Effectiveness Of Interactional ECG Program On Knowledge Regarding Interpretation Of Normal And Abnormal ECG Among Nursing Students.

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Background:

Understanding and interpreting cardiac rhythms can prove to be more challenging than anticipated Basic ECG Interpretation (ECG) equips nurses with knowledge essential for quickly identifying potential cardiac threats and responding appropriately,which promotes optimal patient outcomes. Ideal for critical care nurses, cardiac technicians and other healthcare professionals working with monitored patients.

 About ECG:

- Provides detailed content on cardiac anatomy and physiology, ECG equipment, lead placement, ECG waveforms and intervals, dysrhythmia analysis and interpretation, and troubleshooting pacemakers.

- Uses interactive content, engaging exercises and illustrations to impart knowledge and teach students.

- Includes extensive rhythm strip identification practice to build competency.

- Features real-life case studies to deepen learner understanding and sharpen clinical skills.

- Breaks down dysrhythmia interpretation by key focus area and concludes with an assessment that demonstrates subject matter proficiency.

Used by hundreds of hospitals and nursing schools around the country, ECG is offered as a stand-alone course or can be combined with Essentials of Critical Care Orientation (ECCO) for a comprehensive introduction to high-acuity patient care.

Course Description

The course will provide the students a thorough understanding of the components of the ECG waveform, recognition and interpretation of cardiac rhythms, and diagnosing abnormal conditions using ECG patterns. Throughout the course, you will be provided self-assessment ECGs to practice your diagnostic skills. Able to identify cardiac arrest and begin with effective chest compression and artificial ventilation.

This course was conducted in college of nursing , Teerthanker Mahaveer university. The course duration is one day with 30 students in a batch and total 180 students, in the month of April 2019 we conducted 6 batches from B.Sc Nursing 2nd year, Post Basic B. Sc Nursing 1st year and 2nd year.

At this course, participants will learn to:

- Describe the Fundamentals of ECG

- Calculate the heart rate

- Outline the approach to rhythmn analysis, recognise the steps for rhythm interpretations

- Identify and interpret Sinus Rhythm

- Identify and interpret Sinus Arrhythmias

- Identify and interpret Atrial Arrhythmias

- Identify and interpret Ventricular Arrhythmias

- Identify and interpret Heart Blocks

- Able to identify cardiac arrest and begins chain of survival

- Demonstrate effective chest compression and followed b breathing.

Frequency and percentage of Student category according to their class

| Sr. No.	Class	Frequency (F)	Percentage (%)
1	B. Sc nursing 2 year	120	66.66
2	Post Basic B. Sc 1st year	30	16.66
3	Post Basic B. Sc 2nd year	30	16.66
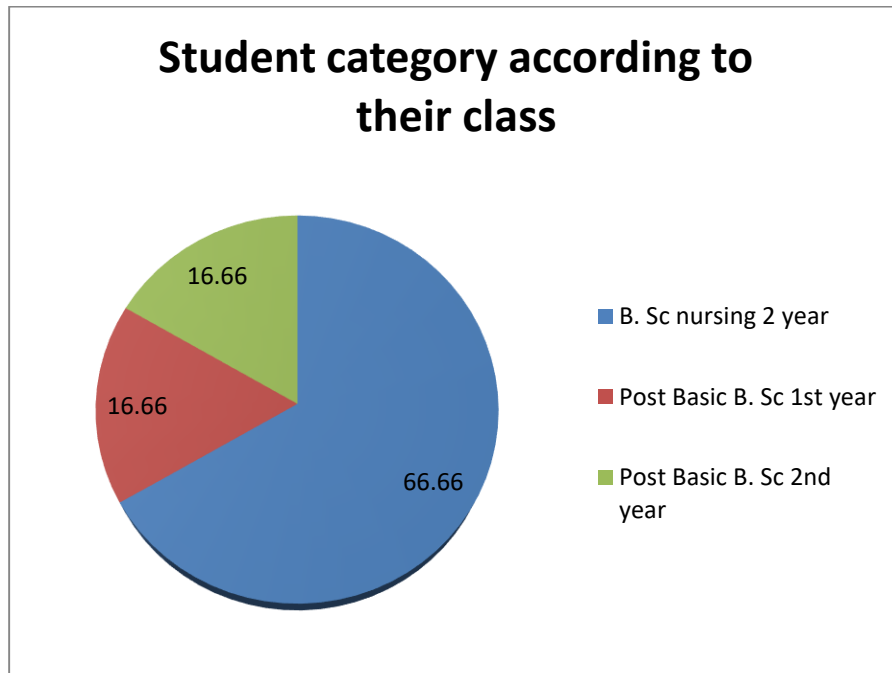
According to Student category according to their class shows that majority of 66.66% of students were BSc Nursing 2nd year and 16.66% were in both the classes of PBBSc 1st year and PBBSc 2nd year.

Assessment of Knowledge before course regarding ECG among nursing students.

N=150

| Sr. No	Criterion	Range of score	Pre test knowledge	
			Frequency	**percentage**
1	Poor knowledge	0 to 7	160	88.89
2	Average knowledge	8 to 14	20	11.11
3	Good knowledge	15 to 30	0	0.00

Pre test Level of Knowledge
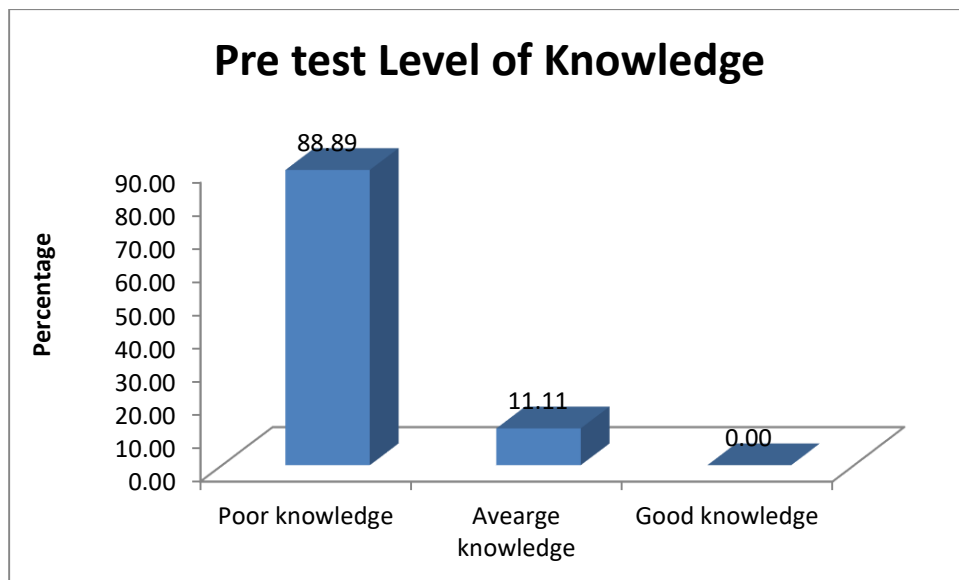
Above table depicts that pre test level of knowledge regarding ECG among nursing students. The result shows that, 88.89% of the nursing students had poor knowledge, followed by 11.11% of the nursing students had Average knowledge and none of nursing students had good knowledge.

Assessment of Knowledge after course regarding ECG among nursing students.

N=180

Sr. No	Criterion	Range of score	Post test knowledge	
			Frequency	**Percentage**
1	Poor knowledge	0 to 7	1	0.56
2	Average knowledge	8 to 14	22	12.22
3	Good knowledge	15 to 30	157	87.22

Post test Level of Knowledge
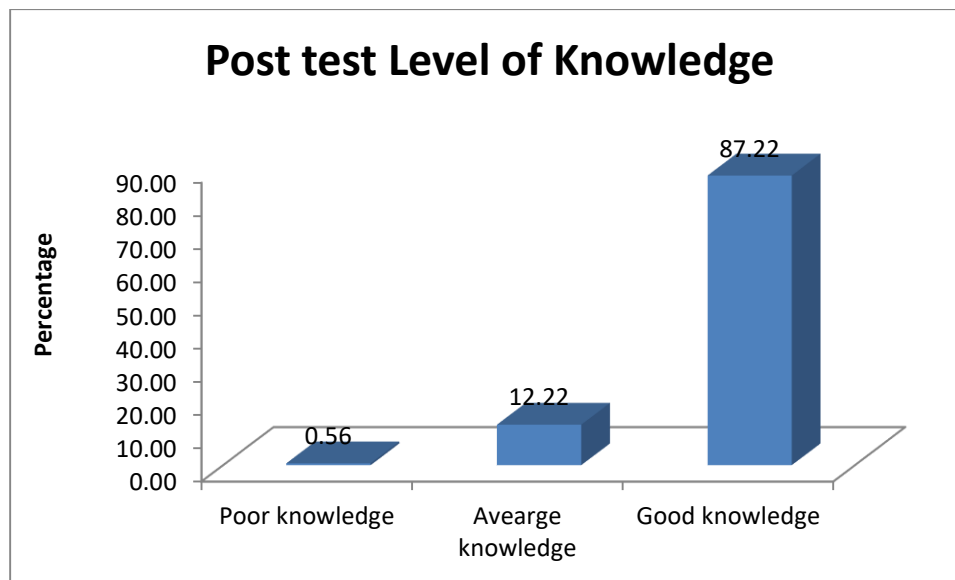
Above table depicts that post test level of knowledge regarding ECG among nursing students. The result shows that, 87.22% of the nursing students had good knowledge, followed by 12.22% of the nursing students had Average knowledge and 0.56% of nursing students had poor knowledge.

Assessment of effectiveness of ECG Course among nursing students

N=180

Sr. No	Group	Mean	Standard deviation	Mean %	Unpaired t test	P value
1	Pre test	4.98	1.96	16.61	64.107	0.000*
2	Post test	16.68	2.09	55.59		

* Significant at the level of p 0.05.

Table shows that comparison between pre and post test knowledge score regarding ECG among nursing students. In pre test Mean found to be 4.98, stander deviation is 1.96 and in post test Mean found to be 16.68, stander deviation is 2.09 and paired t test value found to be 64.107*. which is significant difference between pre and post mean scores.

Conclusion: one day interaction ECG program helps nursing students gain new knowledge and skill regarding interpretation of ECG. The most effective training also helps nursing students apply this information to their hospital workplace.