A Study to Assess the Effectiveness of structured Teaching Programme on Knowledge of ‘Electrocardiogram’ among 2nd year B.Sc. Nursing Students in Selected Nursing College at Indore.

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Abstract- The study was conducted to assess the effectiveness of structured teaching programme on knowledge of ‘electrocardiogram’ among nursing students.

The study was conducted in Nursing college at Indore. Total samples were 30. Non probability purposive sampling technique was used. The research tool was developed in English after an extensive of literature and experts opinion. The structured questionnaire was used as an instrument to measure the level of knowledge of nursing students about ECG at Indore.

This study revealed that samples had poor knowledge (63%) and very few of them had good knowledge (7%) whereas the level of knowledge in very poor range is (30%). Moreover, there were no any single respondent set in excellent and very good category of knowledge.

Chi-square test was calculated to find out the association between the demographic variables and the level of knowledge regarding ECG among nursing students and it resulted there is association between the demographic variable e.g. age and exposure in assisting the investigative procedure and the level of knowledge.

Keywords- Effectiveness, ECG, Knowledge, STP, Nursing.

I. INTRODUCTION

Electrocardiography is the most commonly used diagnostic test in cardiology. If properly interpreted, it contributes significantly to the diagnosis and management of patients with cardiac disorders. Importantly, it is essential to the diagnosis of cardiac arrhythmias and the acute myocardial ischemic syndromes. These two conditions account for the majority of cardiac catastrophes. It is appropriately used as screening test in many circumstances. Basic knowledge of the ECG is usually the most difficult to assimilate, as it implies learning the basis of interpretation. With technological advances, changes in provision of healthcare services and increasing pressure on critical care services, ward patients’ severity of illness is ever increasing. As such, nurses need to develop their skills and knowledge to care for their client group. Competency in cardiac rhythm monitoring is beneficial to identify changes in cardiac status, assess response to treatment, diagnosis and postsurgical monitoring. Every nursing student, nurse or even resident doctor must be aware of the importance of correlating clinical findings after a complete examination with the ECG finding. A good basic ECG interpretation may rely on the ability to combine clinical skills with basic ECG interpretation. (Corabianpaul “Health Technology Assessment” 2012).

II. NEED FOR THE STUDY

Akhil.S.kumar (2010) A Pre – experimental to “effectiveness of structured teaching Programme on knowledge regarding interpretation of electrocardiogram 60 second year B.Sc Nursing students in N.D.R.K College of nursing, Hassan, Karnataka. Probability sampling – Simple random technique is used. But result there was not much difference in pre test and post tests score.

Woods LS (2006), The ECG is a graphic display of the electrical forces generated by the heart. The ECG is the gold standard for non invasive diagnosis of cardiac arrhythmias and conduction abnormalities and useful tool in evaluating the function of implanted devices such as pace – maker and implanted defibrillators. In 1902, a Dutch Physiologist, Willem Einthoven recorded the first ECG with his 270 kg machine, to string galvanometer for which he was awarded a Nobel Prize.

III. OBJECTIVES OF THE STUDY
To assess the Pre test knowledge regarding electrocardiogram among 2nd year B.Sc. Nursing students.

To assess the Post test knowledge regarding electrocardiogram among 2nd year B.Sc. Nursing students.

To assess the effectiveness of Structured Teaching Programme regarding electrocardiogram among 2nd year B.Sc. Nursing students.

To find the association between level of knowledge with selected socio-demographic variables.

IV. HYPOTHESES

- H1: There will be significant difference between the pre-test and post-test knowledge score on electrocardiogram among 2nd year B.Sc. Nursing students at the level of 0.05

- H2: There will be significant association between selected socio-demographic variables of Second year B.Sc. Nursing students and pre-test knowledge score on electrocardiogram.

V. MATERIAL AND METHODS

Research design: Pre experimental design

Setting: The study was conducted in selected nursing college at Indore

Population: The target population and the accessible population were same for the present study i.e. 2nd year B.Sc. Nursing students in an Indore Nursing college, Indore.

Sample: 30 samples

Sampling Technique: The Random purposive sampling technique

Data analysis: The demographic variables were organized by using descriptive measures (frequency and percentage). The association between the level of knowledge and the selected demographic variables were assessed by Chi-square test.

VI. RESULT & DISCUSSION

Majority of 2nd year B.Sc. Nursing students were females (53.33%) and minimal percentage of the sample were males (46.6%).

Second year B.Sc. Nursing students by their exposure in assisting the investigative procedure. They were assisted for electrocardiogram procedure (30%) followed by cardiac catheterization (30%). Echocardiogram (23.33%) and (16.66%) percentage of Second year B.Sc. Nursing students had not assisted for any procedure. It was inferred that some of Second year B.Sc. Nursing students had exposure in assisting electrocardiogram procedure.

| SR. NO. | DEMOGRAPHIC VARIABLES | CHARACTERISTICS | FREQUENCY (f) | PERCENTAGE (%) |
|---------|------------------------|-----------------|---------------|----------------|
| 1       | Age                    | Below 20        | 11            | 56.66          |
|         |                        | 21-22           | 10            | 63.33          |
|         |                        | 23-24           | -             | -              |
|         |                        | Above 24        | -             | -              |
| 2       | Sex                    | Male            | 14            | 46.66          |
|         |                        | Female          | 16            | 53.33          |
| 3       | Food habit             | Vegetarian      | 26            | 93.33          |
|         |                        | Non-vegetarian  | 2             | 6.66           |
| 4       | Religion               | Hindu           | 28            | 93.33          |
|         |                        | Muslim          | 1             | 3.33           |
|         |                        | Christian       | 1             | 3.33           |
|         |                        | Any other       | -             | -              |
| 5       | Exposure in assisting the investigative procedure | Electrocardiogram | 15 | 50 |
|         |                        | Cardiac catheterization | 1 | 3.33 |
|         |                        | Echocardiogram | -            | -              |
|         |                        | None of the above | 14 | 46.66 |
In this present study the mean and standard deviation in pre test assessment score was 7.93, (SD=3.12) and in post test assessment mean score was 23.8, (SD=3.08). The result shows that the STP is effective and helpful to raise the knowledge.

![ASSOCIATION BETWEEN PRE TEST AND POST TEST KNOWLEDGE SCORE](image)

In the association between socio-demographic variables and pre-test knowledge of Nursing students of 2nd year B.Sc.in relation to the age and exposure in assisting the Investigative procedure the chi-square value obtained 7.14 (P=0.028<0.05, df=2) and 15.2 (P=0.02<0.05, df=6) respectively which showed significance at p<0.05 levels.

VII. CONCLUSION

This study reveals that majority of the nursing students have adequate knowledge and regarding ECG after implementation of STP in Indore nursing college at Indore.

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