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Knowledge And Self Efficiency Of Nurses Regarding Early Initiation Of Cardiopulmonary Resuscitation In Selected Hospital In Alqundah Region

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ABSTRACT

This study aimed to study the nurses knowledge and self-efficacy about the cardiopulmonary resuscitation at Al-Qunfudhah region, KSA. Knowledge is defined as the understanding, skill development, Apprehension, expertise enhancement, proficiency and realization regarding the Scenario, construct, event, or any other situation.

Objective: This research aimed to assess the relationship between nurses' knowledge and self-efficacy regarding the early initiation of CPR and automated defibrillation of cardiac arrest patients.

Methods: The study measured the nurse's knowledge regarding cardiopulmonary resuscitation, the adopted scale is consisting of 20 items with four-point response option with 5 subscales. Descriptive statistics and Pearson correlation used for data analysis.

Results: Overall, the study sample showed very low knowledge regarding early initiation of CPR, compared to very high incorrect answer. Moreover, the participant respond (0.0%) for high score of knowledge.

Conclusion: It is important for the nurses to be at a high level of skill and knowledge in this field. Because increasing levels of knowledge of nursing staff will support their own effectiveness.

Introduction

Background:

Heart is the vital and involuntary organ of a living being. This not only pumps the blood to all over the body through the circulatory system but also involves various bodily mechanisms that are involved in the dynamic movement of the lifeline. While this is a leading cause of disease in the world. As 70% cases happened before or outside of the hospitals. (Ponnusamy et al., 2019). Variety of heart health mechanism such as cardiopulmonary resuscitation (CPR) are considered as vital and important for human life to save him from various deadly heart diseases that lead to eventual death (Barker et al., 2020). Cardiopulmonary resuscitation is also known as a technique for life saving purposes that is operational use in the various emergency situations when there is no chance of recovery or limited feed from the heart. In this mechanism when the patient's heartbeat and breathing rate is about to nearly stop or stop because of cardiovascular issues or respiratory deformities. The process of CPR based on the abbreviated factors of C-A-B which they noted that C stands for compression, A stands for air pathway and B stands for breathing process. This is a

systematic process that helps in the maintenance of breath and cardiovascular activities (Stroop et al., 2020). In Saudi Ariba , Jeddah the positive relationship defined aexcessive level of self-efficacy if there has been excessive degree of knowledge .hence ,it is far endorsed that nursing application practice CPR and automatic defibrillation curricula at some point of nurse internships , clear regulations and processes about CPR and automated defibrillation , chronic updates approximately CPR and automated defibrillation , and know how and continuance (on-task-training) about CPR , that could decorate and enhance information and self efficacy among fitness care people , specifically for nurse (Alaryani, Alhofaian et al., 2021)

Rational: The rationale of this study is to monitor and measure the knowledge of nurses regarding the CPR strategy usage. also ponders upon the notion related to the self-efficacy of the nurses regarding the CPR usage technique (Twohig et al., 2019). Therefore, the research will address the knowledge of the nurses in Selected Hospital in Al-Qunfudhah region.

Hypothesis:
Different hypotheses will be tested in the ongoing study:
1. Nurses good knowledge and self-efficacy of nurses regarding early initiation of cardiopulmonary resuscitation at Al-Qunfudhah region, KSA.
2. Nurses poor knowledge and self-efficacy regarding initiation of cardiopulmonary resuscitation at Al-Qunfudhah region, KSA.

Objectives

General Objective
To study the nurses knowledge and self-efficacy about the cardiopulmonary resuscitation at Al-Qunfudhah region, KSA .

Specific Objectives
1- To determine the level of knowledge of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA.
2- To correlate the nurses knowledge with demographic variable.

The study questions:
1. What is the level of knowledge of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA?.
2- What is relation between the nurses' knowledge and with demographic variable?

LITERATURE REVIEW
Cardio-pulmonary issues are usually generated by a various factor that leads to the deterioration of health and elevates the risk of individual mortality. Uses of the key factors and their resources regarding the health care services which established the individual care as well as the concern regarding the human and its comparative nature treatment (Khashaba et al., 2021).

Therefore, it is important to understand that the nurse’s efficacy and knowledge regarding the various substances and the medical techniques require certain interventions in order to facilitate the patient was at their emergency period. The national of current research and the construction of the literature depends upon the efficacy and the knowledge among the nursing profession regarding cardiopulmonary resuscitation which emphasizes individual quality and productive healthcare management (Aljohani, 2020).

For this concern variety of resources has been done regarding cardiopulmonary resuscitation which focuses on individual care and concern based on nursing care. Research is also emphasized on the development of the key and the core computer and characteristics regarding the individual self and nursing care (Brown et al., 2020).

The research was conducted on the ability to pilot randomization centroid trials regarding the various exercises and the cognitive triad based on the impairment in the primary care center which emphasized cardiopulmonary resuscitation. Cardiopulmonary disease resuscitation is the

most important taken and dilemma in reducing the mortality rate among emergency patients and patients who required support (Xu et al., 2020).

Whereas conducted research on advanced cardiac life supports knowledge and skills among the emergency department nurses regarding the residency program. Advance cardiogenic help support is important in the time of critical scenarios very aware that health is an important topic. Nurses are well equipped and identify the main and the virtual assistance regarding the resuscitation among these patients (Campbell & Clark, 2020).

Moreover, other research was conducted on the validation process of the development of pulmonary nurse's intervention based on cardiopulmonary resuscitation suggesting that the patient was suffering from an intensive and biological condition in the intensive care unit. Reporting that the patient is a vulnerable condition associated with the individual capacity to the health iteration and wearing process (Vincelette et al., 2019).

Moreover, another research on virtual reality stimulation regarding the training of cardiopulmonary resuscitation after the intervention of invasion invasive technique of cardiac surgery. Finding validate the content and the face validity of this research suggests that the resuscitation among patients regarding cardiac pulmonary intensive care is an important mechanism that is invasive and highly (Sadeghi et al., 2022).

Vincelette et al. (2019), another research was conducted relying on the organization of ventricular fibrillation which is the initiation of the cardiopulmonary elicitation which involves intensive care unit nursing. Findings indicate that intensive care requires an extensive amount of capacity and attitude proactive attitude of the workers in order to prevent and provide basic and necessary help aid to the patient.

Moreover, another research and the effectiveness of the simulation-based cardiopulmonary acceleration utilizing the various train in mechanism and the nursing education based on the fourth for your business and degree. Findings indicate that nurses were dealing with such individualized care and concern require an appropriate amount of health care concern it is necessary to deal with individual care (Demirtas et al., 2021).

Moreover, the effective structural team nursing model as an epic 80 and the quality of the cardio-pulmonary assessment regarding the resuscitation. This also stated that the myocardial infarction is the preliminary and underlying cause in this case. Patients with these cardio-pulmonary issues usually required clinical nursing intervention which is based on their efficacy in providing healthcare intervention to every patient equally (Li et al., 2019).

A similar assessment of the cardiovascular diseases research to nation knowledge, experiences, and expectations regarding the emergency department nursing based on the pre and post-analysis of the course Egypt suggested that the assessment of the patient with the cardiopulmonary resuscitation depends upon the nursing own knowledge and competency development for the health care promotion and prevention. This will enhance is the capacity and capability of the nurses to work upon the various perspective and figures for better healthcare mechanisms (Albach et al., 2019).

Another research on the safety security and the mobilization of the patient regarding the treatment of cardiopulmonary arrest. Indicating that the patient was suffering from these health-related issues requires highly activated in motivated nurses to perform healthcare services (Pepera et al., 2019).

Moreover, another research on the knowledge competency regarding cardiopulmonary resuscitation among the student staff north region of the kingdom of Saudi Arabia suggested that the student is vulnerable to health care conditions that emphasize productive management and healthcare interventions, therefore, it is important to establish knowledge and competency development regarding the patient care services, especially in the acute and chronic conditions (Owaid Alsharari et al., 2018).

Hence another research on the prevalence and outcome of the sudden intervention that results in the University of the Western region of Saudi Arabia. research indicates that nursing students usually required knowledge and competency, therefore, it is important for them to develop self-efficacy and self-Vigilance for individual-centered care and community-based healthcare services (Alzahrani et al., 2019).

Therefore, other research was conducted on the Interventional association based on cardiopulmonary arrest and assessment regarding individual-centered care. therefore, the overhaul requires nursing care based on the previously identified Strategies and technique that insists the patient upon Healthcare prevention (Bakhsh et al., 2021).

THE RESEARCH METHODS

A. Study design: This research will be purely quantitative in nature by using cross sectional descriptive hospital -based research design .

B. Study setting: The current study there will be conducted in two hospitals . These two hospitals are among best and large hospitals of the region as 150 bed capacity in Al Qunfudhah general hospital with 230 number of staff nurses , South Al-Qunfudhah Hospital is 100 bed capacity with 180 nurses .

Study population: South Al-Qunfudhah Hospital with 180 nurses and Al Qunfudhah General Hospital has 230 nurses.

Inclusion and Exclusion Criteria: Male and female saudi and non saudi nurses will be included

Exclusion: Student and nursing aid will be excluded .C. **Sample size and Sampling technique**: Probability cluster sampling technique will be used on the targeted population of 410 nurses in both hospitals. By using the following formula and setting up 5% confidence of interval, the estimated sample size will be as 199 on the population size of 410 nurses . Sample size from Al Qunfudhah General Hospital is =112 **.** Sample size from South Al-Qunfudhah Hospital is =87

E. **Data collection technique** In this research data will be collected by survey method F**. Data collection tools:** To collect data from the study participants, standardized questionnaire will be used to collect , it consists of the following parts: .

1. Demographic data sheet This part will include basic demographical information by the participant. Such as: gender, age, working department, clinical working experience .

2. Questionnaire on Nurses knowledge regarding CPR . To measure the nurse's knowledge regarding cardiopulmonary resuscitation, the adopted scale is consisting of 20 items with four-point response option with 5 subscales. (Sánchez-García et al., 2015),

3. Resuscitation Self-efficacy Scale: To measure the self-efficacy of the study participants, Resuscitation Self-efficacy Scale will be used. This scale having 17 items with 5-point response option . (Roh et al., 2012)

Table (3-1): Reliability analysis - Cronbach's Alpha for nurses' knowledge regarding CPR

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1-To apply basic high-quality CPR, according to the new recommendation nurses should:	6.11	5.828	0.071	**0.776**
2. What is the correct sequence of the BLS steps, according to the 2010 AHA guidelines	6.28	5.462	0.110	**0.723**
3. What mistake is common and sometimes deadly during the treatment of cardiac arrest?	6.00	5.025	0.285	**0.667**
4. What action is part of high-quality chest compressions?	6.28	5.584	0.054	**0.739**
5. What is the situation that best describes electric activity without pulse?	6.29	5.966	0.120	**0.784**
6. Which is the best strategy to perform high-quality CPR on a patient with an advanced device for the airway?	6.48	5.721	0.075	**0.733**

7. Using capnography in intubated patients...	6.37	5.835	0.046	**0.761**
8. What practice is safe and effective in the defibrillation sequence?	6.34	5.837	0.053	**0.764**
9. What medication and in what dosage is it recommended to treat a patient with persistent ventricular fibrillation?	6.06	4.781	0.399	**0.628**
10. What is the appropriate interval to interrupt chest compressions?	6.04	4.933	0.325	**0.653**
11. What action improves the quality of chest compressions administered during a reanimation attempt?	6.03	4.869	0.357	**0.643**
12. Which is the adequate ventilation strategy for an adult with respiratory arrest and pulse frequency of 80 bpm?	6.26	5.543	0.067	**0.735**
13. A patient with respiratory insufficiency is apneic but continues having a strong pulse. Cardiac frequency drops suddenly to 30 bpm.	6.33	5.562	0.078	**0.732**
14. What rhythm requires synchronized cardioversion?	6.14	5.000	0.297	**0.663**
15. Which tends to be the range of PETCO2 target values after cardiac arrest when ventilating a patient in whom we achieve return of spontaneous circulation (RSC)?	6.04	5.308	0.151	**0.710**
16. What is the most reliable method to confirm and monitor the correct location of an endotracheal tube?	6.32	5.708	0.004	**0.751**
17. If we have a manual defibrillator monitor, the initial monitoring of cardiac activity in a patient who has just had CRA witnessed must be performed in the following manner:	6.43	5.966	0.107	**0.770**
18. Regarding CPR maneuvers, indicate the incorrect response:	6.24	5.775	0.040	**0.765**
19. You are caring for a person in CRA. Upon the rhythm observed on the monitor you doubt between VF and asystole. Indicate the correct action.	6.39	6.169	0.214	**0.797**
20. We are upon a woman 8-months pregnant in CRA and ventricular fibrillation, what action should we take?	6.42	5.435	0.206	**0.704**

Table (3-2): overall Cronbach's Alpha

Reliability Statistics		
Respondent	**N of Items**	**Cronbach's Alpha**
201	**20**	**0.740**

The table (3-1) & (3-2), illustrate the values of the Cronbach alpha coefficient indicate the possibility & the stability of the results that can be obtained from the study when actually used for the researcher's final study since all of the Cronbach alpha coefficient were very good values, that ranging from (0.628) as a minimum value, to (0.797) as a maximum value, while the overall Cronbach's Alpha was (0.740), which very good values.

PEARSON'S CORRELATIONS:

Table (3-3): Pearson Correlation for Nurses' Cardiopulmonary resuscitation knowledge; June 2022

Items	Pearson Correlation
1-To apply basic high-quality CPR, according to the new recommendation nurses should:	**0.235***
2. What is the correct sequence of the BLS steps, according to the 2010 AHA guidelines	**0.294****
3. What mistake is common and sometimes deadly during the treatment of cardiac arrest?	**0.467****
4. What action is part of high-quality chest compressions?	**0.239****
5. What is the situation that best describes electric activity without pulse?	**0.266***
6. Which is the best strategy to perform high-quality CPR on a patient with an advanced device for the airway?	**0.292****
7. Using capnography in intubated patients...	**0.319****
8. What practice is safe and effective in the defibrillation sequence?	**0.221***
9. What medication and in what dosage is it recommended to treat a patient with persistent ventricular fibrillation?	**0.565****
10. What is the appropriate interval to interrupt chest compressions?	**0.503****
11. What action improves the quality of chest compressions administered during a reanimation attempt?	**0.530****
12. Which is the adequate ventilation strategy for an adult with respiratory arrest and pulse frequency of 80 bpm?	**0.256****
13. A patient with respiratory insufficiency is apneic but continues having a strong pulse. Cardiac frequency drops suddenly to 30 bpm. Which intervention has the highest priority?	**0.253****
14. What rhythm requires synchronized cardioversion?	**0.477****
15. Which tends to be the range of PETCO2 target values after cardiac arrest when ventilating a patient in whom we achieve return of spontaneous circulation (RSC)?	**0.349****
16. What is the most reliable method to confirm and monitor the correct location of an endotracheal tube?	**0.183****
17. If we have a manual defibrillator monitor, the initial monitoring of cardiac activity in a patient who has just had CRA witnessed must be performed in the following manner:	**0.337***
18. Regarding CPR maneuvers, indicate the incorrect response:	**0.154***
19. You are caring for a person in CRA. Upon the rhythm observed on the monitor you doubt between VF and asystole. Indicate the correct action.	**0.459***
20. We are upon a woman 8-months pregnant in CRA and ventricular fibrillation, what action should we take?	**0.345****

****. Correlation is significant at the 0.01 level (2-tailed).**
***. Correlation is significant at the 0.05 level (2-tailed).**
As indicated in table mentioned above; table (3-3) indicate the consistency structural by calculating the correlation coefficient. Here "Pearson`s Correlation to know the validity of procedure of

identifying where the calculated correlation between the degree of each items expressions. The tables indicated that the correlation coefficient between each of the item is statistically significant at the level of (0.01) & (0.05). The items are correlated with the total items, which indicating the validity & internal consistency between each of the statements in the subscale knowledge and the rest of the total statements, which will explain the internal consistency and constructive reliability for the study tool, that was intended to measure.

Data processing and management The data will be collected from the two nursing hospitals of Al-Qunfudhah Region. And the present questionnaire will be given to the participants to mark their responses for that process of the study . Data will be analyzed using the SPSS version 26. Various analyses will be run to formulate the answers regarding the research questions.

J. Ethical consideration According to the type of research, which is quantitative research, will consider some ethical consideration. Ethical approval will be obtained from Hafr albatin university. Moreover, Ethical approval will be obtained from the Institute of Research Board (IRB).

K. Expected outcome (out puts): Will provide answers to the research questions. While expected outcomes will be helpful for nursing education, training and development as well will be helpful for the healthcare authorities to make policies regarding nursing management and care policies.

L. Plan for disseminating the research results: The results of ongoing research will be helpful to understand the importance and contribution of demographical variables regarding nursing practices, training and education in the cardiac care and treatment process in the clinical settings. Similarly nursing level of knowledge and self-efficacy information will be disseminate to the healthcare authorities. While moving towards the KSA's health vision 2030, nursing level of knowledge and practices can help to achieve objectives and guide to the right root map of planning, management and initiating health reforms.

Table (3-4) Coding of the Scale Nurses' Knowledge for SPSS Analysis

The code	Choice	The mean value (Range)
0	Incorrect answer	1.0 to > 1.50
1	Correct answer	1.50 to 2.00

Statistical Methods Used:

The researcher used different statistical methods in presenting the data to achieve the research questions & objectives; A statistical package for social sciences (SPSS) version (26) used for data analysis. Been using a number of quantitative and statistical methods appropriate and in accordance with the nature of the study hypothesis & questions and measure the overall level of the study to describe and evaluate the accuracy of data on the study groups' answers that was indicated on two levels:

DATA ANALYSIS AND INTERPRET OF RESULTS

First: Demographic data:

This study aimed to identify the nurses' knowledge and self-efficacy about the cardiopulmonary resuscitation at Al-Qunfudhah region, KSA. It also aimed to determine the level of knowledge and self-efficacy of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA. Also to correlate the nurses knowledge and self efficacy with demographic variable.

The total sample was (201) nurses who worked in selected hospital; a sample from Al Qunfudhah General Hospital & from South Al-Qunfudhah Hospital. Table (4-1) shows the demographic characteristics of the nurses.

This study is based on a number of independent variables related to the personal and occupational characteristics of the study sample, members represented in (hospital name - age - educational level - years of experience – participation in continuous education). In light of these variables, the characteristics of the study sample members can be determined as follows:

Table No. (4-1): Characteristics of the sample according to socio-demographic variables; June 2022

Variable		Frequency (N = 201)	Percent (100%)
Hospital Name	Al Qunfudhah General Hospital	114	56.7%
	South Al-Qunfudhah hospital	87	43.3%
age group	24 and less than 30 years	33	16.4%
	30 and less than 40 years	140	69.6%
	40 and less than 50 years	20	10.0%
	50 years and more	8	4.0%
Educational Level	Diploma in Nursing Graduate	34	16.9%
	Bachelorette in Nursing Graduate	147	73.1%
	Masters in nursing graduate	20	10.0%
Years of Experiences	1-5 years	63	31.3%
	6-10 years	58	28.9%
	11-15 years	53	26.4%
	16-over years	27	13.4%
Participating in continuous education	Never	20	10.0%
	Sometimes	113	56.2%
	Always	68	33.8%

Mean age = ± 34 years min. age 24 years max. age 62 years

It is clear from Table (4-1) which ilustrate the distribution of the study sample according to the demographic variables; So according to the hospital name variable, we find that (114) of the study sample represent (56.7%) of the total study sample, working in Al Qunfudhah General Hospital, and they are the largest group of the study sample, and that (87) of the study sample represent a percentage of (43.3%) from the total study sample work in South Al-Qunfudhah hospital.

As it seem from Table (4-1) the distribution of the study sample members according to the educational level variable, as it was found that (147) of the study sample members represented (73.1%) of the total study sample they have a bachelor's degree, and they are the largest group of the study sample members And that (34) of the study sample members represent 16.7% of the total study sample have Diploma in Nursing Graduate, and that only (20) of them represent (10.0%) of the total study sample have Masters in nursing qualifications. .

Through the above table, it is clear that the study sample members are distributed according to the variable years of experience. It was found that (63) of the study sample members represent (31.3%) of the total study sample with experience ranging from 1-5 years, and they are the majority of the study sample members, and that (58) of them represent (28.9%) of the total study sample members with experience from 10-6 years, and (53) out of them represent (26.4%) of the total study sample have experience ranging from 11 to 15 years, and only we find that (27) of them, which they represent (13.7%).

The above table also indicates the distribution of the study sample according to the Participating in continuous education variable, as it turns out that (113) of the study sample members represent (56.2%) of the total sample who sometimes participate in training internally or externally, and they are the most among the sample members. the study, and that (68) of them represent (33.8%) of the total study sample, always participating in continuous education, while

only (20) of them represent (10.0%) of the total sample of the study never participating in continuous education.

Second: The study questions:

1. **What is the level of knowledge of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA?**

Table no (4-2): knowledge of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA; June 2022

N.	Item	failed to answer	correct answer	Mean	SD	Order
1	To apply basic high-quality CPR, according to the new recommendation nurses should	108 (53.7%)	93 (46.3%)	0.46	0.500	**6**
2	What is the correct sequence of the BLS steps, according to the 2010 AHA guidelines	142 (70.6%)	59 (29.4%)	0.29	0.457	**11**
3	What mistake is common and sometimes deadly during the treatment of cardiac arrest	87 (43.3%)	114 (56.7%)	0.57	0.497	**1**
4	What action is part of high-quality chest compressions	143 (71.1%)	58 (28.9%)	0.29	0.454	**10**
5	What is the situation that best describes electric activity without pulse	144 (71.6%)	57 (28.4%)	0.28	0.452	**12**
6	Which is the best strategy to perform high-quality CPR on a patient with an advanced device for the airway	183 (91.0%)	18 (9.0%)	0.09	0.286	**20**
7	Using capnography in intubated patients	161 (80.1%)	40 (19.9%)	0.20	0.400	**16**
8	What practice is safe and effective in the defibrillation sequence	155 (77.1%)	46 (22.9%)	0.23	0.421	**15**
9	What medication and in what dosage is it recommended to treat a patient with persistent ventricular fibrillation	99 (49.3%)	102 (50.7%)	0.51	0.501	**5**
10	What is the appropriate interval to interrupt chest compressions	95 (47.3%)	106 (52.7%)	0.53	0.500	**3**
11	What action improves the quality of chest compressions administered during a reanimation attempt	92 (45.8%)	109 (54.2%)	0.54	0.499	**2**
12	Which is the adequate ventilation strategy for an adult with respiratory arrest and pulse frequency of 80 bpm	138 (68.7%)	63 (31.3%)	0.31	0.465	**9**
13	patient with respiratory insufficiency is apneic but continues having a strong pulse. Cardiac frequency drops suddenly to 30 bpm.	152 (75.6%)	49 (24.4%)	0.24	0.430	**14**
14	What rhythm requires synchronized cardioversion	114 (56.7%)	87 (43.3%)	0.43	0.497	**7**
15	Which tends to be the range of PETCO2 target values after cardiac arrest when ventilating a patient in whom we achieve return of spontaneous circulation (RSC)	94 (46.8%)	107 (53.2%)	0.53	0.500	**4**
16	What is the most reliable method to confirm and monitor the correct location of an endotracheal tube	150 (74.6%)	51 (25.4%)	0.25	0.436	**13**

17	If we have a manual defibrillator monitor, the initial monitoring of cardiac activity in a patient who has just had CRA witnessed must be performed	172 (85.6%)	29 (14.4%)	0.14	0.352	**19**
18	Regarding CPR maneuvers, indicate the incorrect response	135 (67.2%)	66 (32.8%)	0.33	0.471	**8**
19	You are caring for a person in CRA. Upon the rhythm observed on the monitor you doubt between VF and asystole. Indicate the correct action	164 (81.6%)	37 (18.4%)	0.18	0.389	**17**
20	We are upon woman 8-months pregnant in CRA and ventricular fibrillation, what action should we take	171 (85.1%)	30 (14.9%)	0.15	0.357	**18**
General Mean & SD				**0.23**	**0.358**	

N.B.: Correct given score = 1 failed to answer given score = 0

As indicated in table No. (4-2) the results show that the study sample and from the point of view of the surveyed group of nurses in Al-Qunfudhah hospitals about the reality of knowledge of nurses regarding early initiation of CPR at the selected Hospitals in Al-Qunfudhah, with a general mean of (0.23 out of 1) which is an average that falls in the first category, which is the category that refers to the responses with the degree of "**failed to answer**" on the study tool as a whole.

The results explain that there is homogeneity in the approval of the study sample members from the point of view of the researched group regarding the level of Nurses' knowledge regarding early initiation of CPR at the selected Hospitals in Al-Qunfudhah, which arranged in descending order according to the approval of the study sample members as follows:

1. Statement No. (3) which is: "What mistake is common and sometimes deadly during the treatment of cardiac arrest" come in first ranking in terms of approval by the study sample members with an average of (0.57 out of 1).
2. Statement No. (6), which is: "Which is the best strategy to perform high-quality CPR on a patient with an advanced device for the airway" come at the last ranking in terms of approval by the study sample, with an average of (0.09 out of 1).

Table no (4-3): knowledge of nurses regarding early initiation of CPR at Al-Qunfudhah region, KSA; June 2022

Scale item	Knowledge scale score							
	Low		Moderate		High		score	
	N	%	N	%	N	%	Range	Mean±SD
Checking for breathing	125	62.2%	76	37.8%	0	0.0%	**0 – 2**	**0.76±0.660**
Checking for consciousness	115	57.2%	86	42.8%	0	0.0%	**0 – 2**	**0.86±0.659**
Chest compressions	133	66.2%	68	33.8%	0	0.0%	**0 – 7**	**2.38±1.271**
Applying the defibrillator	130	64.7%	71	35.3%	0	0.0%	**0 – 5**	**1.78±1.084**
Maintain airway & rescue breath	160	79.6%	41	20.4%	0	0.0%	**0 – 4**	**0.81±0.798**
Total knowledge	**175**	**87.1%**	**26**	**12.9%**	**0**	**0.0%**	**2 - 14**	**1.13±0.336**

As shown in Table (4-3) and Figure below, the study sample showed very low knowledge regarding early initiation of CPR, compared to very high incorrect answer. Moreover, the participant respond

(0.0%) for high score of knowledge. The result show 87.1% of low knowledge score, only 12.9% moderate knowledge score regarding CPR.

2. **What is relation between the nurses' knowledge and with demographic variable?**

Table (4-4): relation between the nurses' knowledge and with demographic variable, Al-Qunfudhah, Saudi Arabia; June 2022

Demographic characteristics	Level of nurses' knowledge		P-Value
	Low N = 175 (100.0%)	Moderate N = 26 (100.0%)	
Hospital Name			
Al Qunfudhah General Hospital	98 (56.0%)	16 (61.5%)	0.565
South Al-Qunfudhah hospital	77 (44.0%)	10 (38.5%)	
Age group			
24 and less than 30 years	30 (17.1%)	3 (11.5%)	0.672
30 and less than 40 years	122 (69.7%)	18 (69.2%)	
40 and less than 50 years	17 (9.7%)	3 (11.5%)	
50 years and more	6 (3.4%)	2 (7.7%)	
Years of Experiences			
1-5 years	55 (31.4%)	8 (30.8%)	0.989
6-10 years	50 (28.6%)	8 (30.8%)	
11-15 years	46 (26.3%)	7 (26.9%)	
16 years & over	24 (13.7%)	3 (11.5%)	
Participating in continuous education			
Never	17 (9.7%)	3 (11.5%)	0.790
Sometimes	100 (57.1%)	13 (50.0%)	
Always	58 (33.1%)	10 (38.5%)	

The above-mentioned table, table no. (4-4) explain the relation between the nurses' knowledge and with demographic variable. The demographic data showed no statistical significance according to the level of nurses' knowledge, which means that the study sample of nurses indicated homogenous results of knowledge regarding early initiation of CPR, with the exception of educational level.

What is relation between the nurses' knowledge and with demographic educational level?

Table No. (4-5): Multiple linear regression analysis coefficient to measure the relation between the nurses' knowledge and the educational level; 2022

Dependent Variable	Predictors: (Constant)	R	R Square	Standardized Beta	t	F	Sig.
Total knowledge	Educational level	0.139	0.019	0.139	1.978	3.913	**0.049***

Through the results of (Table 4-5), which shows the relationship between the nurses' knowledge and the educational level, the multiple linear Regression was used, in which the educational level variable was considered as an independent interpret-variable, and the Knowledge level variable as a dependent variable. The results of the regression model showed that the regression model is statistically significant, meaning that there is a statistically significant relationship at (0.05) .

DISCUSSION:

The current study aimed to study the nurses' knowledge and self-efficacy about the cardiopulmonary resuscitation at Al-Qunfudhah region, KSA**, however** Cardiopulmonary resuscitation CPR is utilized in the emergency where the spontaneous actions are important to protect one's life**; Moreover,** he key element in the Medical Health Sciences who performs such health care procedures to save the life therefore it is important to determine, understand and know about the knowledge of the nurses regarding the CPR**.**

Many findings resulted from this study; the demographic characteristics, of the current study indicated that the sample taken equally from both hospitals (Al Qunfudhah General Hospital & South Al-Qunfudhah hospital). Also the study explained that about two third of the sample, their age between thirty and less than fourty years, with a mean age of ±34 years, the lowest age was 24, while the older age was 62. The researcher explains this because most of the nurses who work in the cardiology department are young people who have scientific expertise and medical practices in dealing with heart patients, as they carefully selected for these sensitive departments.

As for the Years of experience of the respondent nurses, it is clear that about half the study sample of nurses have experience of 10 years or less. It may be due to the strategy of the hospital to employ highly qualified nurses whose newly graduated nurses with high educational level. This result is in agreement with (Aljohani, 2020). Which indicated that efficacy and the knowledge among the nursing profession regarding cardiopulmonary resuscitation which emphasizes individual quality and productive healthcare management.

Through this study, it became clear to us that the average degree of knowledge of recovery was Very low, indicated (KHASHABA ET Al., 2021). In his study, which aimed to know Cardio-Pulmonary Issues Are Usually Generated by a Various Factor that Leads to the Deterioration of Health and Elevates the Risk of Individual Mortality that aims to evaluate Knowing and practicing CPR between nurses. Which may indicate the similarities in both studies to the need to work to know the CPR nurses. These results often Concerning continuing education programs is not sufficient for CPR.

The researcher explains this low knowledge that it may be due to the contrast of the category that has participated in the study from the various nursing departments in hospitals, meaning that they may work in the emergency departments, children, internal and other sections, and he may have answered the questions, considering that patients are children instead of adult patients.

Conclusion:

Early detection and effective response to recovery is extremely important for the survival of heart attacks in good health. The nurses are often the first directs of heart patients. Therefore, it is important to be nurses at a high level of skill and knowledge in this field, which reduces the anxiety of new nursing graduates and enhances their ability to carry out cardiovascular resuscitation (CPR). Knowledge and self -effectiveness are the main elements that affect the early start of CPR by nurses in patients with heart attack. In addition, given its effect on various factors, they are also good indicators for CPR performance. Consequently, increased levels of knowledge of nursing staff and support their own effectiveness of potential clinical scenarios is very important.

Recommendations:

The researcher recommended a number of recommendations that will enhance the efficiency of Nurses at CPR unit:

1. Work on the CPR curriculum application during training
2 The importance of continuous updating of knowledge and skills for illnesses in the field of CPR in the hospital.
3. The researcher recommends more research to explore the factors that affect the knowledge and skill of the nurses.
4. Make priority for intensive training courses for CPR

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