Original Article

Nurses' knowledge about electrocardiogram interpretation: A cross-sectional study

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Objective: To determine the level of nurses' knowledge about electrocardiograms.
Methodology: This cross-sectional design study was conducted from November 2022 and March 2023. It included 100 nurses who were working in Al-Fayhaa Hospital and the Basrah Teaching Hospital. The competence of nurses was assessed using a standardized questionnaire that was developed and distributed to the respondents involved. The data collected were analyzed using SPSS version 26.
Results: Nearly to half of nurses had fair understanding regarding ECG interpretation, while one third of study participants had good knowledge.
Conclusion: Most nurses have a solid understanding of ECG interpretation.
Keywords: Nurses, knowledge, electrocardiogram interpretation.

INTRODUCTION

Cardiovascular disease (CVD) was the main cause of 32% fatalities in 2016.[1] The right step to reduce the death rate is early detection of heart disease.[2] The electrical and muscular activities of the heart are assessed using an electrocardiogram (ECG). This allows professionals to evaluate risks and symptoms and is the initial diagnostic tool for chest discomfort. It gives information on diagnosis of acute coronary syndromes and arrhythmias.[3,4] All hospital departments must record ECGs because they aid in the diagnosis of cardiac diseases.[5]

Since nurses make up most the hospital's medical staff and deal with patients often, their expertise in applying and interpreting ECGs is highly valued in their capacity as members of the emergency services team.[4] Analysis, interpretation, and mastery of clinical symptoms and diagnostic techniques in the setting of CVD require significant emphasis in nursing education.[6] The nurse must be knowledgeable about ECG equipment and record important and life-threatening arrhythmias, and respond properly.[7]

Studying ECG in the nursing is extremely challenging due to a lack of study time, complex instructional material, and inadequate fundamental understanding of ECG theory. Nurse practitioners who had received adequate training were proficient at interpreting ECGs and potentially dangerous problems.[8] The aim of this study was to determine the level of nurses' knowledge about ECG.

METHODOLOGY

This descriptive study took place from November 2022 and March 2023 at Al-Fayhaa and Al-Basrah Teaching Hospitals, Iraq. Official approval was acquired from the Basrah Health Office administration and all participants gave an informed consent.

The study included 100 nurses from these hospitals. Inclusion criteria include male and female nurses, nurses from the age of 20 years and over, and all nurses who agree to participate in the study.

We used a questionnaire consisting of two parts. Part one: socio-demographic data (gender, age, years of work experience, level of education, previous ECG training course, unit of work, and source of ECG information) and Part two: (nurses' knowledge of ECG). This part included 18 items representing nurses' information related to ECG.

Statistical Analysis: The data were analyzed through descriptive data analysis and inferential data analysis using SPSS version 26. $p<0.05$ was considered significant.

RESULTS

Most nurses (65.0%) were between the ages of 20 and 25 years. There were 55.0% males, 63.0% had bachelor's degrees, and 90.0% had experience of between one and five years (Table 1). Most nurses (37.0%) worked in the emergency unit, and 83.0% had previously completed an ECG training course.

The nurse's understanding of the ECG is displayed in Table 2. According to the mean score, the study sample's findings indicated that nurses possess a high level of knowledge.