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A Study to Assess the Effect of Planned Teaching Program on Knowledge Regarding Interpretation of Cardiac Arrhythmias and its Management among Staff Nurses in Selected Hospitals of Pune City

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Abstract

Introduction: Any change in electrical conduction or automaticity of the heart causes disturbances in heart rate and rhythm, often referred to as cardiac arrhythmias.

Objectives: To assess the knowledge regarding interpretation of cardiac arrhythmias and it's management among staff nurses before and after planned teaching program, to compare the pre-test and post-test knowledge scores regarding interpretation of cardiac arrhythmias and it's management among staff nurses and to associate the pre-test score with selected demographic data.

Materials and methods: A quantitative research approach using pre-experimental pre-test post-test design was adopted for the study. Sister Callista Roy's adaptation model was adopted in the study, Non-Probability Convenient Sampling technique with 100 samples were selected from selected hospitals of Pune city. A self-structured questionnaire was used to collect the data during September 2017 to October 2017 to obtain the knowledge level.

Results: Findings of the study shows that majority of participants were females (65%), working in critical care units (63%) with Revised Diploma in General Nursing and Midwifery (78%) in the age group of 20-25 years (52%) having attained no in-service education regarding cardiac arrhythmias (77%). There was no association between knowledge scores and selected demographic variables. Pre-test knowledge scores; in the present study 64% of the samples had average knowledge regarding interpretation of cardiac arrhythmia's and its management Post-test knowledge scores increased after planned teaching program. 88% of samples had good knowledge regarding interpretation of cardiac arrhythmia's and its management.

Conclusion: A majority of nursing staff in ICU's can be helpful in prevention of critical condition and promotion of health. Thus, arises the need to train nurse's through educational programs which will benefit in early detection and diagnosis of cardiac arrhythmia's, reducing the mortality rate and improving quality of care provided.

Introduction

16 million deaths were reported globally due to cardiovascular disorders. Cardiac arrhythmias are some of the conditions which carry life threatening risks leading to heart failure or death, where early actions can play a great role in bringing back a patient from the clutches of death. Ventricular fibrillation is the most common dysrhythmia associated with sudden cardiac death, accounting for 65% to 80% of cardiac arrests [1-3].

Materials and Methods

A quantitative research approach using pre-experimental pre-test post-test design was adopted for the study. Sister Callista Roy's adaptation model was adopted in the study, non-probability convenient sampling technique with 100 samples were selected from selected hospitals of Pune city. A self-structured questionnaire was used to collect the data during September 2017 to October 2017 to obtain the knowledge level. The data were collected using self-structured knowledge questionnaire which includes- Section- I: Demographic variables, Section-II: Structured questionnaire consisting of 25 multiple choice questions assessing knowledge regarding interpretation of cardiac arrhythmia's and its management. The scored are given as: 0-8 Poor, 9-16 Average and 17-25 as Good. Ethical approval was obtained from the ethical committee member. Written consent was taken from the participants.

Results

The analysis and interpretation of the data was done to determine the efficacy of the planned teaching program on knowledge regarding interpretation and management of cardiac arrhythmia's among staff nurses working in selected hospitals of Pune city. 52% of samples were from the age group of 20-25, 65% of samples were female, 78% of samples had degree of RGNM, 63% of samples had work experience in critical care units, 50% of samples had undergone in-service education. 64% of samples had average knowledge regarding interpretation of cardiac arrhythmias and its management before planned teaching

which improved after planned teaching as 88% of samples depicted good knowledge regarding interpretation of cardiac arrhythmias and it's management. This was supported by inferential statistics by using paired t test showed that there was marked increase in mean knowledge score after planned teaching program as calculated value of 't' was greater than tabulated value of 't' paired t-test was significant; 't' (99)=24.901, at 0.05 level of significance. There was no association found between demographic variables with pre-test scores. There is no significant association between knowledge regarding interpretation of cardiac arrhythmias and it's management among staff nurses and selected demographic variables at 0.05 level of significance" (Tables 1 and 2).

Knowledge Score	Pre-test		Post-test	
	Frequency (f)	Percentage %	Frequency (f)	Percentage %
Poor (0-8)	24	24%	0	0%
Average (09-16)	64	64%	12	12%
Good (17-25)	12	12%	88	88%
Total	100	100	100	100

Table 1: The findings related to knowledge of staff nurses regarding Interpretation of cardiac arrhythmias and it's management before and after planned teaching program (n=100).

Test	Mean	Standard deviation	Calculated "t" value	Tabulated "t" value
Pre-test	10.66	2.808	24.901**	1.645
Post-test	20.28	2.021	--	--

Table 2: Findings related to efficacy of planned teaching in terms of difference between pre-test and post-test mean score (n=100).

Discussion

Pre-test knowledge scores; in the current study samples had average knowledge regarding interpretation of cardiac arrhythmia's and its management. Samples had good knowledge regarding interpretation and management of cardiac arrhythmias after planned teaching program. There was no association between knowledge scores with selected demographic variables.

Conclusion

The conclusion drawn from the findings of the study is that there is positive influence of educational programs in early detection and management of cardiac arrhythmia's among staff nurses, reducing the mortality rate and improving quality of care provided.

Recommendations

The following recommendations were made for future research:

- Study could be replicated in other intensive care units and wards of selected institute.
- Study could be replicated by increasing the size of the sample.
- Similar study would be replicated to asses the difference in knowledge score's of staff who have attended in-service education/ training programme and those who did not attend any in-service education/training programme.

Acknowledgement

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