

## **A qualitative study on negative attitude toward electrocardiogram learning among undergraduate medical students**

### **ABSTRACT**

Negative affect state toward learning has a substantial impact on the learning process, academic performance, and practice of a particular subject, but such attitude toward electrocardiogram (ECG) learning has still received relatively little attention in medical education research. In spite of the significant emphasis in investigating ECG teaching method, the educators would not be able to address ECG incompetency without understanding the negative perception and attitude toward ECG learning. The purpose of this study was to assess the undergraduate students' difficulties in ECG learning and hence help educators design appropriate ECG learning curriculum to instill competent skill in ECG interpretation based on this outcome. **Materials and Methods:** A total of 324 undergraduate preclinical (year 2) and clinical (year 3–5) medical students participated in this study. The research design used thematic analysis of an open-ended questionnaire to analyze the qualitative data. **Results:** The thematic analysis detected five major emergent themes: lack of remembering (18.2%), lack of understanding (28.4%), difficulty in applying (3.6%), difficulty in analysis (15.1%), and difficulty in interpretation (17.8%), of which addressing these challenges could be taken as a foundation step upon which medical educators put an emphasis on in order to improve ECG teaching and learning. **Conclusion:** Negative attitude toward ECG learning poses a serious threat to acquire competency in ECG interpretation skill. The concept of student's memorizing ECG is not a correct approach; instead, understanding the concept and vector analysis is an elementary key for mastering ECG interpretation skill. The finding of this study sheds light into a better understanding of medical students' deficient points of ECG learning in parallel with taxonomy of cognitive domain and enables the medical teachers to come up with effective and innovative strategies for innovative ECG learning in an undergraduate medical curriculum.