



A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Intravenous Cannulation for Under Five Children Among Staff Nurses in Sagar Hospital, Bangalore

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ABSTRACT

Background of the study: Nurses have an obligation that they and their patients are protected are protected from the complications and hazards associated with intravenous devices is so common that it is found in all the departments of the health care setting. This procedure, being so common, there is a tendency to assume that it is routine and will not be associated with any clinical problems. **Objectives of the study:** 1) To assess the knowledge of staff nurses on intravenous cannulation. 2) To assess the effectiveness of structured teaching program on intravenous cannulation by comparing pretest and posttest scores of staff nurses. 3) To find the association between pretest knowledge scores of staff nurses with their selected demographic variables.

Method: An evaluative approach was adopted and a pre experimental one group pre and post-test design was used for the study. Staff nurses working in Sagar hospital were sample and sample size was 50. The staff nurses were selected by purposive sampling technique.

Result: Findings of the study revealed that the post-test mean score was 28.26 were significantly higher than the mean pretest knowledge scores 17.44 and computed paired “t” value 22.17 is higher than table value 2.56 at $P>0.1$ level. Hence the structured teaching program on intravenous cannulation was effective and statistically highly significant. The study reveals that there is a significant association between total clinical experience of staff nurses in relation with pretest knowledge score of staff nurses at $P>0.05$ level, and there is no association with other selected demographic variables with pre-test knowledge scores of staff nurses at $P>0.05$ level.

Interpretation and conclusion: The study concluded that the structured teaching program was effective in terms of gain in knowledge of staff nurses regarding intravenous cannulation.

KEYWORDS

Intravenous Cannulation, Under Five Children, Staff Nurses, Structured Teaching Program, Knowledge

INTRODUCTION

Nurses who are able to plan and carry out nursing care with knowledge, skill and confidence are better ambassadors for their specialty. Nurses practice within a changing and evolving health care environment and therefore they are required to develop their knowledge, skill and attitude. Nurses who are performing intravenous cannulation will be competent practitioners in the expanded area of

practice which improve patient’s journey within the health services.¹

OBJECTIVES

1. To assess the knowledge of staff nurses on intravenous cannulation.
2. To assess the effectiveness of structured teaching program on intravenous cannulation by comparing pretest and posttest scores of staff nurses.



3. To find the association between pretest knowledge scores of staff nurses with their selected demographic variables.

Problem statement A study to assess the effectiveness of structured teaching program on knowledge regarding intravenous cannulation for under five children among staff nurses in Sagar hospital, Bangalore.

Hypothesis- There is significance increase in posttest knowledge scores as compared to pretest knowledge scores.

Need for the study: Nurses need to be aware of their level of accountability, when performing intravenous cannulation especially when it comes to children. Cannulation should be incorporated in to practice as a part of holistic patient care.² Inserting, monitoring and maintaining peripheral venous access is an integral component of nursing practice.³ Intravenous cannulation is one of the basic procedures that the nurse must be able to do without assistance. The main responsibility of the nurses is the safety of the patient to whom she is giving care.⁴

MATERIALS AND METHODS

Research methodology

Research Approach An evaluative research approach (Fig No 1).

Research Design pre experimental design (one group pre & posttest design)

Variables under study

Independent variable: Structured teaching program on intravenous cannulation

Dependent variable: Knowledge of staff nurses regarding intravenous cannulation

Sampling criteria

Sample size: 50

Sampling Technique: Purposive sampling

Sample: Staff nurses working in Sagar hospital Bangalore

Inclusive criteria:

1. Staff nurses who are willing to participate in the study.
2. Staff nurses who are available during the period of data collection.

Exclusive criteria:

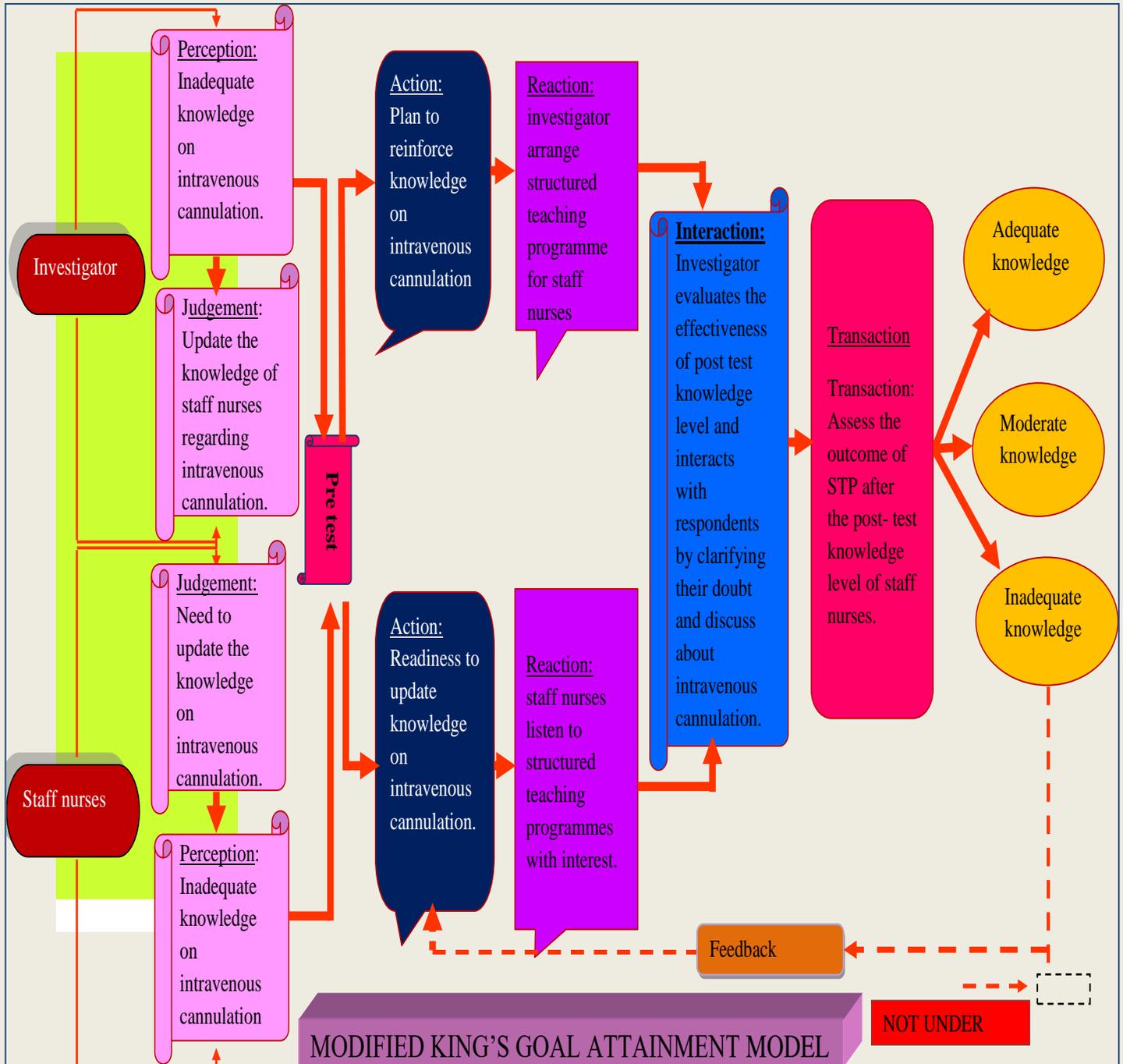
1. Staff nurses who are not present at the time of data collection.
2. Staff nurses who are not involved in direct patient care.

MATERIAL OR TOOLS USED IN RESEARCH STUDY

Section A: Demographic data: Age, Gender, Education qualification, Total clinical experience, Experience in pediatric ward, Exposure to an in-service education, number of cannulation on under-five children per day.

Section B: Knowledge on intravenous cannulation

This section consists of 35 items regarding knowledge on intravenous cannulation in





the following areas:-Anatomy and physiology, Indication and contraindication, selection of cannula, site and vein, Equipment and procedure, Removal of cannula, nurses responsibilities

RESULTS AND DISCUSSION

Section I - Finding of demographic variables of staff nurses (Table 1)

Table 1 Frequency and percentage distribution of respondents according to their Demographic variables

Variables	No. of respondent	%
1 Age in Years		
a. 21-25	40	80
b. 26-30	10	20
2 Gender		
a. Male	07	14
b. Female	43	86
3 Qualification		
a. GNM	24	48
b. BSc Nursing	26	52
4 Total Clinical Experience		
a. < 3 Years	29	58
b. 3-6 Years	21	42
5 Experience in Paediatric Ward		
a. < 1 Year		
b. 1-3 Years	27	54
c. 3 Years & Above	19	38
	04	08
6 Exposure to in service education		
a. Yes	33	66
b. No	17	34
7 Number of cannulation on under-five children per day		
a. None		
b. 1-3 Times		
c. 3 Times & Above	19	38
	22	44
	09	18

Data reveals that 40(80%) respondents belongs to the age group of 21-25 years and only 10(20%) belongs to the age group of 26-30 years. Majority of the staff nurses

43 (86%) were females and 07(14%) were males. The qualification status of the respondents where almost same in both category in which 24(48%) nurses have qualified with GNM and 26(52%) have qualified with B.Sc. Nursing. In total clinical experience of the respondents, 29(58%) nurses have less than 3 years and 21(42%) have 3-6 years of experience. Experience in pediatric ward category reveals that maximum of the respondent that is 27(54%) have less than 1 year, 19(38%) have 1-3 years of experience and least which is 04(08%) have experience of 3 years and above. In the category of in-service education, 33(66%) respondents are exposed and 17(34%) were not exposed. Last category the number of cannulation on under-five children 19(38%) nurses don't perform any cannulation on daily basis, were 22(44%) nurses cannulate at least for 1 times to 3 times per day and least only 9(18%) nurses cannulate for 3 times and above.

Section II- Findings related to effectiveness of structured teaching program on knowledge regarding intravenous cannulation by comparing the pre and post-test knowledge scores. (Table 2)

With respect to pretest, mean is 17.44 and SD is 3.759 and mean% is 49.83%. With respect to the post-test mean is 28.26 and



Table 2 Effectiveness of structured teaching program on knowledge regarding intravenous cannulation by comparing the pre and post-test knowledge scores.

	Pre-test score			Post-test score			t-value	Inference
	Mean	SD	Mean%	Mean	SD	Mean%		
Knowledge score of staff nurses	17.44	3.759	49.83	28.26	3.142	80.72	22.17	S

SD is 3.142. The t value is 22.17 at 0.1% level of significance which is greater than table value 2.56 indicates the effectiveness of the structured teaching program.

Section III-Association of pre-test knowledge scores of respondents regarding intravenous cannulation with their selected demographic variables.

(Table 3)

Table 3 Association of pre-test knowledge scores of respondents regarding intravenous cannulation with their selected demographic variables

Demographic variables	Categories	Pretest knowledge score of staff nurses		X ² value	Df	inference
		Inadequate knowledge	Adequate knowledge			
Age in year	21-25	19	21	0.020	1	NS
	26-30	05	05			
Gender	Female	22	21	1.231	1	NS
	Male	02	05			
Qualification	GNM	12	12	0.074	1	NS
	B.Sc. Nursing	12	14			
Total	>3 years	10	19	5.055	1	S
Experience	3-6 years	14	07			
Experience in pediatric ward	<1 year	10	17	5.797	2	NS
	1-3 years	10	09			
	3 years and above	04	00			
In-service education	Yes	17	16	0.480	1	NS
	No	07	09			
Number of cannulation per day	Nil	10	09	4.741	2	NS
	1-3 times	05	17			
	3 times and above	02	07			

The study reveals that, there is highly significant association between variable total clinical experience in relation with pre-test knowledge scores of staff nurses at P<0.05 level.

CONCLUSION

The study reveals that, there is highly significant association between variable like total clinical experience in relation with pre-test knowledge scores of staff

nurses at P<0.05 level. The study concludes that the structured teaching program is an effective method in providing moderate to adequate level of knowledge regarding various procedures to the staff nurses to impart their knowledge and skill in giving patient care services.



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