Teacher's Practice Regarding Cardiopulmonary Resuscitation at Basic Schools in Erbil City

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ABSTRACT

Background and objectives: Every day, either by accident or illness, there are numerous situations in which the safety of individuals, families or communities is endangered. >2000 children worldwide die every day as a result of unintentional injuries. The majority of risks influencing a cardiac arrest in a school are related to physical activity, such as participating in sports or having an airway obstruction or trauma event. In the United States and Europe, one million people experience cardiac arrests annually. The aim of this study was to assess the basic school teachers' practices regarding cardiopulmonary resuscitation at basic schools in Erbil City.

Methods: A cross suctional study was carried out. To assess the practices of basic school teachers regarding cardiopulmonary resuscitation. The study was conducted from January 20,2021 to May 15, 2022. This study was conducted in basic schools in Erbil city according to six municipalities. The sample size was 470 teachers. The observational check list technique was used to assess cardiopulmonary resuscitation performance.

Results: The majority of them were female (74%), more than half of them have a diploma (52.3%), the majority of age group were between 37-48 years old which represents 51%, the mean age was (43.85±8.27), most of the teachers were married (86.4%), the majority of them did not a training course (86.4%). Several teachers use tradition at media (9.6%) and social media (44.7). A lot of barriers were faced teachers to prevent participation in training courses were not found in professional training course The majority of the schoolteachers had poor levels of practice (51.1%) regarding the performance of cardiopulmonary resuscitation.

Conclusion: The majority of schoolteachers had poor levels of practice regarding cardiopulmonary resuscitation. There was a significant association between the performance of CPR and some socio-demographic variables like age group, gender, years of experience, and desire to attend CPR training course.

Keywords: Cardiopulmonary Resuscitation; Practices; Basic School Teacher.

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INTRODUCTION

Every day, either by accident or illness, there are numerous situations in which the safety of individuals, families or communities is endangered. >2000 children worldwide die every day as a result of unintentional injuries [5]. To date, an estimated 17.5 million people have died each year from cardiovascular diseases (CVD) such as stroke and heart attack, known to be the world's leading cause of death [4]. Cardiac arrests in schools are linked to physical activity, sports, aerobic fitness participation, or other trauma- or airway-related occluded. Although there are about one million cardiac arrests annually in the United States and Europe, cardiac arrest is still a clinical illness with a dismal prognosis [1]. Basic life support (BLS): is defined as "maintaining airway patency and supporting breathing and circulations without the use of equipment other than a protective device" [2]. Basic life support (BLS) is a set of emergency procedures applied to a patient, it comprises a number of techniques, like cardiopulmonary resuscitation (CPR to sustain patient's life until the hospital facility arrives or the person reaches the hospital [3] The American Academy of Pediatrics and the American Heart Association (AHA) have issued guidelines that stress the need for school teachers to be knowledgeable about emergency response measures to address life-threating emergency. Thus, in this regard, the training of school teachers will facilitate the learning process for students [4]. Considering that school instructors have the time to demonstrate BLS to pupils and should be certified in CPR, the European Resuscitation Council recommended that CPR be included in the school curriculum [1]. The study is important because it illustrate practices of cardiopulmonary resuscitation among teachers in basic school. It motivates teachers, how to take care of the school, to

make good scientific intervention, the lives of students in cases of cardiac arrest. The study contributes to the awareness of emergency in the school among the school teachers and staff of school administration to decrease emergency problems by increasing suitable intervention for the purpose of saving lives students and staff in school. Basic life support is of high importance when an individual is at risk. Learning basic life support skills is of great importance in resuscitation, life-saving and is prevention of complications in emergency situations in both the school environment and the community [6]. The aim of this study was to assess teachers, practices regarding cardiopulmonary resuscitation at basic schools in Erbil City. The objectives of the study are to assess the level of teachers' practices in cardiopulmonary resuscitation and, find out the association between level of performance and sociodemographic variables like age, gender, qualification, marital status, number of children, previous in educational program and source of information.

METHODS

The current cross-sectional study was carried out to assess the practices of school teachers regarding cardiopulmonary resuscitation. The study was carried out over a four-month period, from January 20 to May 15, 2021. This study was conducted in basic schools in Erbil city North-Central of Iraq which contents 6 municipality, the sample to six municipality 1 municipality located in the center of the city around a street 60 meters, 2 located from the roadway of Erbil-Mosel to the roadway of Erbil-Shaqlawa, 3 located from the roadway of Erbil-Saqlawa to the roadway of Erbil-Koya, 4 located from the roadway of Eskan to the roadway of Erbil-Mahmur, fifth located from the roadway of Erbil-Koya to the roadway of Eskan street, sixth located

from the roadway of Erbil-Mahmur to the roadway of Erbil-Mosel. The basic schools were selected randomly utilizing simple random sampling according to six municipalities as a geographical distribution area in Erbil city, all municipality were included in the study, 5 basic schools in each municipality were selected, according to the list of all basic schools affiliated to center for the direct education in Erbil city. A total of 30 different basic schools were chosen out of 242 schools in Erbil city. The sample size estimation is distributed according to the number of teachers in Erbil city based on the proportion of school teachers. 385 teachers were selected from the total number of basic school teachers (10445) for this study. The sample was calculated using Taro Yamane formula and it comprised 385 participants. A sample of 385 teachers was estimated to be enough for this study. However, to improve the representativeness of the sample, increase the power of the study and accuracy 470 teachers were recruited for this study. The sample size needed to reflect the target p Taro Yamane formula $n = N / (1 + Ne^2)$ n= 10445/ (1+10445* (0.052)2. n= 10445 / (1+10445*0.0025)n= 10445 / 27.1125 n=385 n= corrected sample size, 385 N = population size, 10445 e = Margin of error (MoE), e = 0.05 based on the research condition, population with a 5% of error at a 95% confidence [7]. A sample is a portion picked from the representative population for the purpose of reaching inferences. All the school teachers who participated in the study were entirely voluntary and their identities were maintained and any feeling of commitment to share in the present study was reduced by satisfying the basic teachers that sharing was optional and that they had the right to drop out at any time they wanted. Probability cluster sampling was carried out, the list of basic schools was obtained from the general directorate

of education in Erbil city, for each cluster, teachers were selected, in 6 municipality there were 470 teachers for a total sample size of 10445 basic school teachers in Erbil city. Approximately, the samples of teachers from each school were enrolled in the study. The number of teachers needed from each school was calculated proportionally to the total sample size. The teacher signed the consent form and then completed the questionnaire using paper and pencil. The samples of teachers from each school are dependent on the total number of teachers in schools. According to the formula of teachers (each school) is multiplied by the sample size (470) and divided by the total of teachers in the whole school (1189). If a teacher did not agree to participate, another one from the same school was randomly replaced. The data collection took place through assessment of cardiopulmonary resuscitation practices using observational checklist technique. After cooperating with the school manager after teachers were accepted to share in the study, assessment tests were used in teachers' rooms in the school to evaluate teachers one by one used. The researcher used an observational checklist for evaluation. The data were collected during the morning shift on school duty, from 8:00 AM to 12:00 PM, and during the shift from 1:00PM to 4:00 PM. The period of data collection depends on three times in the school. Firstly, some of the teachers participated when there was no have class for 45 minutes. Secondly, some of the teacher participated in coffee break. Thirdly, some of the teachers participated at the end of class or according to teacher free time. The data was collected for 8-10 minutes for each sample. They were completed, the researcher gathered all the checklist data, the tool was developed by the researchers after reviewing the related literature, for cardiopulmonary resuscitation dependent



who teachers disagree to participate and complete the questionnaire. A questionnaire of teachers' socio-demographic characteristics and practices consisted of 4 parts. Part 1: Socio-demographic characteristic questions include the following: age, gender, qualification, marital status, number of children, years of experience and previous participation in an educational program about cardiopulmonary resuscitation. Part 2: Questions about respondents' experience with educational programs and surveys in have you, attended a previous training course of CPR. Part 3: Questions regarding sources of information which consist of 1. formal learning which includes study in a formal University education or college). 2. Informal learning (seminar, webinar, workshop, training course). 3. social media (Facebook, Instagram. Snap chat. Whats-up. Telegram. YouTube) 4. Traditional media (TV. Program, reading book, magazines, newspaper, listen to the radio) Part 4: Assessment of CPR practices used the observational checklist, and one of these manikins or learning CPR procedure, the personal resuscitation named. Trauma. The serial number of manikins is Tm1172A150213m. This personal training manikin has a CPR mode that shows the depth of chest pressure through a fixed light point on a 1–7-point device. Each light point is equal to 1cm. It is noticed during training that if the chest compression is incorrect, it appears through the light point; and changes color from green to red. If it is correct, the light point will stay in the green color assessment of basic life support practices consists of an observational check list for CPR procedures consisting of 13 steps, checking for safety, checking responsiveness, shouting for help activating emergency response system, calling an emergency number 066122, from a mobile phone, moving the child to a firm at surface, If the child is face-down, roll him or her face-up, keeping the head, neck and back in a straight line. Airway opened by tilting the head slightly and lifting the chin Checks breathing by listening for breaths, feeling the breaths against the skin and watching the chest movements, checks pulse, performs high-quality compressions, and places hands on the lower half of the sternum 30 compressions at a rate of at least 100 compressions per minute, located the correct hand position by placing the heel of one hand on the child's sternum at the center of his or her chest, compressed at least 2 inches (5 cm), completed recoil after each compression, gives 2 breaths with a barrier device, each breath given over 1 second (pinched nose, made a complete seal over child's mouth) visible chest rise with each breath, resumes compressions in less than 10 seconds, continued cycles of chest compressions and rescue breaths (30:2), (2 cycles for examination purposes. The observational checklist of CPR consists of 13 steps in the worksheet, it was filled out by the researcher for evaluation for each step using 6 categorize Likert skills, got zero for not performance, 5 for excellent 4 for very good performance, 3 for good performance, 2 for moderate performance, and 1 for poor performance. The system scores, forever. CPR evaluation practice starts from 0 minimum to 65 maximum and is categorized into 6 levels, which consist of excellent performance (53 -65), very good performance (40-52), good performance (27-39), moderate performance (14-26), poor performance (1-13) and non-performance (0). The initial study was approve by the Ethics committee, Faculty Nursing, Hawler Medical University with registration No 96 on 13 December 2020. Official permission was sought from the .General Directorate of Erbil education Directorate Center Education of Erbil city, then permission was obtained from the manager of the school, following which

consent was taken orally from each school teacher .They signed the written informed consent attached to the study questionnaire after explaining the purpose of the participants were assured that all information was confidential and their participation in the study was voluntary without any costs and they had the right to refuse to participate in the study. The data was collected and entered into the personal computer. Statistical analysis was done using the statistical package for Social Science (SPSS/version 26) Analysis including frequencies and percentages. They were used to describe the items and the stud variables. A chi-squire test was used to find out the association between sociodemographic variables like age, sex, qualification, years of experience, and source f information. All statistical test had a significance P -value ≤ 0.05 with a 5% confidence level.

RESULTS

OPEN

During the data collection, a total of 500 questionnaires were distributed among school teachers. Finally, 30 questionnaires by the teachers were not completed, related to school issues. In the end, only 470 questionnaires were completed and returned; it was considered in the study that the response rate in the current study is 94%. Table 1: It was reported that the majority of teachers lived in municipality 6, which represented 20.2% while the lowest in musicality 4, which represented 12.6%. The highest age groups among participants were between 37-48 years which represented 53%. The mean age was 43.85±8.283. The majority of the samples were female (74%). 52.3% of participants in the study graduated from an institute while 47.7 % graduated from a college. The majority of class subjects were teaching language (42.1%), while the lowest were exercise (3.4%). The most frequent years of experience among teachers were between 15-26 years which reported 54%. The highest sample (86.4%) in the study were married. 65.1% of respondents reported having 1-3 children, with a mean of 19.09±8.53.

| Table 1: Socio-demographic of | date of participants |
|-------------------------------|----------------------|
|-------------------------------|----------------------|

| Socio-demographic characteristic | | F (%) |
|-------------------------------------|------------------|------------|
| Municipality | Municipality 1 | 76 (16.2) |
| | Municipality 2 | 75 (16) |
| | Municipality 3 | 83 (17.7) |
| | Municipality 4 | 59 (12,6) |
| | Municipality 5 | 82 (17.4) |
| | Municipality 6 | 95 (20.2) |
| Age group years | 25-36 | 85 (18.1) |
| | 37-48 | 249 (53) |
| | 49-60 | 136 (28.9) |
| Mean and standard deviation | | |
| Gender | Male | 122 (26) |
| | Female | 348 (74) |
| Education | College | 224 (47.7) |
| | Institute | 246 (52.3) |
| Class Subject | Science | 97 (20.6) |
| | Language | 198 (42.1) |
| | (Kurdish, Arabic | |
| | and English) | |
| | Math | 68 (14.5) |
| | Sociality | 68 (14.5) |
| | Exercise | 16 (3.4) |
| | Art | 23 (4.9) |
| Years of experience | 3-14 | 130 (27.7) |
| | 15-26 | 254 (54) |
| Manage and shared and day in the se | 27-38 | 86 (18.3) |
| Mean and standard deviation | | |
| Marital Status | Married | 406 (86.4) |
| | Single | 56 (11.9) |
| | Divorced | 5 (1.1) |
| | Widowed | 3 (0.6) |
| Number of child | 1-3 | 252 (65.1) |
| | 4-6 | 125 (32.3) |
| | 7-9 | 10 (2.6) |
| | | |

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Table 2 shows that the majority of study samples have a desire to participate in a basic life support training courses which represented 76.6%. 86.8% of school teachers do not have the opportunity to attend any a previous training courses.

| | | F % |
|---|---------------------------|------------|
| Do you have a desire to participate in basic life support (BLS) | No | 110 (23.4) |
| training course | Yes | 360 (76.6) |
| Do you have attended a previous course of basic life support? | No | 408 (86.8) |
| | Yes | 62 (13.2) |
| How many course | Not participation | 387 (82.3) |
| | one course | 36 (7.7) |
| | two course | 22 (4.7) |
| | three course | 25 (5.3) |
| Type of training course | Not participation | 387 (82.3) |
| | theory course | 29 (6.2) |
| | practices course | 15 (3.2) |
| | both theory and practices | 39 (8.3) |

Table 3 demonstrated that the majority of sources of information among teachers come from traditional media (79.6%),followed

by formal learning (62.6%) and social media (44.7), while the minority comes from formal learning (13.4 %).

Table 3: Source of information

| No. | Source of information | Yes |
|-----|---|------------|
| | | F (%) |
| 1 | Formal learning (study in formal University education) | 63 (13.4) |
| 2 | In formal learning (seminar, webinar, workshop, training course) | 294 (62.6) |
| 3 | Social media (Facebook, Insata-gram, Snap-chat, whats-up, tell-gram, You-Tub) | 210 (44.7) |
| 4 | Traditional media (TV-program , reading book, magazine, newspaper and lis- ten to the radio) | 374 (79.6) |



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Table 4 illustrates that the highest percentage of study samples had poor practice performance in CPR, 51.1%, only 0.4 % of them had good performance and none of the teachers had very good or excellent performance.

Table 4: Over all CPR performance

| Levels of Cardiopulmonary Resuscitation Performance | F (%) |
|---|------------|
| Excellent Performance | 0 (0) |
| Very Good Performance | 0 (0) |
| Good Performance | 2 (0.4) |
| Moderate Performance | 38 (8.1) |
| Poor Performance | 240 (51.1) |
| Non Performance | 190 (40.4) |
| Total | 470 (100) |

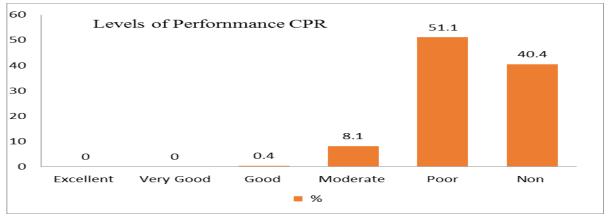


Figure 1:Over all CPR performance

Figu1 demonstrates levels of performance

using the same data in table4

Table 5 shows that the assessment of CPR procedure was done in 13 steps, most of the school teachers had poor performance. Table 6 indicated that there was a significant association between the performance of CPR and some

socio-demographic variables like age group, gender, years of experience, and desire to attended CPR training course.



| Cardiopulmonary Resuscita- tion steps | Not per- formance | Poor perfor- mance | Moder- ate per- formanc e | Good perfor- mance | Very good per- formance | Excellent perfor- mance | |
|---|----------------------|--------------------------|------------------------------------|--------------------------|-------------------------------|-------------------------------|--|
| | F (%) | F (%) | F (%) | F (%) | F (%) | F (%) | |
| 1. Check for safety | 376 (80) | 80 (17) | 2 (0.4) | 1 (0.2) | 2 (0.4) | 9 (1.9) | |
| 2.Checks Responsiveness | 404 (86) | 64 (13.6) | 1 (0.2) | 1 (0.2) | 0 (0) | 0 (0) | |
| 3.Shouts for help Activates emergency called an emer- gency number 066122 | 398 (84.7) | 67 (14.3) | 2 (0.4) | 3 (0.6) | 0 (0) | 0 (0) | |
| 4.Moved the child to the firm flat surface. keeping the head, neck and back in a straight line | 369 (78.5) | 86 (18.3) | 8 (1.7) | 5 (1.1) | 1 (0.2) | 1 (0.2) | |
| 5. Opened the airway by tilting head slightly and lifting chin. | 317 (67.4) | 118 (25.1) | 16 (3.4) | 15 (3.2) | 3 (0.6) | 1 (0.2) | |
| 6. check for pulse | 1 (0.2) | 156 (33.2) | 21 (4.5) | 14 (3) | 3 | 0 (0) | |
| 7.Hand placement on lower half of sternum | 244 (51.9) | 174 (37) | 27 (5.7) | 22 (4.7) | 3 (0.6) | 0 (0) | |
| compressions a rate of at least 100 compressions per minute. | 225 (47.9) | 200 (42.6) | 30 (6.4) | 13 (2.8) | 2 (0.4) | 0 (0) | |
| 9. Located the correct hand position by placing the heel of one hand on the child's sternum at the center of his or her chest, compresses at least 2 inches (5 cm) depth | 234 (49.8) | 203 (43.2) | 19 (4) | 11 (2.3) | 3 (0.6) | 0 (0) | |
| 10.Complete chest recoil after each compression | 252 (53.6) | 192 (40.9) | 16 (3.4) | 9 (1.9) | 1 (0.2) | 0 (0) | |
| 11.Gives 2 breaths with a barrier device Each breath given over 1 second(pinched nose, made a complete seal over child's mouth) | 245 (52.1) | 209 (44.5) | 11 (2.3) | 5 (1.1) | 0 (0) | 0 (0) | |
| 12. Visible chest rise with each breath | 252 (53.6) | 205 (43.6) | 12 (2.6) | 1 (0.2) | 0 (0) | 0 (0) | |
| 13. Continued cycles of chest compressions and rescue breaths (30:2). (2 cycles for examination purposes | 270 (57.4) | ົ 192໌ (40.9) | 8 (1.7) | 0 (0) | 0 (0) | 0 (0) | |

Table 5: Assessment of practices of CPR



| Socio-demographic variables | | Good | Mod- | Poor | Non | Chi- | Р |
|-----------------------------|-------------|------|-------|------|-----|---------|-------|
| | | | erate | | | square | Value |
| | | F | F | F | F | 109.627 | 0.001 |
| Municipality | 1 | 0 | 6 | 54 | 16 | | |
| | 2 | 1 | 16 | 27 | 31 | | |
| | 3 | 1 | 11 | 45 | 26 | | |
| | 4 | 0 | 3 | 37 | 19 | | |
| | 5 | 0 | 1 | 15 | 66 | | |
| | 6 | 0 | 1 | 62 | 32 | | |
| Age Group | 25-36 | 0 | 10 | 43 | 32 | 13.18 | 0.04 |
| | 37-48 | 0 | 22 | 135 | 92 | | |
| | 49-60 | 2 | 6 | 62 | 66 | | |
| Gender | Male | 2 | 20 | 61 | 39 | 22.725 | 0.001 |
| | Female | 0 | 18 | 179 | 151 | | |
| Education | College | 2 | 24 | 114 | 84 | 6.764 | 0.08 |
| | Institute | 0 | 14 | 126 | 106 | | |
| Class Subject | Science | 0 | 6 | 51 | 40 | 7.899 | 0.928 |
| | Language | 2 | 22 | 99 | 75 | | |
| | Math | 0 | 3 | 35 | 30 | | |
| | Sociality | 0 | 4 | 36 | 28 | | |
| | Exercise | 0 | 1 | 8 | 7 | | |
| | Art | 0 | 2 | 11 | 10 | | |
| Years of experi- | 3-14 years | 0 | 15 | 72 | 43 | 16.581 | 0.011 |
| ence | 15-26 years | 0 | 18 | 131 | 105 | | |
| | 27-38 years | 2 | 5 | 37 | 42 | | |
| Marital Status | Married | 2 | 36 | 202 | 166 | 8.323 | 0.502 |
| | Single | 0 | 2 | 32 | 22 | | |
| | Divorced | 0 | 0 | 5 | 0 | | |
| | Widowed | 0 | 0 | 1 | 2 | | |
| Number of chil- | No Children | 1 | 5 | 41 | 36 | 3.977 | 0.913 |
| dren | 1-3 child | 0 | 21 | 130 | 101 | | |
| | 4-6 child | 1 | 11 | 63 | 50 | | |
| | 7-9 child | 0 | 1 | 6 | 3 | | |

Table 6: Relationship between Overall and Socio-Demographic Characteristics practices of CPR



Continue of Table 6: Relationship between Overall and Socio-Demographic Characteristics practices of CPR

| Socio-demographic variables | | Good | Mod- erate | Poor | Non | Chi- square | P- Value |
|--|----------------------|------|---------------|------|-----|----------------|-------------|
| | | F | F | F | F | | |
| Do you have a | No | 0 | 2 | 53 | 55 | 11.077 | 0.011 |
| desire to partic- ipate in train- ing course | Yes | 2 | 36 | 187 | 135 | | |
| Do you have attended a pre- | No | 2 | 33 | 199 | 153 | 1.443 | 0.695 |
| vious training course | Yes | 0 | 5 | 41 | 37 | | |
| how many course | 0 | 2 | 33 | 199 | 153 | 6.595 | 0.679 |
| | One course | 0 | 2 | 21 | 13 | | |
| | Two course | 0 | 3 | 8 | 11 | | |
| | Three course | 0 | 0 | 12 | 13 | | |
| Type of training course | 0 | 2 | 33 | 198 | 154 | 9.908 | 0.358 |
| | Theory course | 0 | 5 | 15 | 9 | | |
| | Practices course | 0 | 0 | 8 | 7 | | |
| | Theory and practices | 0 | 0 | 19 | 20 | | |
| Formal Learning | No | 2 | 32 | 208 | 165 | 0.507 | 0.917 |
| | Yes | 0 | 6 | 32 | 25 | | |
| Tradition Media | No | 1 | 16 | 126 | 106 | 3.421 | 0.754 |
| | Yes | 1 | 16 | 91 | 65 | | |
| social media | No | 1 | 22 | 124 | 113 | 2.747 | 0.432 |
| | Yes | 1 | 16 | 116 | 77 | | |
| Informal Learning | No | 0 | 10 | 88 | 78 | 4.324 | 0.229 |
| | Yes | 2 | 28 | 152 | 112 | | |



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DISCUSSION

The performance of CPR among school teachers in the current research study was found to be inadequate, and this finding was investigated in another country from a neighboring country. Basic life support practices among teachers are weak and inadequate the public administration of education makes compulsory participation in basic life support training courses among school teachers, this can be e improved and promoted by opening mandatory training courses or teachers annually. All the factors contributing the low level of performance in cardiopulmonary resuscitation are related to a lack of training courses or educational programs in a school, no present instructors or guide posters and postcards for basic emergency first aid, and no films on health-applied TV programs in order to show how to provide basic life support and immediate care for sudden cardiac arrest. It is an outstanding role of teachers when dealing with injuries and accidents that happened in the school. After dealing with them using appropriate first aid techniques, the morbidity and death rate of these accidents decreased. Community health nurses or other health care providers are not present in schools for the purpose of performing immediate emergency health care services. In the present, study out of 470 school teachers, 26 % were males and 47.7% graduated from college; most of them had not attended a previous training course in school. This finding is in agreement with the study done in South India (2015) shows the majority of school teachers do not know how to perform CPR. Out of 146 participants, only 8 teachers can perform CPR correctly. The present result is similar with a mean age (39.3±10). Most of the teachers were female (82%) and the majority of school teachers do not attend a previous training

course (70%) [10]. The finding of the present study was consistent with the study done in Turkey Anatolia province that shows more than half of school teachers were female; most of them were married and had children while there was inconsistency with participation in a previous training course in which the majority of study samples participated [11]. The difference could be due to the mandatory requirement among school teachers to participate in training courses. This rule effected improved teachers' knowledge and practice regarding basic life support. The result of the current study is in agreement with the study done in Malaysia regarding sources of information that come from social media and TV. Program while disagreeing with participating in the training course, more than half of school teachers in Malaysia shared in the training course regarding basic life support [12]. The result of the present study is in agreement with the study done by Alhejaili AS et al, in Saudi Arabia, which shows that in the majority age group (41-50), most of the school teachers have the desire to participate in a training course [13]. Also, our result strongly agrees with the study done in Saudi Arabia-Hail city by Alshammari KO, (2021) which demonstrates that the mean age is 39±7.8 the majority of teachers were married, more than half of them have not participated in training course, the majority of samples have a desire to participate in training course (87%), and most teachers use social media as sources of information [4]. The average of teachers who received basic life support training sessions in the present study was found to be very low because most of the teachers had not attended any training course. This finding is consistent with studies that shows that lowest percentage of teachers



having attended training courses in the school, 40% in Greece [14], % 30% in Saudi Arabia [13]. 50% in Spain [15], 8.9% in South Africa [16] 3 % in Ethiopia [17], 42% in Palestine [18], 24.2 % in Indonesia [19]. In the current finding, there was no significant difference between teachers who attend training courses with those attend training courses. This result is in is agreement with the study in Greece that found that those teachers had a higher level of knowledge than their non-trained counterparts [14]. Variety among countries regarding rules and regulations could be one of the factors the affects the difference between the two results of the study. The educational program regarding basic life support does not involve a school curriculum, and is not mandatory, among school teachers in our country when compared to other countries. Regarding sources of information, the present study found that most teachers got information from formal learning like seminars, webinars, workshops and training courses. In addition, the next source comes from social media. This finding is in disagreement with a study done in Saudi Arabia by. Sara A. alzherei, et al20. Most school teachers, sources of information come from social media while the lowest come from informal learning. The present studies demonstrate the signaled low scores in overall levels of CPR among school teachers because most of them do not participate in any educational program or training course and do not have the opportunity to participate in workshops and seminars. In addition, no extra supports are present to improve the knowledge and skill of teachers regarding basic life support in school. The school teachers faced many barriers in their lives that did not allow them to participate in educational programs or training courses regarding basic life support. These issues

sometimes lead you to situations that are dependent on teachers' personalities or school situations; on the other hand, the responsibility is related to the general directorate of education. All those factor cause school teachers to have poor knowledge and practices regarding basic life support. Most teacher do not attend any training courses in the school, and the educational program content in the school curriculum does not present any subject of basic first aid. A lack of training in teachers may also contribute to the curriculum of higher education (university degrees) that does not contain basic support, even in the colleges of science and physical activity. For this reason, our school teachers have poor skills. Most teachers agree that training Most teachers agree that basic life support should be mandatory teachers in school. Some of responders fear causing harm to victims and fear transferring communicable diseases like Corona virus during mouth-to-mouth breathing [3]. The majority of the present investigation reported that the levels of practices among school teachers were very low. This finding is compatible with a study done in Palestine, Hebron city by Ghraib FA, et al. in 2017 that showed a low level of practices toward basic life support [18]. The current study findings regarding basic life support practices were similar to those of the study done in South Delhi by Jacob OM et al, (2018) that showed a low score percentage in CPR (15%), and choking (10%) [20] because the majority of school teachers had not attended training courses. A similar outcome was investigated in Egypt by Abu-Elenen NRM, which showed that the majority of basic life support poor performance [21] Our finding, regarding CPR practices is in agreement with a study done in Iraq-Baghdad (2016) that shows



most school teachers have very weak CPR practices[22].

CONCLUSION

The majority of school teachers in basic school have poor performance about CPR, the majority of them have not attended previous training course. There was a significant association between performance in CPR and some socio-demographic variables like age group, gender, years of experience, and desire attend CPR training courses.

Conflict of interest

There was no conflict of interest during the conducted study.

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