheral Intravenous Catheter (PIVC) Related Local Complications among Patients in KFCH Jizan. Journal of Advanced Practices in Nursing. 2017;2(3):1000138.
- [7] Ahmed B, Khan IM, Atif Beg M. Frequency of Central Venous Catheter Related Infections and their Culture and Sensitivity Pattern. Journal of Islamabad Medical & Dental College. 2016;5(2):63-66.
- [8] Sharma LS, Mohammad I. The knowledge and practice regarding intravenous cannulation and its complications: A narrative review. International Journal of Advance Scientific Research. 2019;4(4):78 81.
- [9] Osti C, Khadka M, Wosti D, Gurung G, Zhao Q. Knowledge and practice towards care and maintenance of peripheral