

Effectiveness of Information Booklet on Intravenous Infusion on Knowledge of Staff Nurses in Selected Hospitals of Mangalore



Medical Science

KEYWORDS : Knowledge, Effectiveness, Fluid therapy, Staff nurses

Mrs. Shalini Lidwin Fernandes

Lecturer, Department of Medical surgical Nursing, Laxmi Memorial College of Nursing, Mangalore, Karnataka. India.

ABSTRACT

Intravenous infusion (IV) is the introduction of a large amount of fluid into the body through the vein. IV infusion mainly given to restore fluid volume to normal incase of hemorrhage, diarrhea and vomiting. It prevents and treats shock and collapse. The nurse is responsible for initiating, monitoring and discontinuing the therapy.¹ The aim of the study was to assess the Effectiveness of Information Booklet on Intravenous Infusion on knowledge of staff nurses. An evaluative study design was adopted. Simple Random sampling technique was used to collect the sample. Knowledge questionnaire on IV fluid therapy was administered to the staff nurses. Booklet was given on the same day. Post test was conducted on the 8th day.

In the pre-test majority of nurses, 76% had average knowledge score (12-22) on IV fluid therapy, 20% had good knowledge and 4% had poor knowledge (0-11). In the post test 84% of the sample had good knowledge and 26% had average knowledge on IV fluid therapy. The mean post test knowledge score of staff nurses (28±1.9) was significantly higher than the pre-test knowledge score (19±, $t_{29}=2.06, p=0.05$). There was no significant association of variables age ($\chi^2=0.7$), gender ($\chi^2=0.06$), education ($\chi^2=0$) years of experience ($\chi^2=7.37$) and source of information ($\chi^2=2.71$) with their pre-test knowledge score

Introduction

Fluid is an essential component required for a living being. Like a fish out of water, a human being deprived of fluids, cannot survive for long. Both fluids and electrolytes are necessary for a person to maintain a good health. An average adult having moderate activity requires about 2600-3000 ml of fluid. The body may lose the fluid by vomiting, diarrhea, haemorrhage, gastric and intestinal suction etc. To overcome this loss, fluids have to be replaced in body through the intravenous route called infusion.² While, working in the wards, researcher found that the incidence of complication related to peripheral I.V infusion was increasing day by day. It was also observed that nurses had inadequate knowledge regarding I.V infusion techniques. This motivated the researcher to prepare a booklet regarding I.V fluid therapy.³

Review Of Literature

A descriptive study was conducted in schools of nursing of Bidar district, to assess the knowledge and practices of I.V fluid therapy among the student nurses. The sample size was 100 student nurses. The data was collected using structured questionnaire for knowledge and an observational checklist for practice of I.V fluid therapy. The study found that 32% of the student nurses had a satisfactory level of performance and remaining 68% had unsatisfactory performance. The post test analysis of practice of IV therapy shows 98.8% had satisfactory level of performance and only 1.2% had an unsatisfactory performance.⁴

A descriptive study was conducted in two tertiary hospitals of Indore, M.P., to assess the effectiveness of planned teaching programme regarding peripheral I.V. infusion on knowledge and practices of staff nurses. 60 staff nurses were selected by purposive sampling technique. The data obtained using structured knowledge questionnaire. The study found that the post-test score was (38.23) higher than the mean pre test practice score (16.16). The dispersion of post test score ($SD \pm 2.29$) was less than that of their pre test score ($SD \pm 4.67$) and the computed paired 't' value showed that there was highly significant difference between pre test and post test mean practice score ($t_{59} = 27.03, p < 0.001$ level). Result of the study revealed that there was increase in the knowledge.⁵

Objectives of the study

- To determine the knowledge of staff nurse regarding I.V fluid therapy.
- To evaluate the effectiveness of booklet on I.V fluid therapy on knowledge of staff nurses.
- To find the association of the pre-test knowledge score of staff nurses with the demographic variables.

Methodology:

Setting: The study was conducted at AJ Hospital and research Centre Mangalore

Population: Staff nurses who were working in medical, surgical, emergency, postoperative, neurological wards and posted on rotation basis.

Sample size: 30

Sampling technique: Simple Random sampling technique

Research design: Evaluative design

Tools:

- Demographic proforma
- The structured knowledge questionnaire on IV fluid Therapy had a total of 34 items. A score value of one (1) was allotted to each correct response. Knowledge scores were arbitrarily divided into three (0-11), Poor, (12-22) Average and (23-34) Good.

Data collection method:

- Prior to data collection, permission was obtained from the concerned authority for conducting the study.
- Subjects were selected according to the selection criteria.
- Informed consent was obtained from the samples.
- Questionnaire was administered to 30 staff nurses working in AJ Hospital and Research Centre.

Result of the study;

The data in the study showed the majority (96%) of sample were in the age group of 20-29 years and least (4%) in the age group of 30-39 years and majority (84%) sample were females. Majority (60%) of the sample had completed general nursing and midwifery. Majority (36%) of sample had both 6-12 month and two year of experience and least (4%) had 3 years of experience. Highest percentage (76%) of sample had source of information from experience and least (8%) had from in service education

The mean post-test percentage knowledge score was highest (96%) in the area of "sizes" and definition and least (76%) in the area of "nurses responsibility". The mean pre-test percentage knowledge score was least in the area of "types and calculation" (43.27%) and highest (100%) in the area of "sizes".

The mean post-test knowledge score of staff nurses (28 ± 1.9) was significantly higher than their pre-test knowledge score (19 ± 2.4), $t_{(29)} = 2.06, P = 0.05$, than their

Description of knowledge scores of staff Nurses

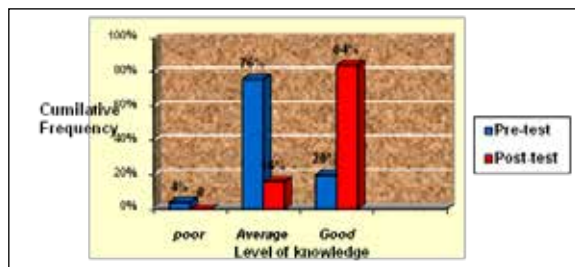


Figure 1: Bar diagram describes percentage distribution of samples according to their knowledge scores

The data in Figure 1 shows that prior to the distribution of booklet, majority of nurses (76%) had average knowledge score (12-22) on IV fluid therapy, 20% had good knowledge score (23-34) and the rest 4% had poor knowledge score (0-11). In the post-test there was an increase in the knowledge of sample as 84% had good knowledge and 16% had average knowledge regarding I.V fluid therapy.

Association of knowledge scores with demographic characteristics

Table 1: Chi square test showing association of practice score and demographic variables

Variables	χ^2 value	Df	Table value	P value	inference
Age (in years)	0.7	3	7.82	$P < 0.05$	Not significant
Gender	0.06	1	3.81	$P < 0.05$	Not significant
Education	0	3	7.82	$P < 0.05$	Not significant
Years of Experience	7.37	3	7.82	$P < 0.05$	Not significant
Source of information	2.71	3	7.82	$P < 0.05$	Not significant

Data presented in the table 1 showed that there was no significant association of variables age ($\chi^2=0.7$), gender ($\chi^2=0.06$), education ($\chi^2=0$), years of experience ($\chi^2=7.37$) and source of information ($\chi^2=2.71$) with their pre-test knowledge source.

Conclusion: Nurses play a major role in the field of emergency. Nurses must not only have a theoretical knowledge but also perfection in performing the procedure. But today most of the nurses do not have an adequate knowledge on the procedure, which affects survival rates of individual. The study concluded that the booklet would improve the knowledge of staff nurses and would enable the staff nurses to apply this knowledge and skills in day to day activity. So as to protect the patients for whom they are caring in the hospital setting.

REFERENCE

1. The Trained Nurses Association of India; Fundamentals of Nursing A Procedure Manual; 1st edition; Published by Secretary – General on behalf of The Trained Nurses Association of India: 2005 P 384. | | 2) Taylor Carol, Lillis Carol, Lemone Priscilla. et. al. Fundamentals of Nursing, The art and science of Nursing care; 4th edition; Lippincott publication; P 1302. | | 3) Sharma Shakunta; principles and practice of Nursing; Jaypee Brothers Medical publishers; P 240. | 4) Fatima Anjum. Knowledge and Practices of I.V Fluid Therapy. Indian Journals of Nursing studies 2008: 29-32 | . 5) Martian Drowin, Joshi Manju. Effectiveness of planned Teaching programme regarding peripheral intravenous infusion among staff Nurses. Indian Journal of Nursing studies 2011: 2[1], 45-50. |