

Knowledge on Hemodialysis among Staff Nurses

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Abstract

The study was conducted to assess the effectiveness of structured teaching program on knowledge of Hemodialysis among staff nurses. The study design adopted was non equivalent control, pretest –post test design. The demographic proforma were collected from the staff nurses by using structured knowledge questionnaire. Data obtained in these areas were analyzed using descriptive and inferential statistics. A significant difference between pre test and post test knowledge was found ($t 13.171p<0.001$). The study findings showed that the structured teaching program was effective in improving knowledge of staff nurses regarding Hemodialysis. There was no significant association between the level of knowledge and demographic variables except the group in working area and inservice education.

Keywords: Knowledge; Structured teaching program; Hemodialysis

Introduction

Nurses must make an important contribution towards maintenance of health in all aspect due to scientific changes in medical science and technology.[1] These expanding responsibilities of nursing based on growing demands of more knowledge and raise the need for critical evaluation of the educational programs that prepare the nurses to enter into skillful nursing profession.

Clinical Nurse Specialist competence produces confidence in their capabilities and subsequent willingness to share their experts with other, so that they were not only “knowledge power broker” on their units or in their area of specialization. For patient with chronic renal failure,hermodialysis prevents death,although it does not cure renal disease and does not compensate for the loss of endocrine or metabolic activities of the kideny.[2]

Dialysis may be used to relieve manifestation of renal failure temporarily. Dialysis must be continued for rest of client’s life until successful kidney transplantation is done. The yearly death rate of patients receiving maintenance dialysis has increased to 22%. Patient who is undergoing for dialysis suffering from many of the problems.

The nurses responsibility for the hemodialysis patients are to maintain the patency of vascular access site and keep it free from infection, to monitor the patient before, during, and after the treatment, to teach the patient and family about dialysis treatment and often home treatment and to assist the patient and family to cope with necessary life style changes and problems.Usually Hemodilysis performed by a specially trained nurse who is familiar with the protocol and equipment.[3]

Statement of the Problem

A Quasi Experimental Study to Evaluate the Effectiveness of Structured Teaching Program on Hemodialysis among the Staff Nurses Working In a Selected Hospital, Ludhiana, Punjab.

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Objectives

- To assess the pre-test knowledge of staff nurses regarding hemodialysis among experimental and control group.
- To assess the post-test knowledge of staff nurses regarding hemodialysis among experimental and control group.
- To compare the pre and post test knowledge of staff nurses regarding hemodialysis among experimental and control group.
- To ascertain the relationship of the effectiveness of structured teaching program on knowledge of hemodialysis among the staff nurses with selected variables i.e age, professional qualification, training institution, profession experience, working area, in-service education and exposure to hemodialysis.

Hypotheses

H₁ - The post test knowledge score of hemodialysis among experimental group will be significantly higher than control group of staff nurses as measured by self structured questionnaire at $p < 0.05$ level.

H₂ – Experienced staff nurses knowledge on hemodialysis will be significantly higher than those with less experienced staff nurses as measured by self structured questionnaire at $p < 0.05$ level.

Conceptual Frame Work

Conceptual frame work for the study was adopted from Ludwig Von Bertalanffy's (1968) open system model. Theory provides a holistic approach to study nursing phenomena as an open system and frees one's thinking from the parts versus whole dilemma.[4] In this model each person or individual serves as an open system to the environment or surroundings and getting input in the form of energy, matter, and information which ultimately (throughput) change the cognition level of the person and shows impact on the knowledge level.

Methodology

Research approach: Quantative Approach

Research Design: Quasi Experimental Design: Non Equivalent Control, Pretest-Post test Design.

Settings: The study was conducted at CMC and hospital, Ludhiana, Punjab.

Sample and Sampling Technique: The investigator adopted non probability purposive sampling method and selected 40 subjects from nephrology unit, ICU, Medical wards, out of which 20 subjects were in control and 20 subjects in experimental group.

Development and Description of Tool

To accomplish the objectives of the study, self structured questionnaire (MCQ). It consist of two parts.

Part I: It deals with demographic data.

Part II: It deals with MCQ about hemodialysis which consist of 50 questions regarding definition, principles, vascular access, indications, Dialyzer and dialysate, complications, procedure, and nursing care.

Validity and Reliability of the Tool

Validity refers to the degree to which an instrument measures what it is intended to measure.[5]The tool was referred among various experts for its validation. Reliability of the tool was estimated by test-retest method. The reliability was found to be 0.77 which indicated that the tool was reliable.

Data Collection Procedure

Prior to data collection formal permission was obtained from the head of the departments and obtained consent from staff nurses after explanation of the purpose of the study. The staff nurses who met the criteria and were willing to participate in the study were selected. Pre test was done from the control and experimental group. Structured teaching program was given to experimental group with the help of lesson plan and with AV aids. The investigator spent 45 min to complete the teaching. Post test was taken from both groups.

Significant Findings

- Maximum number of the staff nurses belonged

Table 1: Comparison of Mean Pre and Post Test Knowledge Score Related to Hemodialysis Among Staff Nurses in Control and Experimental Group

N= 40

Knowledge score							
Group	n	Pre test		Post test			
		Mean	SD	Mean	SD	df	't'
Control	20	a 24.95	5.206	a' 24.7	5.601	38	0.142 NS
Experimental	20	b 26.55	4.795	b' 44.35	3.422	38	13.171***
		df		't'		df	
		a+b	39	0.986NS	a'+b'	39	13.049***

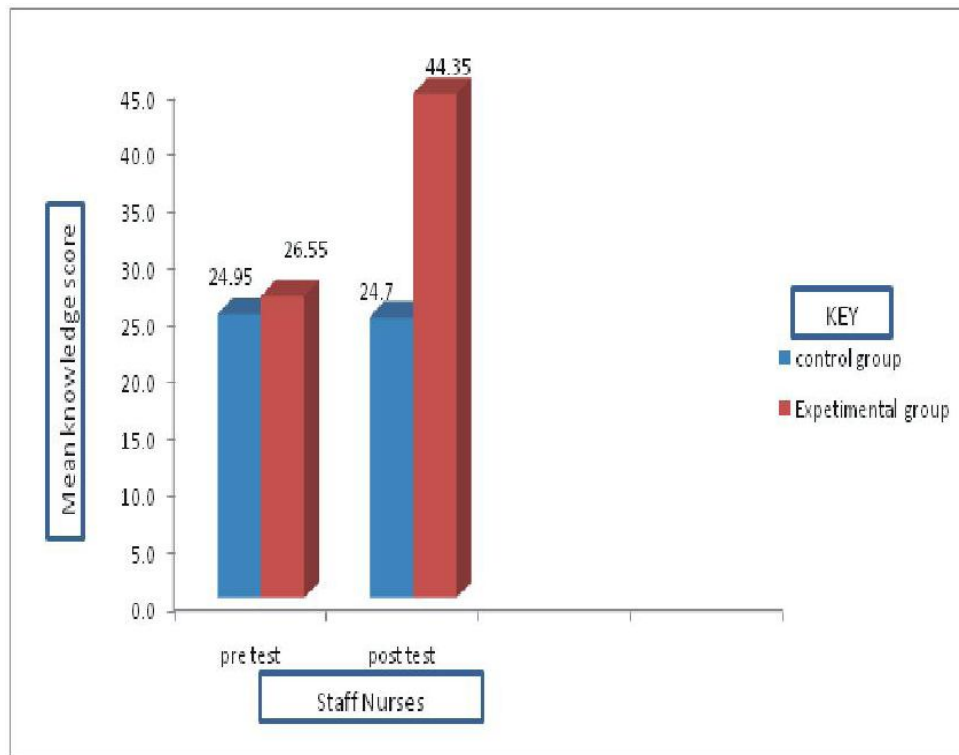
Maximum score=50

Minimum score=0

NS= Non significant

***= Highly significant at p<0.001 level

Figure 1: Comparison of Mean Pre and Post Test Knowledge Score Related to Hemodialysis Among Staff Nurses in Control and Experimental Group



to 26-30 years in control group and 21-25 years in experimental group. In both group maximum number of the staff were G.N.M, trained from CMC and had more than 4 years of experience. In both group maximum number of staff nurses were working in medical wards and attended in-service education. In both group maximum numbers of staff nurses were exposed less than 2 years to hemodialysis.

- In control group 50 % of staff nurses had average and below average knowledge level in

the pre-test i.e. 58.6 % and 41.2 % respectively. But in the experimental group, one staff nurse had 68 % and 13 staff nurses had average and others had below average knowledge level i.e 57.84 % and 40.32 % respectively in the pre test.

- In post test, Maximum number of the staff nurses had average and below average knowledge level i.e. 57.2 % and 38.88 % in control group respectively, But in the experimental group, most of the staff nurses had excellent knowledge level

i.e. 90.22 %.

- There was statistically significant effect on post test knowledge score of staff nurses in the experimental group at $p < 0.001$ level.
- There was no statistically significant effect on pre test knowledge scores of the staff nurses in the control and experimental group in all variables
- There was statistically highly significant effect of demographic variables in post test knowledge scores of staff nurses in experimental group at $p < 0.001$ and $p < 0.01$ level. Hence it is concluded that the structured teaching program made good impact to raise the knowledge of staff nurses in experimental group.
- In the both groups, staff nurses those who were working in the nephrology unit had statistically effect on pre test and post test knowledge score at $p < 0.05$ level.
- In both groups, the staff nurses those who were exposed to hemodialysis for 2-4 years had statistically significant effect on pre and post test knowledge scores at $p < 0.05$ level.

Recommendations

1. This study can be replicated on a large sample to validate and thereby can generated for a large population.
2. Similar study can be done by using other teaching strategies i.e use of SIM, CAI, simulation and clinical presentation.
3. Similar study can be conducted in different setting and different target of population such as students, Health assistance etc.
4. A true experimental study may be conducted to standardize the structured teaching program.

5. A comparative study can be conducted between the knowledge levels of private and government student/ hospital regarding hemodialysis.
6. Similar study can be done on the staff nurses to assess their knowledge, practice regarding Hemodialysis.

Conclusion

Structured teaching program was given to the nurses and its effectiveness was evaluated. In the experimental group mean knowledge score increased from 26.55 to 44.35 which were statistically significant. So from the findings of the study it was concluded that the structured teaching program on Hemodialysis was an effective tool in enhancing the level of knowledge of nurses.

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