Nurses' Knowledge about Cardio-Pulmonary Resuscitation in Mosul City

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ABSTRACT

Background and Objectives: Resuscitation in hospitals and health care facilities, refers to prompt actions aimed to prevent death and providing the best possible chances for human survival. The study aims to assess the nurses' knowledge towards cardiopulmonary resuscitation and to identify the relationship between nurses' knowledge about cardiopulmonary resuscitation and some demographic variables (age, gender, educational level, work place and years of experience).

Material and method: A descriptive study design was adapted to assess the knowledge of the nurses regarding CPR. The sample of the study consist of (122) nurses, (26) female, and (96) male who works in Iben-Sena and Al-Zahrawe teaching hospitals in Mosul City. The sample of the study was selected in the simple random method. Data were collected by using a questionnaire throughout an interview technique. The questionnaire consists of two parts, Part one consists of (5 items) includes some demographic data including age, gender, educational level, work place and previous experience. Part two consists of (23 items) include questions that assess the nurses' knowledge towards cardiopulmonary resuscitation. Data were analyzed and calculated by using SPSS program.

Results: The nurses' knowledge score regarding cardiopulmonary resuscitation record low, (27.942%), and standard deviation (0.609).

Conclusion: The present study reveals that the nurses have poor knowledge regarding the CPR techniques and there are no significant difference between nurses' knowledge about cardio pulmonary resuscitation with demographic characteristics except work place and gender.

Keywords: Knowledge, Cardiopulmonary resuscitation.

INTRODUCTION

Resuscitation in hospitals and health care facilities, refers to prompt actions aimed at preventing death and providing the best possible chances for human survival. The immediate actions of the health care worker can make the difference between life and death. Regular, updated, and effective resuscitation training courses for health care workers are therefore crucial (Tan and Ismail, 2009). The American Heart Association estimated that in the world, among the overall population the incidence of death due to cardiac arrest varies between (0.2 to 0.4%) year (Daisey, 2007). CPR is the foundational technique for the emergency treatment of cardiac arrest. Nurses are an integral part of the health care system and are perceived to be knowledgeable in providing institutional care to the patients (Susan and Mercedes, 2017). CPR is an important medical procedure, which is needed for individuals who face sudden cardiac arrest. It is a combination of rescue breathing and chest compressions, which is delivered to the victims who are thought to be in cardiac arrest (Hamilton, 2005). Being important members of

the healthcare team, nurses are deemed to possess the basic skills and expertise, which are needed to perform CPR. It is documented that a timely performed CPR can largely prevent sudden death (Madden, 2006) and it is hence considered to be an important medical procedure. Many times, the doctor may not be present near the patient and hence the nurses are expected to provide this emergency care. To perform the procedure in a meticulous manner, the nurses should be knowledgeable and they should have expertise in the procedure. Contrary to their roles, studies from different countries have reported a poor knowledge among the nurses regarding CPR. A study also reported that interventions could improve the nurses' knowledge of CPR (Parajulee and Valarmathi, 2011). Knowing what to do in an emergency situation is as important as knowing what not to do, because CPR measures misapplied that might lead to serious complications such as broken ribs, ineffective lung inflation and cardiac output resulting in brain damage or death (Demestiha *et. al*., 2010). The study objects to assess of nurses knowledge towards CPR and to identify the relationship

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between nurses' knowledge about CPR and some demographic variables (age, gender, educational level, work place and years of experience).

MATERIALS AND METHOD

A descriptive study design was adapted to assess the knowledge of the nurses regarding CPR. The setting of the study is carried out in the intensive care units, emergency units, surgical and medical wards and operational units in Iben Sena and Al-Zahrawe teaching hospital in Mosul City. The sample of the study was consisted of (122) nurses, (26) female , and (96) male who works n Iben-Sena and Al-Zahrawe teaching hospital in Mosul city. The sample of the study was selected by using the simple random method.

Data were collected by using the tools in a questionnaire from throughout an interview technique. The questionnaire consists of two parts, Part one consists of (5 items) includes some demographic data, including age, gender, educational level, work place and previous experience. The second part consists of (23 items) includes questions to assess nurses' knowledge towards CPR. The variables of the questionnaire and methods used by the investigator were explained briefly with all subjects in the simplest way. The period of the study extends from 13th of January 2013 end to the 1st April 2013.

RESULTS

Table (1): Distribution of the socio-demographic characteristics of the study subjects. (No. 122)

Variables		
Age	**No**	**%**
(20-30)year	64	52.89
(31-40)year	43	35.54
(41-50)year	9	7.43
More than 50 year	6	4.14
Gender	**No**	**%**
Male	97	80.16
Female	25	19.84
Work place	**No.**	**%**
Ibn-Sena	66	53.72
Al-Zahrawee	56	46.28
Educational level	**No**	**%**
Secondary	52	42.62
Insatiate	51	41.8
College	19	15.58
years of experience	**No**	**%**
Less than 1 year	28	22.95
(1-5)years	33	27.05
(6-10) years	35	28.69
More than 10 years	26	21.31

Table (2): Distribution of the mean nurses knowledge score regarding cardiopulmonary resuscitation.

No. of subject	Mean of knowledge score	Total score of knowledge	SD
122	27.942	46	0.609

Table (3) One way analysis of variance for the difference between nurses knowledge towards CPR and their age group.

S.O.V	SS	DF	MS	F. Obs
Between Groups	0.713	3	0.238	0.652
Within Groups	43.057	118	0.365	N.S
Total	43.771	121		

F. Critical = 3.78

Table (4) Comparison of the difference between nurses knowledge towards CPR and their gender.

Gender	No.	Mean	SD	DF	t. obs	P. value
Male	97	3.35	0.52	119	1.99	S
Female	24	1.63	0.57			

T. Critical= 1.9

Table (5) One way analysis of variance of the difference between nurses knowledge towards CPR and their educational level.

S.O.V	SS	DF	MS	F. Obs
Between Groups	1.334	2	0.667	1.868
Within Groups	42.436	119	0.357	N.S
Total	43.771	121		

F Critical =4.

Table (6) One way analysis of variance for the difference between nurses knowledge towards CPR and their work place.

S.O.V	SS	DF	MS	F. Obs
Between Groups	8.488	4	2.122	7.026
Within Groups	35.283	117	0.302	S
Total	43.771	121		

F. Critical = 3.32

Table (7): One way analysis of variance for the difference between nurses knowledge towards CPR and their years of experience.

S.O.V	SS	DF	MS	F. Obs
Between Groups	0.266	3	0.89	2.411
Within Groups	43.504	118	0.369	N. S
Total	43.771	121		

F Critical = 3.78.

DISCUSSION

The mean of the study sample who aged between (20-30) years (52.51%), and most of them were male (78.68%), the most of them were secondary (42.62%). And the higher of the work in intensive care unit (27.87%). The nurses who years of experience between (6-10) years are a higher number (28.69%) Table (1). The nurses' knowledge score regarding cardiopulmonary resuscitation was low, (27.942), and standard deviation (0.609) table (2). Another study from Kuwait evaluated the nurses' knowledge, attitude, and experience regarding CPR. This study also documented a poor knowledge among nurses regarding CPR. Another study from the Hainan province of China evaluated the community nurses' knowledge of CPR and found there is lacking in the essential knowledge (Al Kandary *et. al.*, 2007; Xiu. *et. al*., 2008). Bakhtiar *et. al.* (2007) supported the present finding and stated that experiences showed that in many critical situations, nurses do not have sufficient basic CPR knowledge. In addition,

Hussain *et al*. (2009) stated that the majority of the nurses has poor CPR knowledge and Damjan *et. al*. (2009) mentioned that the study revealed a disappointing level of knowledge of the fundamentals of basic life support in both study groups. The study found in Table (3) there is a significant difference between nurses' knowledge regarding CPR according to gender at P. Value=0.05. This finding is disagreement with those of previous studies such as those performed by Tok *et. al.* (2004) and Verplancke *et. al.* (2008). The gender of nurses may play a role in knowledge regarding CPR because the CPR procedure commonly doing by male because it need power. The current study was found a statistically significant association between the nurses' knowledge and their worksites at P Value=0.05, Table (4). The present study is in agreement with the study of Hussain *et. al.* (2009) which stated that significant differences were found in terms of knowledge and working area, on the other hand; the finding was in disagreement with Al Kandary *et. al.* (2007). The findings of the present study indicate that there is

no significant difference in knowledge about CPR between nurses with few years of work experience and those who have accumulated a large number of years of work experience at (P Value=0.05) Table (5). Nyman and Sihvonen (2000) note that while work experience may increase the confidence of individual nurses, there is no correlation between years of work experience and competence in the performance of CPR.. Another study conducted by Miotto *et. al.* (2008) revealed that older health care providers obtained lower scores than younger health care providers during the course of being evaluated for their CPR knowledge (Lasshmir, 2009). The present study indicated that there are no significant relationship between nurses' knowledge toward CPR and their age at (P value=0.05), Table (6). Similar relations were observed no significant difference between the different age groups of nurses and their knowledge about CPR (Ministry of Health Malaysia, 2009). The results of the study also showed that there are no significant difference between nurses knowledge about CPR and their educational level at (P value =0.05), Table (7). Previous study reported that no significant correlation between educational level and nurses knowledge regarding CPR (Parajulee and Valarmathi, 2011).

CONCLUSION

The study concluded that most of the nurses have poor knowledge regarding CPR and there are no significant between nurses' knowledge and their demographic characteristics except gender and work place.

RECOMMEDNDATIONS

The study recommended that the results of this study need to be discussed with the nursing educators and appropriate training in the vital areas has to be instituted for the practicing nurses. Construction refreshing courses for increase the knowledge of nurses in different age and different departments regarding the proper technique of cardio-pulmonary resuscitation.

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