

# **Nurses' Perception and Barriers as Regarding Cardiopulmonary Resuscitation**

**Thesis**

Submitted for Partial Fulfillment of the Master Degree in Medical  
Surgical Nursing (Critical Care Nursing)

**By**

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## *List of Abbreviations*

<b>AHA</b>	: American Heart Association .
<b>AED</b>	: Automated External Defibrillator .
<b>ALS</b>	: Advanced Life Support.
<b>AIDS</b>	: Acquired Immune Deficiency Disease.
<b>BLS</b>	: Basic Life Support.
<b>CPR</b>	: Cardiopulmonary Resuscitation.
<b>CAB</b>	: Circulation, Airway, Breathing.
<b>CCU</b>	: Critical care units.
<b>CA</b>	: Cardiac Arrest.
<b>CPA</b>	: Cardiopulmonary Arrest.
<b>ECG</b>	: Electrocardiogram .
<b>ICU</b>	: Intensive Care Unit.
<b>LOC</b>	: Level of Conscious.
<b>MCQs</b>	: Multiple choice questions.
<b>MI</b>	: Myocardial Infarction
<b>PEA</b>	: Pulseless Electrical Activity.
<b>SCA</b>	: Sudden Cardiac Arrest .
<b>VF</b>	: Ventricular Fibrillation .
<b>VT</b>	: Ventricular Tachycardia.
<b>WHO</b>	: World Health Organization.

## **ABSTRACT**

Cardiopulmonary resuscitation (CPR) is one of the most evolving areas of modern medicine which comprises a series of lifesaving actions that improve the survival rates following cardiac arrest. **Aim of the study:** to assess nurses' perception and barriers regarding cardiopulmonary resuscitation technique. **Design:** A descriptive exploratory design was utilized. **Setting:** The study was carried out in critical care unit (ICU & CCU) at El- Fayoum University Hospital. **Study subjects:** Convenient sample of all available nurses (n=40) were included in the study. **Data collection tools:** Data were obtained through demographic data tool, nurses' knowledge questionnaire, nurses' observational checklist, factors affecting nurses' perception questionnaire and barriers affecting nurse's perception questionnaire. **Results:** Three quarter of the study nurses had unsatisfactory knowledge and more than half of them had incompetent level of practice regarding CPR. There were many barriers affecting nurses' perception as; nurses' related barriers, health setting related barriers and patients' related barriers. There was statistically significant difference between factors affecting the nurses' perception, level of knowledge and practice regarding CPR and study subjects' demographic characteristics. **Recommendations:** Designing in-service training and educational program to improve nurses' knowledge and practice regarding CPR.

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**Keywords:** Knowledge, Practice, perception, cardiopulmonary resuscitation.



## INTRODUCTION

Perception has been defined as the positive or negative beliefs, opinions, experiences or feelings of .It also refers to a way understanding, interpreting, experiencing or conceptualizing something. It is the conscious recognition and interpretation of sensory stimuli through unconscious associations (and especially through memory) that serves as a basis for understanding, learning, knowing or the motivation of a particular action or reaction (**Maryle, Cooper, Simon 2010**).

Cardiac arrest is the cessation of the circulating blood flow, which halts oxygen delivery to the tissues. Many cardiac arrests caused by dysrhythmias may include electrolytes disturbances, heart damage and certain prescribed or recreational medications. Lethal dysrhythmias include ventricular tachycardia (VT) and ventricular fibrillation (VF) may require electrical shock for treatment (**Potter, Perry, 2012**).

Cardiopulmonary Resuscitation (CPR) is a critical component of basic life support and the established first line before advanced life support. CPR as a potential life saver is

associated with survival and has the potential to prevent sudden death. The American Heart Association (AHA) resuscitation guidelines recommended that all hospital staff who are in contact with the patients should have regular resuscitation training. The quality of cardiopulmonary resuscitation has a direct impact on victims' chance of survival (**Baksha, 2010**).

Basic life support (BLS) is the foundation for saving lives following cardiac arrest. Fundamental aspects of BLS include immediate recognition of sudden cardiac arrest (SCA) and activation of the emergency response system, early CPR and rapid defibrillation with an automated external defibrillator. The CAB of basic life support is, circulation, airway and breathing. Breathing is achieved by mouth-to-mouth resuscitation. Circulation involves closed-chest cardiac massage. Circulation is the heart of basic life support (**American Heart Association, 2014**).

The World Health Organization (WHO) estimates that 17 million people died in 2010 from cardiopulmonary diseases, which are consequently classified as the leading causes of death among all non-communicable diseases. Cardiovascular disease is the leading global cause of death,

accounting for 17.3 million deaths per year, a number that is expected to grow to more than 23.6 million by 2030 (El-Meanawi, 2015).

Lack of competency and skills retention is relevant because nurses may have poor retention of cardiac rhythm recognition and this can delay defibrillation if they are not recognizing the rhythms in a timely manner. What is particularly relevant to consider is nurses' attitudes and perceptions of their ability to deploy their CPR skills. The reason for this is that the likelihood of a nurse initiating CPR when they are an in hospital first responder appears to be influenced by their perception and attitudes towards their ability to carry out basic life support actions (Heber, 2017).

A barrier is defined as one of those factors and elements that block or obstruct or hinder proficiency in CPR and the effective performance of CPR by nurses. Numerous publications and surveys have identified consistent barriers to the practice of advanced skills like defibrillation, Inadequate resources, facilities by the healthcare system, Inadequate knowledge, skills, motivation, attitudes, lack of confidence, fear of incurring litigation, harming the patient or themselves, perceived difficulty in interpreting

electrocardiograph rhythms, entrenched supportive role of nurses in resuscitation and the lack of practicing privilege by the policy maker strategies **(Heng, Fong, Weef, 2011)**.

Nurses need to be aware of their important role in preventing morbidity and mortality that may caused by CPR in their work environment. Empowering nurses with knowledge and skills is very important to increase their decision making ability in the workplace as well as to provide patients with the best standard of care possible **(Ribeiro, 2010)**.

### **Significance of the study:**

Sudden cardiac arrest is associated with a high rate of morbidity, accounting for over 300,000 deaths annually. It is estimated that the morbidity rate in Egypt as result of cardiovascular diseases (5.6%) and by 2015 over million people will suffer serious cardiac arrest in Egypt. It has been documented that 33% to 40% of cardiac arrests in developed countries occur in the hospital setting, and of the arrests that occur in the hospital setting more than 60% are first recognized by nurses **(Saied, 2012)**.

At El-Fayoum university hospital nurses' doesn't have any training program or simulations as regards to BLS technique since five years ago. At El-Fayoum General Hospital statistical office reported that, the incidence of mortality rate were 249.606 and the liable cases for cardiac arrest were 1240 in 2014 (**Statistical Office of El-Fayoum General Hospital, 2014**).

## **AIM OF THE STUDY**

### **The aim of this study to:**

Assess the nurses' perception and barriers regarding cardiopulmonary resuscitation technique.

### **This aim will achieve through the following:**

1. Assessing nurses' knowledge regarding cardiopulmonary resuscitation (basic life support technique).
2. Assessing nurses' practice regarding to cardiopulmonary resuscitation (basic life support technique).
3. Identify the factors affecting nurses' behavior regarding to cardiopulmonary resuscitation (basic life support technique).
4. Identify barriers affecting nurses' performance of CPR.

### **Research questions:**

1. What is nurses' level of knowledge regarding cardiopulmonary resuscitation (basic life support technique)?

2. What is the nurses' practice regarding cardiopulmonary resuscitation (basic life support technique)?
3. What are the factors affecting nurses' behavior regarding cardiopulmonary resuscitation (basic life support technique)?
4. What are the barriers affecting nurses' performance of CPR?