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A Study to Assess The Effectiveness of Structured Teaching Programme (Stp) on Knowledge Regarding Dialysis Disequilibrium Syndrome (Dds) Among the Staff Nurses, in a Selected Hospital, in Mangalore.

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ABSTRACT

Aim: To evaluate the effectiveness of Structured Teaching Programme (STP) on knowledge regarding Dialysis Disequilibrium Syndrome (DDS) among the staff nurses and to find the association between Pre-test knowledge scores and selected demographic variables. Material and methods: A evaluatory study was conducted from November 8 to December 8, 2014. 100 staff nurses were selected through probability sampling technique. Existing knowledge was assessed through a pretest after which they were given a structured teaching program on DDS. A posttest was conducted after a week through the same tool as administered during pretest. The structured teaching program covered aspects related to concept, anatomy and physiology, definition, causes, risk factors, clinical features and differential diagnosis and management of symptoms, its prevention of DDS. The pretest test and posttest score were compared and analyzed through descriptive and inferential statistics. Results: The findings of the study revealed that mean pre test was $\bar{x}$_1=10.5 and post test $\bar{x}$_2=25.5 and the computed t99=38.46 with p<0.001 which was higher than the table value. Conclusion: Excellent knowledge score was seen among the staff nurses after the structured teaching programme which indicates that implementation of training programs are considered valid tools to improve knowledge and practice among staff nurses.

KEYWORDS STRUCTURED TEACHING PROGRAMME (STP), DIALYSIS DISEQUILIBRIUM SYNDROME (DDS).

Introduction

Chronic Kidney Disease (CKD) is the 12th leading cause of death in the world. In India, approximate total burden of CKD is 800 per million population (WHO). Hemodialysis is one of the renal replacement therapies.1 Dialysis disequilibrium syndrome (DDS) is a central nervous system disorder occurring in patients usually during hemodialysis (HD) or within 24 h of HD.2 It is due to chronic renal failure and associated, in particular, with "aggressive" (high solute removal) dialysis. This is due to the reverse mechanism of urea effect, cerebrospinal fluid acidosis produced in the brain.3 So Nurses working with dialysis patients in the med/surg setting must have a basic general knowledge of chronic kidney disease and management and being the forefront care providers, need to know the major indicators and thus can save a patient's life. The best way to help chronic kidney disease patients is to educate non-nephrology nurses on the basics of nephrology.4

Objectives

To determine the pre interventional knowledge level of staff nurses regarding DDS by a Structured Knowledge Questionnaire.

To determine the effectiveness of STP in terms of gain in knowledge score.

To find the association between Pre-test knowledge scores and selected demographic variables.

Hypothesis

All hypothesis will be tested at 0.05 level of significance.

H1:The mean post test knowledge score of the staff nurses will be significantly higher than their mean pretest knowledge score.

H2:There will be a significant association with the knowledge scores and their selected demographic variables.

Material and Methods

A evaluatory study was conducted from November 8 to December 8, 2014 among 100 staff nurses on the knowledge about DDS and the effectiveness of STP in improving their knowledge. The inclusion criteria of the study was staff nurses who were working in Father Muller Medical College Hospital with diploma in nursing (GNM), or a degree (Basic BSc) qualification. Exclusion criteria of the study was Staff nurses with Post Graduation with less than one year of work experience and more than ten years of work experience The staff nurses were selected through random sampling techniques (lottery method) was used. Pre experimental one group pre-test post-test design and an evaluatory approach was used. Data collection instruments used was Baseline proforma, Structured Knowledge Questionnaire. The tool consisted of two aspects:

Section 1: It is comprised of baseline proforma consisted of 7 items pertaining to age in years, professional qualification, present designation, years of experience and programmes attended regarding dialysis and its complications, number of programmes attended this year, area of work.

Section 2: Structured Knowledge Questionnaire regarding concept of dialysis, anatomy and physiology of kidney, definition, causes, risk factors, pathogenesis, clinical features, differential diagnosis, treatment, prevention and nurses responsibility in preventing DDS.

Data collection process : Formal written permission was obtained from concerned authorities before data collection. The subjects were assembled as per the fixed schedule at the Conference Hall of Father Muller Medical College Hospital. The

purpose of the study was explained to them and confidentiality was assured. The informed written consent was taken from all the staff nurses by explaining the purpose of the study. The pre-test was conducted on a total of 100 respondents by administering the structured knowledge questionnaire regarding DDS. The STP was administered immediately after the pre-test which lasted for 45mins. The technique of teaching included lecture and discussion with the help of AV aids, like vedio, whiteboard and powerpoint (LCD). The post-test was conducted after seven days of administration of STP with the same questionnaire.

Results

Analysis showed that the majority staff nurses (57%) had BSc, 28 (28%) had GNM, 15(15%) had PPBSc Nursing degree and were working in areas like Dialysis(10%), general ward(28%),critical care unit(30%) and private area(32%) with clinical experience of 1-2yrs(62%), 3-4yrs(28%) and 5-6yrs(10%).

Pre test knowledge score was comparatively lower than that of the post test which was administered after administering STP i.e. in pretest 52% of staff scored between 6-10(poor) and 41% between 11-15(average) and in post test it was 56% between

25-30(excellent) and 44 between 16-24 (good). (Table -1).

Table-2 shows that mean pre test value obtained was x1=10.5 and post test x2=25.5 and the computed t99=38.46 with p=0.00 which was higher than the table value(t99=1.98) hence it was concluded that STP was effective.

Association was calculated using Chi square at p<0.05 level of significance. Findings of the present study showed that there was no significant association between knowledge level and selected demographic variables such as age ($\chi 2(3) = 0.135$, p<0.05), Professional qualifications ($\chi 2(2) = 0.14$, p<0.05), years of experience ($\chi 2(3) = 1.42$, p<0.05), Area of work ($\chi 2(3) = 1.95$, p<0.05), programmes attended regarding Dialysis.

Discussion

Previous Reviews (Ballerini L et.al,2002; Binsy Daniel et.al,2013; Kumar N,2014) shows that Structured Teaching Programme is effective in improving the knowledge and practice among staff nurses thus helping them to provide effective patient care. Since there were no much studies on DDS, the researcher found a need of assessing the knowledge of the staff nurses and educating them about DDS as it is a can be prevented if the health professionals have adequate knowledge and thus planned to conduct a study.

Conclusion

The results of the present study showed that there was a need for staff nurses to update their knowledge regarding DDS. After the administration of STP, excellent knowledge score was seen among the staff nurses which indicates that implementation of training programs are considered valid tools to improve knowledge and practice among staff nurses. The study reveals that STP is an effective teaching strategy.

Table 1 : Distribution of Subjects According to the Grading of Pre and Post Test Knowledge Score. n=100

Range of score	Percentage (%)	Grading	Pre- test		Post-test	
			Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1-10	3- 33	Poor	55	55		
11-15	36-50	Average	41	41		
16-24	53-80	Good	4	4	44	44
25-30	83- 100	Excellent	-	-	56	56

Maximum Score =30

Table 2: Mean, Median Difference, Standard Deviation and 't' value of Pre and Post-test Knowledge Score of Staff Nurses.

n=100

Group	Mean Knowledge Score		Mean Difference	Standard Deviation		't' value	P
	Pre test	Post test		Pre test	Post test		
Staff Nurses	10.5	25.5	15	2.7	2.5	38.46	0.00*

t_{99}= 1.98, p<0.05 *Significant

Table 3 Area-wise Mean Knowledge Score, Mean Difference, Standard Deviation and t value of Pre- and Post-test Knowledge Score

Areas	Max. Score	Mean Knowledge Score		Mean Difference	SD	't' value	p value
		Pre-test	Post-test				
Concept	11	5.06	9.86	4.8	1.97	24.3*	<0.001
Definition, causes, risk factors	10	3.19	7.92	4.73	2.18	21.67*	<0.001
Clinical features and differential diagnosis	2	0.85	1.88	1.03	0.81	12.72*	<0.001
Management of symptoms, its Prevention	7	1.81	5.81	4	1.39	28.57*	<0.001

t_{99}=1.98; p<0.05 *= Significant

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