

# 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. (Corabianpaula “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 in the age group of below 20 years (53.33%) followed by 21-22 years (46.6%) and no one was above 22 years old.

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.

Table 1. Frequency & Percentage distribution of students by their demographic characteristics

SR. NO.	DEMOGRAPHIC VARIABLES	CHARACTERISTICS	FREQUENCY (f)	PERCENTAGE (%)
1	Age	Below 20	11	36.66
		21-22	19	63.33
		23-24	-	-
		Above 24	-	-
2	Sex	Male	14	46.66
		Female	16	53.33
3	Food habit	Vegetarian	28	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.

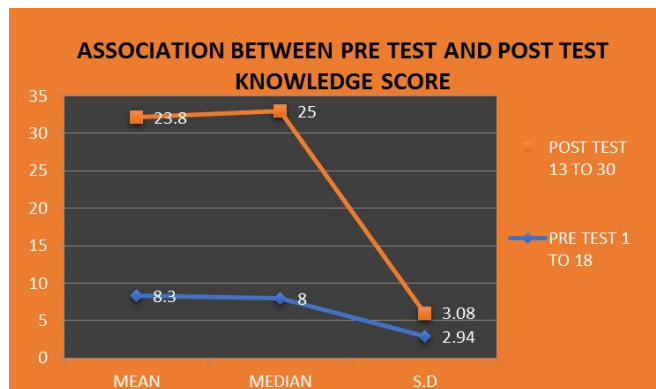


Figure 1.

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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