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AN EXPLORATORY STUDY TO ASSESS THE KNOWLEDGE REGARDING CARE OF PATIENTS WITH CARDIAC ARRHYTHMIAS AMONG THE CARDIAC NURSES AT SELECTED HOSPITALS, BATHINDA WITH A VIEW TO DEVELOP A SELF INSTRUCTION MODULE

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ABSTRACT

Nurses in clinical specialties are expected to have an adequate knowledge on care of the patients with cardiac arrhythmias by using proper analysis of ECG and to inform the physician to make diagnosis to initiate an immediate care. The objective of the study was to assess the knowledge regarding care of the patients with cardiac arrhythmias among the cardiac nurses in selected hospitals of Bathinda and also to rule out the association of nurse's knowledge in respect to the demographic variables. A total of 50 cardiac nurses were randomly chosen from selected hospitals of Bathinda District. Convenient sampling method was selected for choosing the samples. A valid questionnaire was used to gather the data. The study showed that the 20% of the nurses had poor knowledge, 60% had an average knowledge and 20% of them had a good knowledge regarding the care of the patients with cardiac arrhythmias. There is a statistical significance between the mean knowledge score and the demographic variables such as qualification and period of experience. But at the same time have no association with age, gender and exposure to in service education.

INTRODUCTION

The word Cardiac Arrhythmia was derived from Latin word ``Cardiac'' means heart, "A'' means disturbance, distortion, or without and ``Rhythmia'' means to measure continuous normal rhythm. Cardiac Arrhythmia is also termed as Heart Arrhythmia, Heart Rhythm Disorder or Rhythm Disorder; Cardiac Arrhythmia is an irregular heart rate, rhythm or both.

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Arrhythmias are often grouped according to the location in the conduction system where the abnormality occurs. The word Cardiac Arrhythmia is used when there is abnormality in the conductive system of the heart [1]. The electrical impulses carried by the heart known as cardiac conduction, makes the contraction and relaxation of the heart. The steady cycle of the heart muscles contraction succeeded by relaxation causes blood to be pumped throughout the body. Conductive system of the heart can be influenced by various elements like temperature, exercise and endocrine system hormones [2].

Sudden cardiac arrest is accounted for more than 50% of all deaths due to cardiac diseases in United States and each minute that defibrillation is delayed decreases the survival rate by 8% to 10% [3]. Most episodes of arrhythmias occur outside the hospitals during routine activities of daily living. Arrhythmias that occur with acute myocardial infarction are usually the result of electro physiological and biochemical abnormalities in the infracted cardiac muscles [4].

Nursing knowledge is a collection of many influences. Nurses have a remarkable diagnostic influence in the field of cardiac pattern tracking and to rule out arrhythmias. Keeping an eye on ECG has become common in both in and out patients at clinical settings. Nurses are accountable for care of cardiac patients including monitoring and analyzing cardiac arrhythmias. They should possess a critical thinking skill that helps them to assess the significance of arrhythmias. A depth understanding of cardiac anatomy, physiology and properties will provide a framework for interpreting cardiac arrhythmias to execute an immediate treatment plan [5].

ECG analysis is a complex subject that requires considerable experience. An understanding of the principles of ECG can make the learning process easier. Nearly 50% of the deaths from myocardial infarction are due to arrhythmias. These deaths can be prevented by recognizing and treating arrhythmias at the early stage. The lethal arrhythmias seldom occur instantaneously and are often preceded by less severe arrhythmias. The nurses especially in cardiac departments should have a proper knowledge in spotting of such arrhythmias [6].

NEED FOR THE STUDY

The arena has gone a swift epidemiological transition closer to non-communicable illnesses; persistent diseases at the moment are the leading reason of illness and death in the world, accounting for 68% of deaths in the world and almost disability. Consistent with United Nation projections, by way of the middle of this century, the quantity of aged people in the world will exceed the number of young people and this would be the first of its kind [7]. According to World Health Organization (WHO) almost 17.5 million lives are lost due to the heart disease globally and in the race, the Indians are once more running as Americans and others. WHO estimates approximately 60% of the whole world cardiac patients will be Indians [8].

Nurses can make a contribution to avoid the cardiac arrest within the community with the aid of prompting the significance of search of medical care in the event of chest pain. Moreover skilled medical help and recognition of the prodromes of cardiopulmonary collapse may reduce the prevalence in hospital cardiac arrests.[9] Nurses play a crucial role to make the prognosis in acute arrhythmia calls for recognition and interpretation of vital electrocardiogram (ECG) findings as an expertise of resuscitation guidelines [9].

At the bedside, nurses play a vital role in arrhythmia identification and management. The electrocardiographic (ECG) monitor recording interpretation by the nurses, along with additionally accumulated data could notify the physician who makes remedy selection and institute pharmacologic and counter shock therapies consistent with unit-precise protocols. Consequently understanding the nurse's notion of arrhythmia expertise and ultimately developing gear to evaluate this expertise and competence in the recognition of ECG rhythms are of vital significance to nursing.

I consider this study will make a prime contribution to the field of health literacy. Since the nurses cares for their patients around the clock, need to have higher degree of knowledge and ability in interpretation and management of arrhythmias to promote the quality and appropriate care for patients with cordial elements. Hence the investigator determined to conduct a study to assess the knowledge regarding care of the patients with cardiac arrhythmias among the cardiac nurses.

PROBLEM STATEMENT

An exploratory study to assess the knowledge regarding care of patients with cardiac arrhythmias among the cardiac nurses at selected hospitals, bathinda with a view to develop a self instruction module.

OBJECTIVES

1. To assess the knowledge of the cardiac nurses regarding care of the patients with cardiac arrhythmias at the selected hospitals.
2. To find out the association between knowledge of the cardiac nurses regarding care of the patients with cardiac arrhythmias with the selected socio demographic variables.
3. To develop a self instructional module regarding care of the patients with cardiac arrhythmias.

RESEARCH METHODOLOGY

Research Approach: A descriptive approach was utilized for the present study since the purpose of the study was to assess the knowledge and association between the selected variables.

Research Design: A descriptive survey design was applied in this study.

Setting of the Study: The study was conducted at selected hospitals of Bathinda district, Punjab.

Population: For the present study target population is the cardiac nurses working at selected cardiac hospitals of

Bathinda district.

SAMPLE AND SAMPLING TECHNIQUE

Sample: The sample for the present study consisted of cardiac nurses working at the selected hospitals of Bathinda district.

Sampling Technique: Random sampling technique was used for choosing of samples.

Sample Size: A total of 50 cardiac nurses were selected to be the part of the study.

Description of the data collection tool:

In this study the data collection tool consisted of 2 parts covering the following areas.

I. **Socio-demographic data:** It contains Five (5) questions selected on background factors such as age, gender, professional qualification, total years of experience and exposure to in-service education.
II. **Preparation of knowledge questionnaire:** A structured self administered questionnaire was used based on the objective of the study.

Method of data analysis:

- Description of sample characteristics, baseline data containing sample characteristics (socio-demographic data) was analyzed using frequency and percentage.
- The knowledge of the nurses was analyzed using frequency, percentage, +mean percentage and standard deviation.
- Association between knowledge scores and selected demographic data was found out by using Chi-Square test.

RESULTS

The above table depicts that the majority 46% of the nurses was of 26-30 years in age, and 20% among them were of 31-35 years, 18% in the age group of 21-25 years and the minority 16% was in the age group of above 36 years. In regards to their gender, majority 80% of the samples were females and the rest 20% were males. Considering their qualification 28% were GNM, 50% of them were BSc Nurses, 10% were Post BSc Nurses and 12% were MSc Nurses. With regard to their years of experience 28% had less than one year of experience and 50% were in the group of 1-2 years, 10% with an experience of 3-4 years and 12% had an experience of more than 5 years. 60% of the nurses had attended in-service education program while 40% had no exposure to in-service education.

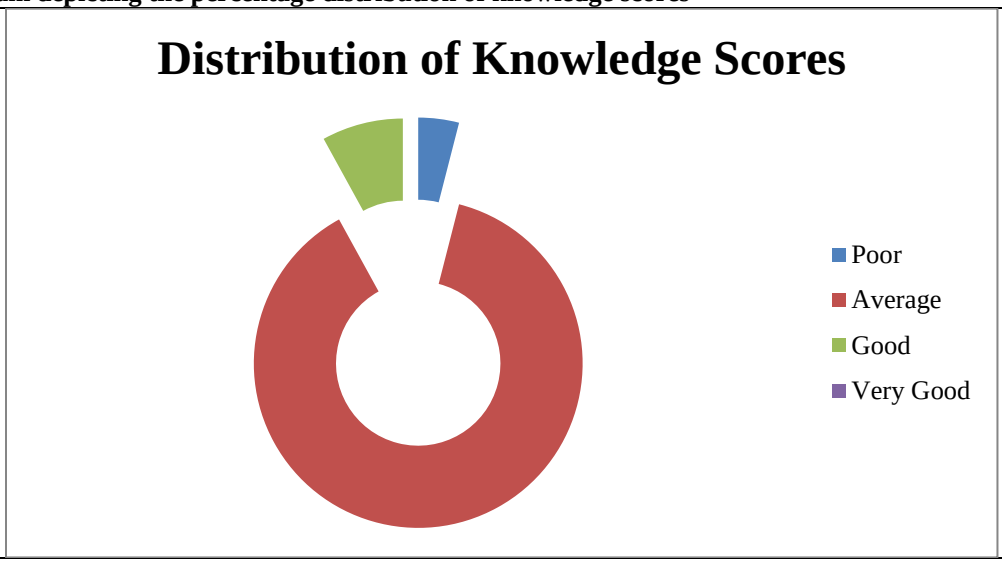
Table 1.Distribution of cardiac nurses of the selected hospitals according to socio-demographic variables (n=50)

Variables	No of respondents	Percentage
Age in years		
a. 21-25 years	09	18.0
b. 26-30 years	23	46.0
c. 31-35 years	10	20.0
d. 36 and above	08	16.0
Gender		
a. Male	10	20.0
b. Female	40	80.0
Professional Qualification		
a. GNM	14	28.0
b. BSc Nursing	25	50.0
c. Post BSc Nursing	05	10.0
c. MSc Nursing	06	12.0
Years of Experience		
a. Less than 1 Year	14	28.0
b. 1 – 2 Years	25	50.0
c. 3 – 4 Years	05	10.0
d. Greater than 5 Years	06	12.0
Exposure to In Service Education		
a. Yes	30	60.0
b. No	20	40.0

Table 2: Percentage distribution of knowledge scores regarding care of the patients with cardiac arrhythmias among the cardiac nurses

Sl.no	Level of knowledge	No. of Cardiac Nurses	Percentage
1.	Poor knowledge	02	04%
2.	Average knowledge	44	88%
3.	Good knowledge	04	08%
4.	Very good knowledge	00	0%
	Total	50	100

Fig: 1. Diagram depicting the percentage distribution of knowledge scores



The above table reveals that the majority of the cardiac nurses (88%) had an average knowledge, 08% had a good knowledge and 04% had a poor knowledge regarding care of the patients with cardiac arrhythmias.

Level of association between the nurse's knowledge regarding care of the patients with cardiac arrhythmias with the selected demographic variables.

The study shows that there is a significant association between the knowledge regarding care of the patients with cardiac arrhythmias with the selected demographic variable such as professional qualification and years of experience. The rest demographic variables such as age, gender and exposure to in-service education have no association with the knowledge level of the nurses.

CONCLUSION

The study concluded that 4% of the cardiac nurses had poor knowledge, 88% of them had average knowledge, 8% had good knowledge and none of them were having very good knowledge regarding care of the patients with cardiac arrhythmias. Also there is a significant association between knowledge level of cardiac nurses regarding care of the patients with cardiac arrhythmias with the selected demographic variables such as profession qualification and years of experience and the rest variables had no association.

IMPLICATIONS OF THE STUDY

The findings of the study have implications for Nursing Education, Nursing Practice, Nursing Research and Nursing administration.

The findings of this study have scope in the following areas:

Nursing Education:

- The present study emphasis on the encouragement of staff nurses to undergo continuing nursing education program, specialized courses or training regarding cardiac diseases. There should be an ongoing feedback on the performance of the nurses giving care to the cardiac patients.
- The knowledge among student nurses should be disseminated through the emphasis on planned clinical teaching and the incidental teaching during their hospital postings in relation to the care of cardiac patients.

Nursing Practice:

The study shows varied degrees of knowledge

deficit among the cardiac nurses regarding the care of patients with cardiac arrhythmias.

- The study shows the need of correction of the knowledge deficiency among the nurses.
- Nurses working in cardiac hospital should be encouraged to have continuing education and also through in-service education and there competency has to be measured by performance appraisal.
- The study also highlights the need to develop protocols and nursing standards in caring the patients with cardiac emergencies.

Nursing Administration:

- Nursing administrator should be provided with manpower, money and material in planning and arranging educational sessions and workshops by subject experts to the nursing personnel to update their knowledge.
- The ward in charge should be encouraged to strengthen their supervising skills, which enable them to guide the new staff to have competent knowledge.
- The nursing superintendent should arrange for educational sessions and workshops by the subject expert.

Nursing Research:

- As research helps in broadening the nursing horizons, the present study has given the base to conduct the future quantitative and qualitative research on the knowledge of cardiac nurses regarding the care of the patients with cardiac arrhythmias.
- Use of research findings becomes a quality assurance evaluation tool to enhance individual performance as a whole.

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