International Journal of Community Health Nursing

Journal homepage: www.mcmed.us/journal/ijchn

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING INOTROPIC DRUGS AMONG STAFF NURSES

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Article Info

Received 12/01/2019; Revised 25/02/2019;
Accepted 18/03/2019

ABSTRACT

A study to assess the effectiveness of structured teaching programme on knowledge regarding inotropic drugs among staff nurses. Objectives:. Assess the pre and post test level of knowledge regarding inotropic drugs in experimental and control group, evaluate the effectiveness of structured teaching programme on knowledge regarding inotropic drugs among staff nurses in experimental and control group, find out the association between pre test level of knowledge and selected demographic variables of both experimental and control group. Method: Quantitative approach was used and the study design was quasi experimental pre test post test control group design. The study was based on *Orlando's deliberative interactive model*.The pilot study was conducted with six samples to determine the feasibility of the study. The main study was conducted in February 2017. Out of 60 samples, 30 were selected for control group from KIMS Al Shifa Hospital, Perintalmanna and 30 for the experimental group from Edapal Hospitals Pvt. Ltd, Edapal using non probability convenient sampling technique. Data were collected using structured knowledge questionnaire to assess the knowledge of staff nurses regarding inotropic drugs. Pre test was done on day one for both experimental and control group and structured teaching programme regarding inotropic drugs was given to the staff nurses in the experimental group. Post test was done for both experimental and control group on seventh day. The data were analyzed and interpreted using descriptive and inferential statistics. Results: 80% of subjects in the experimental group and 93.33% of subjects in the control group have poor pre test level of knowledge.13.33% of subjects in experimental group and 6.67% of subjects in control group have average knowledge. 6.67% of subjects in control group have good knowledge. The mean post test knowledge score (25.13) of experimental group was significantly greater than control group (4.93) (t =22.69). Hence it is evident that structured teaching programme was effective in improving the knowledge regarding inotropic drugs. The study revealed that there was no significant association between pre test knowledge score and demographic variables. Conclusion: The study concluded that structured teaching programme improved the knowledge of staff nurses regarding inotropic drugs.

Key Words: Structured teaching programme; Inotropic drugs; Staff nurses.

INTRODUCTION

The heart's conduction system must function normally for the heart to beat properly and to pump blood effectively to meet the body's needs. Disturbance in rate, rhythm or both are called as arrhythmias [1]. An inotrope is an agent that alters the force or energy of muscular contractions. Negatively inotropic agents weaken the force of muscular contractions. Positively inotropic agents increase the strength of muscular contraction. Both positive and negative inotropes are used in the management of various cardiovascular conditions. The choice of agent largely depends on specific pharmacological effects of individual agents with respect

to the condition. Some cardiac issues like Congestive cardiac failure, Right heart failure, Myocardial infarction etc, and cardiac surgeries like cardio pulmonary bypass, angioplasty, valvuloplasty etc. are some cardiac emergencies where inotropics are in use.

Objectives

1. Assess the pre and post test level of knowledge regarding inotropic drugs in experimental and control group
2. Evaluate the effectiveness of structured teaching programme on knowledge regarding inotropic drugs among staff nurses in experimental and control group
3. Find out the association between pre test level of knowledge and selected demographic variables of both experimental and control group.

Hypotheses

The hypothesis is tested at 0.05 level of significance

H_1 – There is a significant difference between pre test and post test level of knowledge scores regarding inotropic drugs among staff nurses in experimental and control group

H_2 - There is a significant association between level of knowledge scores and selected demographic variables in experimental and control group.

RESEARCH METHODOLOGY

Ethical consideration

The study was approved by the institutional ethical committee. Administrative sanction for conducting study was obtained from KIMS Al Shifa hospital and Edapal Hospitals pvt. Ltd. Formal permission was obtained from the participants prior to the data collection. The samples were informed that participation was voluntary and they had freedom to withdraw from the study. Confidentiality was maintained. No ethical issues were aroused during the course of the study. Informed consent was obtained from all the participants.

MATERIALS AND METHODS

Research design: The study design used for this present study is quasi experimental pre test post test control group design. In this study there are two groups of study subjects.

Study Setting and study population: The study was conducted in KIMS Alshifa Hospital, Perinthalmanna and Edapal hospitals Pvt. Ltd, Edapal. Target population in the present study was Staff nurses who are working at selected hospitals at Malappuram.

Sample and sampling technique: The sample size of the study was 60 Staff nurses of KIMS Al Shifa Hospital Perinthalmanna, and Edapal hospitals. Pvt. Ltd, Edapal. Of which 30 persons were in the experimental group and 30 persons were in the control group. The sampling technique adopted for this study was non probability convenient sampling technique [2-5].

Study Variables:In this study the independent variable is Structured teaching programme regarding inotropic drugs and the dependent variable is Level of knowledge regarding inotropic drugs among staff nurses. Demographic variables under this study is age, gender, professional qualification, area of working in hospital,total years of experience, participation in in-service education programme regarding inotropic drugs.

Pilot study: Pilot study was done in EMS Hospital, Perinthalmanna and Moulana Hospital, Perintalmanna from 31-01-2017 to 6-02-2017.The pilot study revealed that the appropriateness of methodology, comprehensibility of the tool and practicability of intervention. The data collected was found to be amenable to statistical analysis. Hence considering the feasibility and practicability of the study, there were no modification; the investigator proceeded with the main study.

Data collection process

The formal permission for data collection was obtained from Principal, Al- Shifa College of Nursing and KIMS Al Shifa Hospital, Perinthalmanna and Edapal Hospitals Pvt. Ltd . The study conducted from February to March 2017.The samples of 60 staff nurses including 30 samples from the Edapal hospitals Pvt. Ltd, Edapal in the experimental group and 30 samples from KIMS Al Shifa hospital, Perinthalmanna in the control group were selected on the basis of inclusion criteria by using non probability convenient sampling technique. The investigator introduced her and developed rapport with the subjects. The investigator collected the socio-demographic and level of knowledge regarding inotropic drugs by using semi structured knowledge questionnaire. After administering the pre-test, structured teaching programme of inotropic drugs was given to experimental group for one hour in two small groups of 15 participants in each group. Structured teaching programme included various aspects of inotropic drugs including the classification, dosage, method of preparing the drug before administration, mechanism of action, adverse effects and role of nurse in assessing the adverse effects and toxicity. Post test was conducted for both experimental group and control group to assess the level of knowledge regarding inotropic drugs. After post test STP was given to the control group participants also for ethical clearance [6-10].

Statistical analysis

Frequency and percentage distribution were used

to study the demographic variables. Mean and Standard deviation were used to determine the pre test and post test knowledge score. Paired 't' test is used to determine the effectiveness of STP. Chi-square test was used to find out the association of level of fatigue with selected demographic variables. The level of significance for the study was set as 0.05.

RESULTS

Section I: Distribution of demographic characteristics of staff nurses.

The analysis reveals that 33.33% of the samples in the experimental group belong to the age group of 31-35 and 30% of samples in the control group belong to the age group of above 35. With respect of gender, 46.67% of staff nurses in the experimental group and 33.33% of staff nurses in the control group are males.53.33% of experimental group and 66.67% of control group are females. 36.67% of staff nurses in experimental group and 30% of staff nurses in control group have the educational qualification of post basic BSc nursing. 23.33% of staff nurses in experimental group and 33.33% of staff nurses in control group have the educational qualification of BSc nursing. 20% of staff nurses in experimental group and 26.67% of staff nurses in control group have the area of experience in emergency department.36.66% of staff nurses in experimental group and 30% of staff nurses in control group have the area of experience in wards. 36.66% of staff nurses in control group have 2-4 years of experience and 26.67% of staff nurses in experimental group have 5-7 years of experience. 13.33% of staff nurses in experimental group and 26.67% of staff nurses in control group have participated in inservice education programme regarding inotropic drugs.

Section II: Assessment of level of knowledge of Staff nurses.

The analysis depicts that 80% of subjects in the experimental group and 93.33% of subjects in the control group have poor pre test level of knowledge. 96.67% of samples in the control group have poor knowledge and 83.33% of samples in the experimental group have good knowledge in the post test.

Section III: Evaluate the effectiveness of Structured Teaching Program on knowledge regarding inotropic drugs.

The mean pre test knowledge score of experimental group (6.27± 4.89) was not significantly different than control group (4.93± 2.85). The obtained t value (1.29) was statistically not significant at 0.05 level with a p value 0.1010. Hence this implies that the two groups were equivalent with respect to knowledge regarding ionotropic drugs before the intervention. It also depicts that the mean post test knowledge score (25.13±3.96) of experimental group was significantly different than control group (4.93±2.7) and calculated t value (15.331) was statistically significant at 0.05 level with a p value 0.0001. Hence it is evident that structured teaching programme is effective in improving the knowledge of staff nurses regarding inotropic drugs.

Section IV:Association between knowledge of staff nurses and their selected demographic variables.

There was no significant association found between pre-test knowledge score and demographic variables like age, gender, professional qualification, area of working, total years of experience and participation in in-service education regarding inotropic drugs.

DISCUSSION

The present study evaluated the effectiveness of structured teaching program on knowledge regarding inotropic drugs and found that the structured teaching program was effective in improving the knowledge of staff nurses. The study findings revealed that the mean post test knowledge score (25.13) of staff nurses in the experimental group is significantly greater than their mean pre-test knowledge score (6.27) of experimental group (paired t =18.27, p =0.0001).The analysis depicts that the mean post test knowledge score (25.13) of experimental group was significantly greater than control group (4.93) and calculated t value (18.27) was statistically significant at 0.05 level with a p value 0.0001. Hence it is evident that the structured teaching programme is effective in improving the knowledge of staff nurses regarding inotropic drugs.

The present study was supported by the pre-experimental study conducted to assess the effectiveness of planned teaching programme on knowledge of emergency drugs among staff nurses working in critical care units in selected hospitals at Mangalore. One group pre-test post-test research design was used for the study. Convenient sampling technique was used and 30 staff nurses were selected for the study. Structured knowledge questionnaire was developed to assess the effectiveness of planned teaching programme on emergency drugs. The result revealed that the overall pre-test mean knowledge score regarding emergency drugs observed to be 26.0 that are 52% and post-test mean score found to be 43.87(87.73%). This findings also tested by paired't' test the calculated value was greater than table value at 0.05 level of significance.

The present study also reveals that both the experimental (80%) and control group (93.33%) participants had poor knowledge of ionotropic drugs in the pre-test, and improved to good knowledge level of 83.33% in experimental group after the STP, however

there is no improvement in the level of knowledge in the control group. These findings are in line with the study findings conducted to measure nurse's knowledge of high alert medications. This cross sectional study included 305 nurses selected by snow ball sampling method. The findings reported that only 3.6% of nurses had sufficient knowledge about high alert medications and 84.6% hoped to gain more training to improve their knowledge [11].

Table 1: Association between knowledge of staff nurses and their selected demographic variables

SL no	Demographic variables	Experimental group		Control group		Chi square	P value
		N	%	N	%		
1	AGE IN YEARS						
	21-25	6.9	23.33	8	26.67	2.7	0.8454
	26-30	8	26.67	6.9	23.33		
	31-35	9.9	33.33	6	20		
	Above 35	5	16.67	9	30		
2	GENDER						
	Male	14.1	46.67	9.9	33.33	0.38	0.8269
	Female	15.9	53.33	20.1	66.67		
3	PROFESSIONAL QUALIFICATION						
	Diploma in Nursing	8.1	26.67	9	30	3.63	0.7266
	Post basic BSc Nursing	11.1	36.67	9	30		
	BSc Nursing	6.9	23.33	9.9	33.33		
	MSc Nursing	3.9	13.33	3	10		
4	AREA OF WORKING						
	ICU	8	26.67	7	23.33	2.63	0.8536
	Emergency department	6	20	8	26.67		
	wards	11	36.66	9	30		
	Other area	5	16.67	6	20		
5	TOTAL YEARS OF EXPERIENCE						
	< 2years	7	23.33	6	20	4.83	0.5657
	2-4years	9	30	11	36.66		
	5-7years	8	26.67	8	26.66		
	>7years	6	20	5	16.67		
6	PARTICIPATED IN INSERVICE EDUCATION REGARDING INOTROPIC DRUGS						
	Yes	3	10	7	23.33	1.18	0.5543
	No	7	23.33	23	76.67		

Table 2: Level of Knowledge regarding ionotropic drugs in pre-test and post-test of experimental and control groups.

Level of Knowledge	Pre-test level				Post-test level			
	Experimental group		Control group		Experimental group		Control group	
	f	%	f	%	f	%	f	%
Poor	24	80%	28	93.33%	0	0%	29	96.67%
Average	4	13.33%	2	6.67%	5	16.67%	1	3.33%
Good	2	6.67%	0	0%	25	83.37%	0	0%

Table 3: Effectiveness of STP on knowledge regarding ionotropic drugs.

Level of knowledge	Group	N	Mean	Std. Deviation	Independent t value	P value
Pre-test level of knowledge	Experimental	30	6.27	4.89	1.29	0.1010
	Control	30	4.93	2.85		
Post-test level of knowledge	Experimental	30	25.13	3.96		
	Control	30	4.93	2.7	22.69	0.0001*

CONCLUSION

The study concluded that STP was effective in improving the level of knowledge regarding inotropic drugs among staff nurses.

Financial support and sponsorship: There was no funding support for this study,

Conflict of interest: There is no conflict of interests.

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