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### Knowledge and Attitudes of Primary School Teachers Toward First Aid in Al-Najaf Al-Ashraf City

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#### KEYWORDS

Knowledge,  
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#### A B S T R A C T

The current descriptive cross-sectional study aimed to assess participants' knowledge and their attitudes toward first aid, as well as, to find any significant relation for teachers socio-demographic characteristic with their knowledge and attitudes regarding first aid. Therefore, by using SPSS a simple random sample of thirty governmental primary schools were selected, and then 302 primary school teachers were selected randomly. The result showed that 287 (95%) of participants had total fair knowledge and only 15 (5%) of participant teachers had poor knowledge, besides no one of them had good knowledge. With regard to teachers' attitudes towards first aid, the results showed that 282 (93.4%) of the teachers commonly had a positive attitude toward first aid. With respect to the relation of participants' socio-demographic data with their knowledge levels no significant association was determined but for monthly income. The final conclusion and summary of the study showed unsatisfactory knowledge about first aid in spite of teacher retaining a good general knowledge about the goals and benefits of first aid, thus the establishment of mandatory training sessions for teachers at the beginning of each academic year is intensely recommended. It is worth mentioning, that despite the teachers' positive attitudes towards first aid, an observed weakness in their responses about attitude for medical conditions that obligates providing first aid noted, which seems due to lack of knowledge and awareness about these situations where it can be improved through first aid programs and educational sessions or at least through health bulletins.

### Introduction

Unintentional injuries encountered in the childhood are a global public health problem and are to be found as a first order among

the causes of morbidity and mortality. Across the world, at least 875 000 children aged below 18 years decease due to

unintentional injuries yearly and more than 95% of these deaths happen in countries with low and middle income levels (Altunda & Öztürk, 2007; İnanç, Baysal, Coşgun, Taviloğlu, & Ünüvar, 2008; WHO, 2006). Injuries and sudden illnesses are an essential issue in public health and usually occurring at any times of daily life. Besides, school children injuries take a major part. Unintentional playground injuries occurring during school hours and includes falls, head injuries, wound bleeding and others (Salminen, Kurenniemi, Raback, Markkula, & Lounamaa, 2014). Accidental injuries are usually categorized based on their happening, for instance: burns, scalds, poisoning, falls and drowning,...etc. (WHO, 2010). Also, school aged children exposed to numerous kinds of epidemiological factors in the school which impact their current and upcoming condition of health (Masih, Sharma, and Kumar, 2014).

A significant part of children's life is school lifetime, which directly affect their physical and mental health (Olympia *et al.*, 2005; Thyer, 1996). Unfortunately, school health services are ignored in some countries particularly the developing ones. This contributes to shortage in awareness and knowledge regarding sudden illnesses and first aid measures (Bhatia *et al.*, 2009). Children's times mostly spend in school under direct supervision of teachers. Consequently, first-aid should be well-known by teachers who are the key personnel to deal with urgent health needs during school hours (Masih *et al.*, 2014).

Teachers are almost the first and the main caregiver represented the first line to protect school children, in addition, teachers' role complements the parent's role. School teachers during the school hours, are the real first-respondent to emergencies, injuries resulting from school accidents. Therefore, they have to be capable to act accurately

with health emergencies affected the school children (Barrett, 2001; Sönmez, Uskun, & Pehlivan, 2014; Uskun, Alptekin, Öztürk, & Kişioğlu, 2008).

The first aid is an urgent attention delivered to victims of sudden illness or injury until medical helps arrive. So that, early treatment of such emergencies decreases morbidity and deaths among school aged children (Abdella, Abu-Elenen, Elkazaz, & Moussa, 2015; Khatatbeh, 2016; Singer, Gulla, Thode Jr, & Cronin, 2004).

First aid is complex and situation specific, so that more informed and better trained, first aiders are more eligible to deal with unexpected illness or sudden injury (Saubers & Iannelli, 2008). First aid can be obtained by everybody and comprises self-care, so that first aider can be any person exist in the scene of emergency and provides such care like parents, teachers, policeman, fireman, first responder, professional medic, etc. (Piazza, 2014; Singletary *et al.*, 2015). The field of first aid is affected by both training and regulatory constraints. Therefore, the definition of this scope mutable and could be defined regarding to surrounding circumstances, needs and regulations (Singletary *et al.*, 2015).

There are three main objectives for first aid, firstly to preserve life, not merely victim's life, but first aider's life as well. Because if first aider put his/her life in danger might ends up struggling for his own life instead of the victim's. Secondly to avoid worsening of condition.

The third aim of first aid is to encourage recovery, which means first aider actions should assist injured person toward improvement, certainly after preventing situation from getting worse (Barraclough, 2015).

There is a lack in scientifically sound data and only few studies are concerned with this subject in Iraq, in addition, physicians and health care providers are not present in the Iraqi schools (Al-Robaiaay, 2013).

This study aimed to assess the level of knowledge and attitude of primary school teachers toward first aid at primary schools of Al-Najaf city, and also, to identify the relationship between the level of knowledge and attitudes of primary school teachers toward first aid and their socio demographic characteristic.

### **Methodology**

By using a descriptive design, a cross-sectional study was carried out with analytic utility. A self-administered questionnaire composed of three parts was used, the first part included inquiry regarding socio-demographic characteristic of participants, and the second part included questions concerning knowledge about first aid which was divided into six domains (38 questions), while the last part included questions regarding teachers' attitude toward first aid and also it was sub-divided into three domains (12 questions).

### **Sample Size and Sampling Technique**

Sample size was calculated according to the standard equation cross-sectional studies was used, (Charan & Biswas, 2013; Hajian-Tilaki, 2011; Naing, Winn, & Rusli, 2006). A total of 30 primary schools were randomly selected from the total number of primary schools in Najaf city. The teachers at the level of each school were selected by simple random sampling technique, 320 primary school teachers were selected and provided with a self-administered questionnaire. The data collected from 10<sup>th</sup> February through 13<sup>th</sup> April 2016. Finally,

only (302) questionnaires were acceptable for analysis due to missing or incomplete data .

### **Statistical Analysis**

By using statistical package for social sciences (SPSS), version 23. All the scale variables were normally distributed with small Skewness and Kurtosis in some variables. Appropriate statistical tests were used accordingly, P. value  $\leq 0.05$  considered significant difference or relationship.

### **Results and Discussion**

A total of 302 primary school teachers were enrolled in this study, with a mean age of  $43.5 \pm 9.1$  (range: 22 - 62) years. Majority of participants aged more than 30 years. Females represented 76.5% of the studied group. (97.4%) participants of urban residents, (87.1%) were married, (79.8%) participants had at least one child. Nearly half of the participants had a monthly income of 700-1000 thousands IQD, while 87 (24.5%) had an income of < 700,000 IQD and (20.2%) had a monthly income of > 1000, 000 IQD (Table 1). More than two thirds of participants, (69.9%), had an institute level of education and 27.2% had a college level while only 3% had higher education. Majority (78.8%) of the participant teachers had an experience of more than 10 years. (Table 2). One hundred eighty four teachers, (60.9%), claimed they had a previous information about first aid, and (22.8%) get their information via reading (35.1%) via Television and mass media and (15.6%) through training courses while (10.9%) get their information through previous experience and (10.9%) from the internet. However, some teachers obtained their information about first aid from more than one source of information (Table 3). Additionally, teacher's responses concerning

general information about first aid was good with a mean score of (2.47), regarding the domains of first aid for bleeding, bone injuries, medical emergencies, burns and bites...etc. had fair evaluation concerning participants' responses with a mean score of (1.81, 1.79, 1.97, 1.85 & 1.82), respectively (Table 4). According to the overall evaluation of participants' knowledge about first aid, 287 participant teachers (95%) had fair knowledge, and only 15 (5%) had poor knowledge, while none of the participants had good overall knowledge about first aids in primary school, hence, the evaluation of overall knowledge was fair with a mean score of (1.95) (Table 5).

No statistically significant association was found between the overall knowledge score of participants with socio-demographic characteristics, ( $P > 0.05$ ), except significant correlation with participant's monthly income ( $P = 0.025$ ), (Table 6).

Regarding attitude, majority of the participants, (98.3%), had positive attitude toward learning first aid, the mean score for this domain was (4.15). For the giving first aid domain, 94% of participant teachers had positive attitude and showed clearly the desire to give first aid when needed, the mean score for this domain was (3.6). The third domain concerning the attitude toward medical conditions, the score was lower than aforementioned two domains; 194 (64.2%) of participants had positive attitude toward this domain and, unfortunately, 108 (35.8%) had negative attitude, nonetheless, the mean score of this domain was (3.15) which still within the overall positive attitude. Additionally, the overall mean score for all domains of attitude, was (3.7) giving an evaluation of overall positive attitude toward first aid among studied group, on the other hand, 282 participants (93.4%) had an overall positive and only 20 (6.6%) had an

overall negative attitude toward first aid, these findings are demonstrated in (Table 7 and Figure 1).

Furthermore, it had been found that positive attitude was significantly associated with urban residence, and the longer years of experience, 21- 30 years, ( $P < 0.05$ ). No statistically significant association had been found between attitude and other variables, ( $P > 0.05$ ) (Table 8).

The present study included a group of (302) Iraqi primary school teachers with a mean age of 43.5 (range: 22-62) years, besides, the mainstream of participants' age was above 40 years (Table 1). This finding is similar to a study done by Sunil Kumar *et al* in 2013, which reported that majority of participants were above 40 years of age (Kumar *et al.*, 2013). Furthermore, female was the dominant gender, and represented almost three quarters of the studied group. These findings may come back to that females are having better desire and more willing than males to work in the primary education sector in addition, the working time in schools are utmost appropriate for females in Iraq. Moreover, an Indian research conducted in 2014 by Shobha Masih *et al.*, reported that the female gender was the predominant gender, (94%) of teachers (Masih *et al.*, 2014). From other point of view, vast majority of school teachers in the present study were resident in urban areas, which is consistent with the demographic distribution of Al-Najaf province that confirm this fact, where more than 70% of Al-Najaf population dwelling in urban areas (NCPP, 2012), in addition, the present study conducted in the urban areas (Al-Najaf city). According to (Table 2) majority of participants had an experience in education more than ten years (>78.8%), and this attributed to reduction in the employment rate by Ministry of Education in the last

years which lead to reduction of numbers of recently employed teachers. Concerning previous information on first aid among participants, almost (61%) of participants had previous information about first aid and when they were asked about the source of these information, it appeared that reading and (TV & mass media) were more frequent sources of information about first aid, followed by reading and training course, while previous experience and interned had the lowest score. Likewise, Al-Samghan *et al* from Saudi Arabia reported that 76.3% of teachers gained their information from TV and mass media (Al-samghan, Al-shahrani, & Al-shahrani, 2015). During the current study only 47 (15.6%) of participant teachers alleged that they obtained their information from training courses. This low number is at first step related to absence of any training programs for teachers regarding first aid at Iraqi schools (Al-Robaiaay, 2013). Similarly, the current study agreed with other works done in Saudi Arabia and China, that their results revealed similar numbers which less than 30% of teachers were trained on first aid or at least received some lectures for it (Al-samghan *et al.*, 2015; Li, Jiang, Jin, Qiu, & Shen, 2012). Also, our findings regarding preceding first aid training were in contrast with result of previous studies done in Turkey, Poland, France, and Australia, that are interested in first aid programs in schools, and showed higher proportions of teachers whom received previous training during different stages of their career, and about 60 – 70 % of teachers in these studies received previous training on first aids, due to wide applying such programs for training on first aid in these countries, even if it were not mandatory, regardless of quality of such programs (Ammirati, Gagnayre, Amsallem, Némitz, & Gignon, 2014; Reveruzzi, Buckley, & Sheehan, 2016; Wiśniewski & Majewski, 2007; Yurumez, Yavuz, Saglam,

Köken, & Tunay, 2007). Regarding internet, the present study showed that only (10.9%), of participants were obtained information from this source, in which it is quite similar to the findings of Abd-el-Ghany *et al*, in 2014 in which revealed that the internet had the lowest score (14.1%) among other sources of information (Abd el-Ghany, Adel, Amen, Sayed, & Nady, 2014). This can be clarified as the nature of social media (e.g. Facebook, YouTube and twitter etc.) that usually widely used by society for social, political, Entertaining, communicative and profit purposes rather than educational aims. As well, concerning previous experience of participants in the current research toward situations and conditions that needed first aid, only (33) teachers experienced such conditions, this disagreed with a study done in Mangalore, India in 2015 in which stated that (88) teachers faced such situation, while (74 out of 88) teachers handled with it (Nitin Joseph *et al.*, 2015). The reason might be due to few serious accidents happening in Iraqi schools or due to the absence of records that confirm such situations. The discrepancy in the findings regarding the sources of information about first aids among different studies might be attributed to the demographic, cultural, governmental and regulatory differences among these populations in different countries. Concerning assessment of overall teachers' knowledge on general information about first aid, current finding revealed that (70.2%) of the respondents had an overall good knowledge on general information about first aid, which giving the impression that the teachers having a good general perception and information on first aids' purposes and priorities, however, unfortunately when the teachers, asked a more deeply and specific question on first aider qualification only 12.7% of them answered this question correctly, this finding



supported by a study done in 2013 by Kumar and others and found that 97.3% of teachers heard about first aid in general while when the questions get more complexity the participants were found to have unsatisfactory knowledge on first aid (S. D. Kumar *et al.*, 2013). Moreover, regarding the overall respondents' knowledge about first aid for wounds and bleeding, it was fair for this domain, however, (3.3%) had good knowledge, (53.3%) of the participants had fair knowledge and (43.4%) had poor knowledge concerning this domain. In details, the questions such as epistaxis management, stopping the bleeding and washing wounds by running water to decrease the risk of infection were answered correctly as (21.2%), (19.2%) & (48.3%), respectively. present result was in same line with two other studies one done in Iraq by Al-Robaiaay in 2013 and the other one conducted in India in 2014, in both of them majority of participants answered questions regarding epistaxis and means to stop bleeding incorrectly (Al-Robaiaay, 2013; Dasgupta, Bandyopadhyay, & Das, 2014).

Furthermore, the teachers' responses to questions regarding bone and joint injuries, showed that most answers ranged from poor to fair assessment, except one question. As well, the overall evaluation of this domain was fair. Moreover, current findings agreed with study done in 2015 by Abdella *et al.*, in Saudi Arabia, in which the pre-test results showed only 12% of teachers sustained satisfactory knowledge regarding first aid for fractures (Abdella *et al.*, 2015). Additionally, Kumar and others in 2013 found similar results to current study, which more than 55.7% of teachers said to avoid movement the fracture site and 19.6% of them answered correctly question regarding supporting fracture site (Kumar *et al.*, 2013); whereas in current study the correct

responses percentage were 55.3% & 16.6%, respectively. Moreover, in existing study results, lower correct responses to questions regarding types of fractures, immobilization of fracture and first aid for open fractures & joint injuries had been found, in which might be attributed to dearth of both previous training and former information about first aid. In addition, first aid knowledge of teachers concerning medical conditions revealed insufficient (poor) knowledge regarding seizure attack, asthma attack & poisoning while the other responses varied between fair and good assessment. Total 89.1% of teachers sustained an overall knowledge evaluated as fair domain. Regarding knowledge on seizure attack the results of current study evaluated as poor which agreed with findings of Joseph and others in 2014 which only 13.8% of participants acceptably responded to knowledge about seizure's first aid (N Joseph, Kumar, Babu, Nelliyanil, & Bhaskaran, 2014). As well, teachers' perception and knowledge about questions regarding asthma evaluated as poor in the current research, which reinforced by Faisal Alnasir study in Bahrain in 2004 who agreed with current study result that school teachers had poor knowledge regarding asthma management, as well, Govender and Gray results in study done in south Africa in 2012 determined that teachers' knowledge on asthma and its care was deficient and needed training programs to improve it (Alnasir, 2004; Govender & Gray, 2012). Furthermore, the current study result concerning diabetes emergency was good in which (53.6%) of teachers responded correctly, this finding was close to that of Al-Samghan *et al.*, study in which 46.5% of teachers had correct knowledge on hypoglycemia management at school, while it found to be more higher in study applied in 2015 by Mobarak *et al.*, which reached around 76% for untrained participants (Al-

samghan *et al.*, 2015; Mobarak, Afifi, & Qulali, 2015). Generally, insufficient knowledge among primary school teachers was observed in the current study, which indicates a lack in the participants' information regarding such conditions. The existing study found that 64.9% of participants sustained an overall fair knowledge for questions on burns, which is inconsistent to the finding of Joseph and others who found that (80.8%) of teachers sustained good knowledge regarding burn first aid, which might be related to the fact that nearly half of participants were trained on first aid previously (Nitin Joseph *et al.*, 2015). Questions about dog's bite and insect stings obtained poor assessment in which only 9.9% and 14.2% of teachers answered them correctly, respectively. This result agreed with Snomez *et al.*, outcome who found that only 16.4% of teachers had correct knowledge about dogs' bite immediate care, besides, in 2006 the pretest result of Devi found that only 6.77% of teachers had adequate knowledge for both animal bites and insects' stung; as well, Baser and others outcomes in 2007 noticed that more than 50% of teachers ignorant to accurate care for insect stings (Başer, Çoban, Taşci, Sungur, & Bayat, 2007; Devi, 2006; Sönmez *et al.*, 2014).

Totally, the result of current study revealed overall fair knowledge about first aid among teachers, while only (5%) of teachers had poor knowledge about first aid (Table 6). This may be due to the ease of most of the questions, and the use of self-administered questionnaire in which obtaining answers from other sources couldn't be excluded. The findings and evaluation of the teachers' knowledge in the present study, lead to consider teachers' responses as unsatisfactory, especially if take into account that majority of questions was not practical but theoretical. While, a study done

in Baghdad found that (77%) of participants had poor knowledge, which is lower than the current study in Al-Najaf, whereas, the majority of teachers had overall fair assessment (Al-Robaiaay, 2013); which may be due to variances in profoundness of asked questions. However, the overall assessment of this study agreed with Sunil Kumar study in 2013 which revealed that most of teachers' responses ranged from poor to fair for knowledge regarding first aid (S. D. Kumar *et al.*, 2013). Subsequently, greatest proportion of research's regarding school teachers' information about first aid, found unsatisfactory knowledge (either poor or fair), and needed to be improved by regular training programs (Al-samghan *et al.*, 2015; Devashish, Gaurav, & Bharat, 2013; Hırça, 2012; Nitin Joseph *et al.*, 2015; Li *et al.*, 2012; Li, Sheng, Zhang, Jiang, & Shen, 2014; Sönmez *et al.*, 2014; Sosada, Zurawiński, Stepień, Makarska, & Myrcik, 2002; Yurumez *et al.*, 2007). Concerning participants' attitude toward first aid (Table 7), the present study found that overall attitude of vast majority of teachers was positive, in which 93.4% of teachers had positive attitude, while only 6.6% of participants' had negative attitude, toward first aid, which can be explained by the noble humanistic values in our Arab societies, and especially Iraqi society that is well recognized for desire to help others. Likewise, the existing study results are analogous to studies done by Chinese researchers Feng Li *et al* in 2012 and Indian researchers Nitin Joseph *et al* in 2015, in which stated that majority of teachers had positive attitude toward first aid regardless of level of knowledge about first aid (Nitin Joseph *et al.*, 2015; Li *et al.*, 2012). With respect to questions about importance of first aid learning, the result of current study exposed positive attitude among overwhelming majority of teachers toward learning first aid. A similar finding was

informed by Joseph and others in 2015, in which majority of teachers' attitude was positive toward learning first aid (Nitin Joseph *et al.*, 2015). Concerning questions about attitudes in the direction of providing first aid, positive attitude was reported by

current study, but slightly, it was lower than rates in the direction of learning first aid, in which also agreed with findings by Engeland *et al.*, in 2002 and Li *et al.*, in 2012 (Engeland, Roysamb, Smedslund, & Sogaard, 2002; Li *et al.*, 2012).

**Table.1** Socio-demographic characteristics of the studied group (N = 302)

Characteristic		Frequency	Percentage
Age (year)	21 – 30	30	9.9
	31 – 40	98	32.5
	41 – 50	103	34.1
	> 50	71	23.5
Gender	Female	231	76.5
	Male	71	23.5
Residence	Urban	294	97.4
	Rural	8	2.6
Marital Status	Married	263	87.1
	Single	20	6.6
	Widow	15	5.0
	Divorced	4	1.3
Number of children	None	61	20.2
	1 – 2	43	14.2
	3 – 4	124	41.1
	5 or more	74	24.5
Monthly Income (x 1000 IQD)	< 700	87	28.8
	700- 1000	154	51.0
	≥1000	61	20.2



**Table.2** Educational level and years of experience of the participants

<b>Variable</b>		<b>Frequency</b>	<b>Percentage</b>
Educational Level	Institute	211	69.9%
	College	82	27.2%
	Others	9	3.0%
Years of experience (year)	1 - 10	64	21.2%
	11 - 20	106	35.1%
	21 - 30	92	30.5%
	> 30	40	13.2%

**Table.3** Distribution of source of Information about first aid

	<b>Frequency</b>	<b>Percentage</b>
<b>Previous Information about first aid</b>		
Yes	184	60.9
No	118	39.1
<b>Source of information</b>		
Reading	69	22.8
Television and mass media	106	35.1
Training course	47	15.6
Previous experience	33	10.9
Internet	33	10.9

**Table.4** Responses of participants regarding first aid domains

<b>First Aid Domains</b>	<b>Mean Score</b>	<b>Evaluation</b>
General information about first aid	2.47	Good
Wounds and Bleeding	1.81	Fair
Bone and joint injuries	1.79	Fair
Medical situations (epilepsy, DM, asthma, ... etc.)	1.97	Fair
Burns	1.85	Fair
Bites, stings & foreign body	1.82	Fair

**Table.5** Evaluation of teachers' overall knowledge about first aid

Overall knowledge	Frequency	Percent
Fair	287	95.0
Poor	15	5.0
Total	302	100.0

**Table.6** Relationship between overall knowledge of participants and their socio-demographic characteristics

Socio-demographic characteristic		Overall knowledge				P.value
		Fair (n=287)		Poor (n=15)		
		Frequency	percent	Frequency	percent	
Age (year)	21 - 30	26	86.7	4	13.3	0.10
	31 - 40	96	98	2	2	
	41 - 50	98	95.1	5	4.9	
	> 50	67	94.4	4	5.6	
Gender	Male	65	91.5	6	8.5	0.98
	Female	222	96.1	9	3.9	
Residence	Urban	280	95.2	14	4.8	0.32
	Rural	7	87.5	1	12.5	
Marital Status	Married	249	94.7	14	5.3	0.71
	Single	20	100	0	0	
	Widow	14	93.3	1	6.7	
	Divorced	4	100	0	0	
Number of children	None	57	93.4	4	6.6	0.22
	1 - 2	42	97.7	1	2.3	
	3 - 4	115	92.7	9	7.3	
	5 or more	73	98.6	1	1.4	
Educational Level	Institute	202	95.7	9	4.3	0.29
	College	77	93.9	5	6.1	
	Others	8	88.9	1	11.1	
Years of experience	1 - 10	59	92.2	5	7.8	0.22
	11 - 20	104	98.1	2	1.9	
	21 - 30	86	93.5	6	6.5	
	> 30	38	95	2	5	
Monthly Income (x 1000 IQD)	< 700	79	90.8	8	9.2	<b>0.025</b>
	700- 1000	151	98.1	3	1.9	
	≥1000	57	93.4	4	6.6	

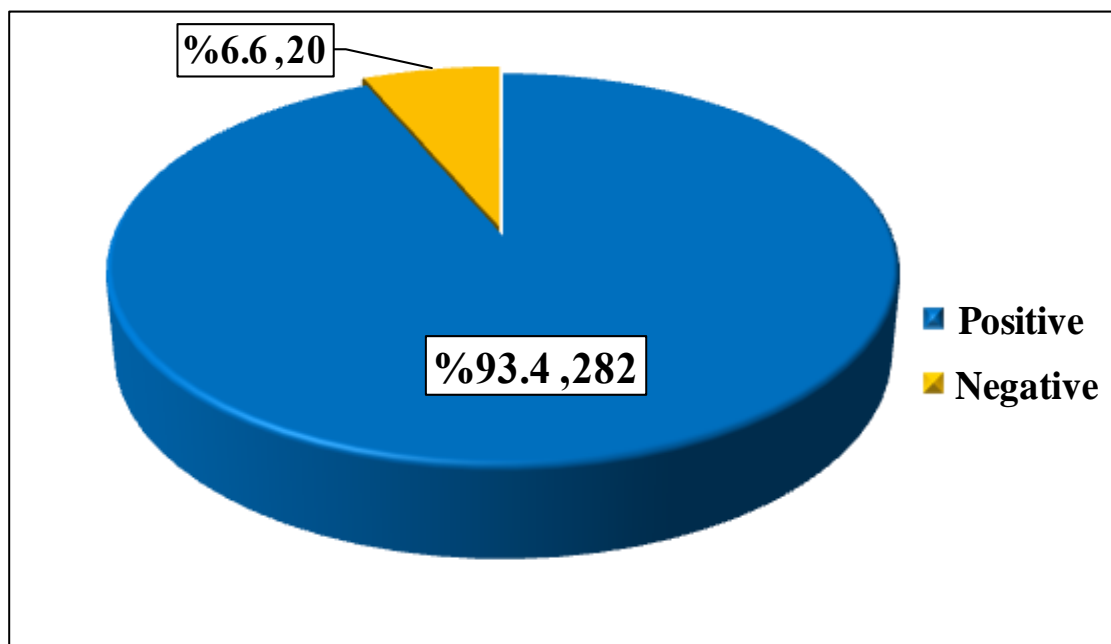
**Table.7** Frequency distribution of domains and overall attitude toward first aid of participant teachers (N=302)

Attitude toward	Positive		Negative		Mean score	Evaluation
	No.	%	No.	%		
Learning first aid	<b>297</b>	98.3%	<b>5</b>	1.7%	4.15	Positive
Giving first aid	<b>284</b>	94.0%	<b>18</b>	6.0%	3.6	Positive
Medical condition	<b>194</b>	64.2%	<b>108</b>	35.8%	3.15	Positive
Overall	<b>282</b>	93.4	<b>20</b>	6.6%	3.7	Positive

**Table.8** Relationship between attitude of participants toward first aid in schools and their socio-demographic characteristics

Socio-demographic characteristic		Attitude				P.value
		Positive (n= 282)		Negative (n=20)		
		Freq.	percent	Freq.	percent	
Age (year)	21 - 30	28	93.3	2	6.7	0.34
	31 - 40	93	94.9	5	5.1	
	41 - 50	98	95.1	5	4.9	
	> 50	63	88.7	8	11.3	
Gender	Male	66	93.0	5	7.0	0.87
	Female	216	93.5	15	6.5	
Residence	Urban	276	93.9	18	6.1	<b>0.034</b>
	Rural	6	75.0	2	25.0	
Marital Status	Single	15	75.0	5	25.0	0.40
	Widow	13	86.7	2	13.3	
	Divorced	4	100.0	0	0.0	
	Married	250	95.1	13	4.9	
Number of children	None	53	86.9	8	13.1	0.133
	1 - 2	40	93.0	3	7.0	
	3 - 4	118	95.2	6	4.8	
	5 or more	71	95.9	3	4.1	
Educational Level	Institute	197	93.4	14	6.6	0.70
	College	76	92.7	6	7.3	
	Others	9	100.0	0	0.0	
Years of experience	1 - 10	61	95.3	3	4.7	<b>0.003</b>
	11 - 20	100	94.3	6	5.7	
	21 - 30	89	96.7	3	3.3	
	> 30	32	80.0	8	20.0	
Monthly Income (x 1000 IQD)	< 700	82	94.3	5	5.7	0.23
	700- 1000	146	94.8	8	5.2	
	≥1000	54	88.5	7	11.5	

**Fig.1** Distribution of participant teachers according to their attitude toward first aids in schools, (N =302)



In addition, teachers' responses to the attitudes toward medical conditions was found positive but lower than attitudes toward learning and giving first aid. Generally, regardless of the unsatisfactory teachers' knowledge about first aid, the general trends of studies reported positive attitude towards first aid among teachers despite the disparities in rates, and even in some implemented educational program on first aid such as Kumar and others in 2016, in which pre-test results reported modest majority for positive attitude toward first aid, while it raised up to 93.3% in post-test results which reveals the importance of training not only for raising the level of knowledge, but also to improve the attitudes toward first aid (Kumar, Ghosh, & Jacob, 2016). The current study findings presented, that there was no significant relationship between teachers' socio-demographic characteristics and overall knowledge about first aid, except the monthly income. Consequently, the Iraqi researcher Al-Robaiaay in 2013 found that years of

experience were not associated with teachers knowledge (Al-Robaiaay, 2013); likewise, this finding was supported by Joseph *et al* results in 2015, in which stated that the level of knowledge was not associated with age, gender and years of experience (Nitin Joseph *et al.*, 2015).

In contrary, the study done by Sunil Kumar and others reported that a significant association found between teachers' knowledge and their (urban residency, experience above 10 years and educational levels) (Kumar *et al.*, 2013). Moreover, concerning teachers' overall attitude with socio demographic, no significant relationship was found except with urban residency and years of experience. Furthermore, the study done by Baser and others revealed that the socio demographic characteristic of participants had no significant relation to their knowledge and attitude regarding first aid (Başer *et al.*, 2007).

## Conclusions and Recommendations

The overall results of the knowledge of the teachers about first aid indicates a clear paucity of knowledge, which is due to a lack in educational and training programs in this field, which demonstrating the importance of first aid programs for teachers in order to help pupils, also, it reflects inadequate exploitation of social media, mass media, TV and internet for purposes of education on first aid. Additionally, the overall teachers' attitudes towards the first aid was very good, while, some of the negative attitudes about dealing with medical conditions in the classroom can be explained as a result of lack of knowledge about the health problems in general and first aid in particular, which also can be overcome by emphasizing on the importance of education and training in first aid and health programs. The current study recommends establishing mandatory courses for training teachers on first aid, using incentives for encouraging teachers to learn first aid, retaining a first aid box at each school, providing professionally trained nurses on first aid to work in schools, using mass media, posters and leaflets about first aid as tools for education about first aid

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