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RESEARCH ARTICLE

FIRST-AID KNOWLEDGE AND PRACTICE OF PRIMARY-SCHOOLS TEACHERS IN THE CATCHMENT AREA OF HAY AL-SALAAM AL-SAKANY PHC, BAGHDAD- IRAQ, 2018

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ABSTRACT

Background: First-Aid is the assessments and interventions that can be performed by stander (or by the victim) immediately with minimal or no medical equipment. Training is necessary to equip the First-Aid provider with the knowledge, skill and confidence to attend to an emergency. **Objectives:-**to assess the knowledge and practices of primary school teachers in catchment area of Hay Al-Salaam Al-Sakani PHC about the First-Aid. Method: Cross section study with analytic element, conducted in Baghdad during the period from February - august 2018. Eight schools out 23 schools, were choose randomly, 145 teachers who were work in choosing schools and accept to involve in this study. A structure questionnaire depending on The Iraqi Red Crescent guideline for First-Aid, and American college of emergency physician's First-Aid manual 5th edition; were used. Data entered statistical analysis and coding done. **Result**:145 teachers involved in this study, 64(44.1%) aged 40-49y, most of them females (93.8%), graduated institute (63.4%), married (77.9%), had1-3 child, (65.5%), job teaching (87.6%), had 11-18y experience (30.3%). the most teach material was Arabic, and only 44 (30.3%) applied First-Aid previously, most of the teachers 104(71%) do not involved in First-Aid training courses. teachers age had statistically significant with First-Aid general knowledge, knowledge about poisoning, fractures and burn(0.004, 0.009, 0.032, 0.012 respectively). Their educational level had statistically significant with knowledge about coma/epilepsy, fractures/teeth and burn. (P=0.031, 0.003, 0.008 and 0.023) respectively. **Conclusion:** In spite of that their knowledge about the First-Aid in general and in each type of accident (which can be occurring in the school) was good knowledge except in asphyxiation and electric shock were fair knowledge; Most of them not involve in First-Aid training courses, and did not applied any of First-Aid

Key words: Primary School Teachers, First-Aid, Wound, Perception, Practices

INTRODUCTION

Professionals working in the school environment, whether they are teachers or employees, should receive formal and ongoing training to deal with emergencies in the school environment, since school children and adolescents are more vulnerable to emergency situations due to developmental, physical and behavioral characteristics, including narrower airways, lower body mass and thinner skin, more susceptible to injuries (Sönmez *et al.,* 2014; Slabe *et al.,* 2016). Children and adolescents spend most of their day at school today, where they are liable to suffer accidental injuries due to the large number of group activities (Calandrim *et al.,* 2017). According to national First-Aid science advisory board, First-Aid should be learned by every person, for this it is necessary, that First-Aid training and education should be provided to everyone or universal (The National First-Aid Advisory Board, 2005; Lingard, 2002). In childhood, school life plays an important role for everyone. It has a great or direct impact on children's physical and mental development (Thyer, 1996). As the children come under the vulnerable group; they are more prone to get injuries and accidents especially when they are in school going age because at that time they are still maturing physically and mentally. In school; teachers are the first caregiver who protects the children from trauma and accidents. Every teacher should have the ability to deal with any health emergency condition, when a children need health care.

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The victim should get immediate management of any accidents or trauma for good and early prognosis (Wilson, 1930). Injuries are a relatively neglected health issue (Gosselin *et al.,* 2009), around 4.7 million people die annually as a result of intentional & unintentional injuries which together account for 8.5% of all deaths globally (Wang *et al.,* 2016; Vos *et al.,* 2016). In 2010, an estimated 11% of the total cause of disability- adjusted life years (DALYs) was attributed to injuries with over 90% of the DALYs lost occurring in low & middle-income countries (LMICs) (Mahajan *et al.,* 2013; Peltzer *et al.,* 2015). Non-fatal injuries occur more often than fatal injuries and have a significant impact on disability, productivity, cost of treatment & rehabilitation (Molcho *et al.,* 1998; Lescohier and Gallagher, 1996). it has been forecast that the magnitude of both non-fatal and fatal injuries will decline in high-income countries, but will continue to be a significant cause of death-injury event by trained clinicians and first responders, resulting in better outcomes for injured victims. The International Federation of Red Cross and Red Crescent Societies (IFRC) was states that while disability in the developing world over the next 20 years; (Gosselin *et al.,* 2009; Peltzer *et al.,* 2015) provision of First-Aid for injuries is a secondary preventive measure taken immediately after a First-Aid is by no means a substitute for emergency health services, it is a pivotal primary step for providing effective and rapid interventions to reduce serious injuries and increase the chances of survival. To be most effective, First-Aid should be provided immediately after the event (IFRC First-Aid for a Safer Future, 2017).

Objective: To assess the knowledge and practices of primary school teachers in catchment area of Hay Al-Salaam Al-Sakani PHC about the First-Aid.

METHODS

Study design: Cross section study with analytic element, conducted in Baghdad during the period from February - august 2018.

Sampling technique: There are 23 primary schools in the catchment area of hay al-salaam al sakany PHC, by random technique we choose 8 schools to involve in the study, Inclusion criteria all the teachers who were work in the 8 choosing schools and accept to involve in this study.

Study tools: We use a structure questionnaire depending on The Iraqi Red Crescent guideline for First-Aid, and American college of emergency physician's First-Aid manual 5th edition. It's consisted from first part: demographic feature of the teacher, second part: information about the First-Aid training courses, participant's First-Aid practice, First-Aid box and it's contains. Third-tenth part consists from (injuries, bleeding, epistaxis, electric shock, Asphyxiation, poisoning & chemicals, coma/epilepsy, fractures/teeth, and burns). Forth part about the source of information, need of training courses and their preferable place and any suggestions.

Pilot study and Expert's opinion: A structured questionnaire was employed to 20 teachers to evaluate it. Tested and validated with Reliability Statistics (Cronbach's Alpha= 0.878) We take opinion of 2 community physicians' experts, 2 family physician, and six Red-Cross-First-Aid trainings and their notes taken in consideration.

Ethical consideration : An oral consent was obtained before introducing the questionnaire to each teacher who was answer on separated paper. We explain all the questions of the teachers about the study and the questionnaire, and collected the forum after the teachers answer it.

Statistical analysis and coding technique

type	Coding OF knowledge
First-Aid in general = Q11	good (33-26), fair(25-18), poor=(≤17)
Injuries = Q10	good (30-23), fair =(22-17), poor =(≤16)
Epistaxis = Q6	good =(18-15), fair =(14-10), poor =(≤10)
Electric shock = Q9	good =(27-21), fair =(20-14), poor= (≤13)
Asphyxiation = Q8	good =(24-19), fair =(18-13), poor =(12-8)
poisoning & chemicals = Q5	good =(15-12), fair =(11-9), poor =(8-5)
Coma & epilepsy = Q8	good =(24-19),fair =(18-13), poor =(12-8)
Fractures = Q9	good =(27-21), fair =(20-14), poor =(13- 9)
Teeth = Q6	good =(18-15), fair =(14-10), poor =(≤10)
Burns = Q9	Good =(27-21), fair =(20-14), poor (13- 9)

RESULTS

In the current study the distribution of primary school teachers according to their aged 40-49y is 64(44.1%), females(93.8%), education level most of them institute(63.4%), marital states married(77.9%), children No.(1-3 child, 65.5%), job teaching(87.6%), of the total 145 teachers(30.3%) had 11-18y experience as shown in Table1. The highest percentage of teachers had teach the first and fourth classes, and the most teach material was Arabic followed by mathematics or both Arabic & mathematics, while the social science lowest material as shown in Fig 1 and 2.

Table 1. Distribution of the teachers according to their demographic features

		Frequency(N= 145)	Percent
Age	20-29 yr	4	2.8
	30-39 yr	43	29.7
	40-49 yr	64	44.1
	50 yrs and above	34	23.4
Gender	Male	9	6.2
	Female	136	93.8
Education	institute	92	63.4
	teachers house	21	14.5
	university study	27	18.6
	high education	5	3.4
Marital status	single	18	12.4
	married	113	77.9
	devoice/ separated	8	5.5
	widow	6	4.1
Children no.	Nil child	25	17.2
	1-3 child	95	65.5
	4-6 child	21	14.5
	7 child and above	4	2.8
Job	manager	9	6.2
	Associate Director	8	5.5
	guide	1	.7
	teaching	127	87.6
Experience years	3-10	26	17.9
	11-18	44	30.3
	19-26	42	29.0
	27-34	26	17.9
	35-42	7	4.8

Table 2. Distribution of the teachers according to their applying First-Aid, how often, and where

		F	%
Applied First-Aid previously	N0	101	64.1
	Not know	8	5.5
	YES	44	30.3
Total		145	100.0%
Numbers of First-Aid	once only	30	77.27
N= 44	two and more	14	31.18
Places of First-Aid	House	22	50.00
N=44	School	17	38.63
	Street	5	11.36

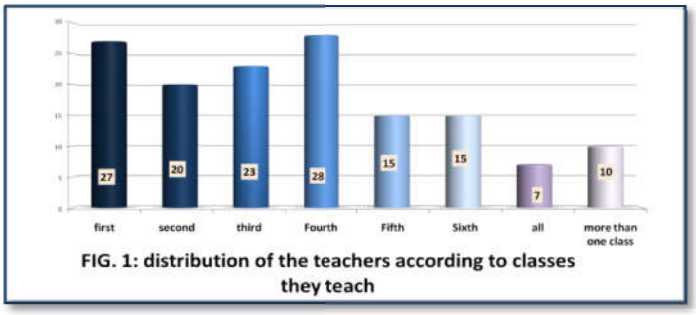

FIG. 1: distribution of the teachers according to classes they teach

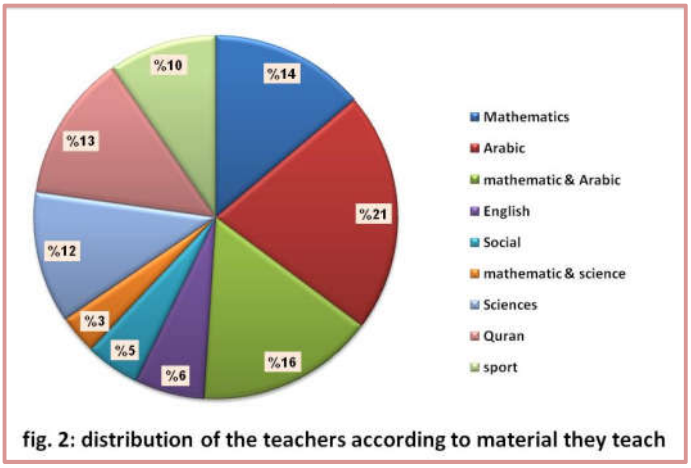

fig. 2: distribution of the teachers according to material they teach

Table 3. Distribution of the teachers according to their knowledge in general and in each type of injures can be happened in schools

		f	%			f	%
First-Aid general knowledge	Good	121	83.4	electric shock	good	62	42.8
	Fair	24	16.6		fair	83	57.2
Injures	Good	112	77.2	asphyxiation	good	38	26.2
	Fair	32	22.1		fair	101	69.7
	Poor	1	.7		poor	6	4.1
Epistaxis	Good	74	51.0	poisoning	good	110	75.9
	Fair	69	47.6		fair	26	17.9
	Poor	2	1.4		poor	9	6.2
Coma & epilepsy	Good	85	58.6	fracture	good	115	79.3
	Fair	58	40.0		fair	28	19.3
	Poor	2	1.4		poor	2	1.4
Burn	Good	112	77.2	teeth	good	77	53.1
	Fair	31	21.4		fair	66	45.5
	Poor	2	1.4		poor	2	1.4

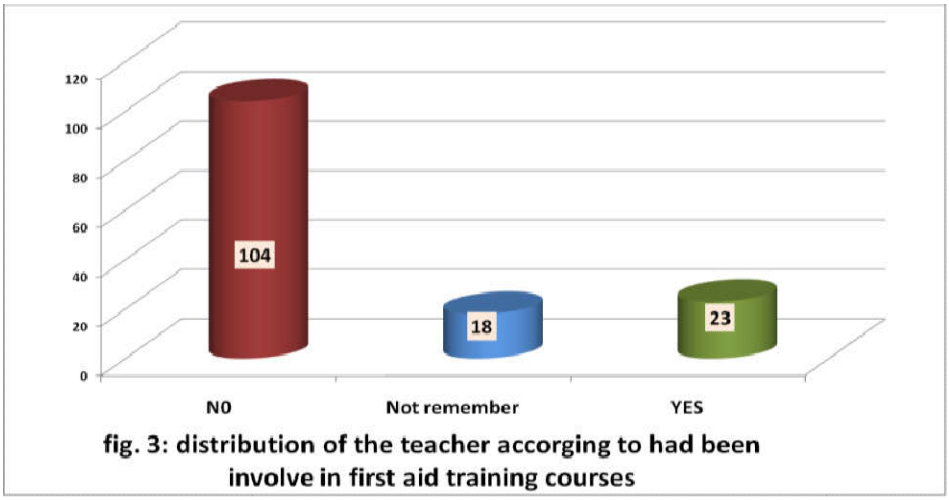

fig. 3: distribution of the teacher accorging to had been involve in first aid training courses

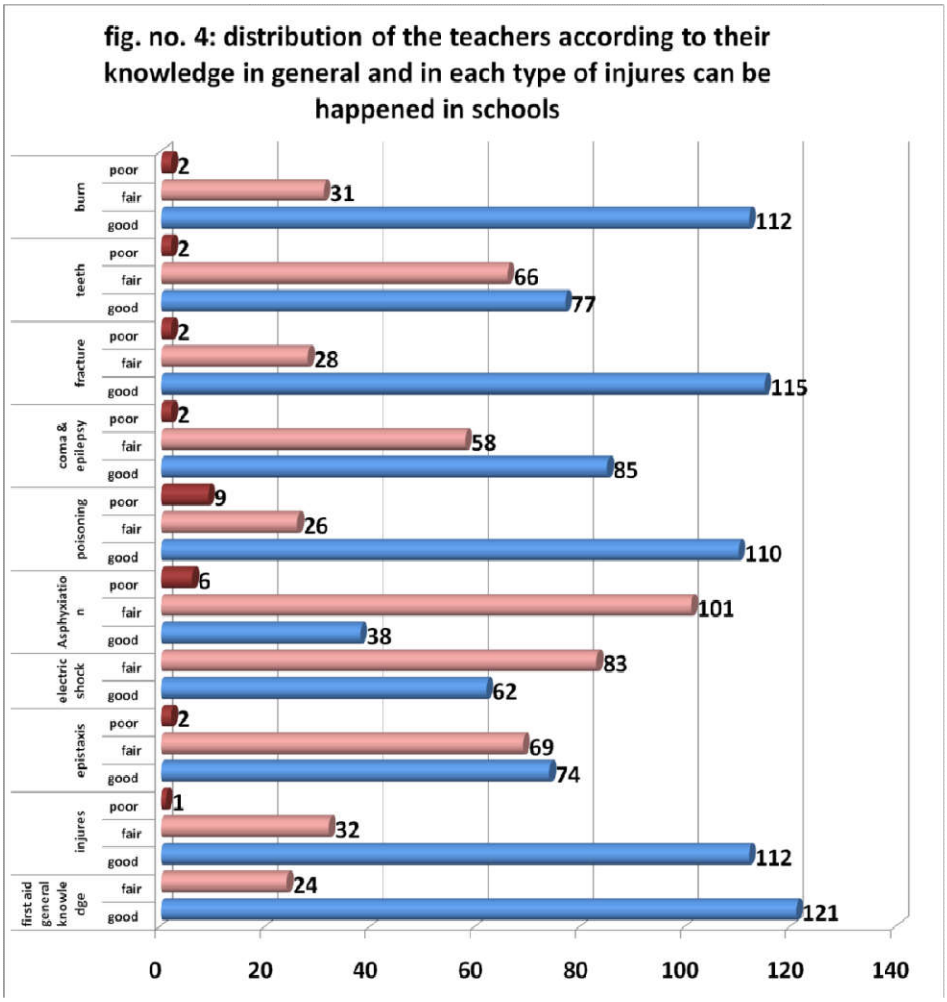

Table 4. Distribution of the teachers according to their information's' source:

	F	%		F	%
College and institutional years	49	33.8	educational ministry	34	23.4
Internet	25	17.2	more than source	15	10.3
Television	12	8.3	colleagues	8	5.5
Friends	2	1.5			

Table 5 Relation between the teacher's age and their knowledge in general and in each type of injures can be happened in schools

		Age				Total	p value
		20-29	30-39	40-49	≥50		
First-aid general knowledge	Good	1	33	56	31	121	0.004
	Fair	3	10	8	3	24	
Injures	Good	1	32	52	27	112	0.178
	Fair	3	11	11	7	32	
	Poor	0	0	1	0	1	
Epistaxis	Good	2	21	31	20	74	0.783
	Fair	2	21	33	13	69	
	Poor	0	1	0	1	2	
Asphyxiation	Good	0	12	17	9	38	0.917
	Fair	4	29	44	24	101	
	Poor	0	2	3	1	6	
Poisoning	Good	1	30	49	30	110	0.009
	Fair	3	7	12	4	26	
	Poor	0	6	3	0	9	
Coma & epilepsy	Good	0	23	41	21	85	0.110
	Fair	4	20	21	13	58	
	Poor	0	0	2	0	2	
Fracture	Good	1	30	56	28	115	0.032
	Fair	3	12	7	6	28	
	Poor	0	1	1	0	2	
Teeth & fracture	Good	2	20	39	16	77	0.706
	Fair	2	22	24	18	66	
	Poor	0	1	1	0	2	
Burn	Good	1	29	55	27	112	0.012
	Fair	3	14	7	7	31	
	Poor	0	0	2	0	2	
Electric shock	Good	0	14	32	16	62	0.092
	Fair	4	29	32	18	83	
Total		**4**	**43**	**64**	**34**	**145**	

Table 6: Relation between the teacher's educational level and their knowledge in general and in each type of injures can be happened in schools

		Education level				Total	p value
		Institute	Teaching house	College	High education		
First-aid in general knowledge	Good	72	18	26	5	121	0.107
	Fair	20	3	1	0	24	
Injures	Good	71	17	20	4	112	0.988
	Fair	20	4	7	1	32	
	Poor	1	0	0	0	1	
Epistaxis	Good	44	10	18	2	74	0.489
	Fair	47	10	9	3	69	
	Poor	1	1	0	0	2	
Asphyxiation	Good	24	8	5	1	38	0.166
	Fair	65	11	22	3	101	
	Poor	3	2	0	1	6	
Poisoning	Good	69	17	21	3	110	0.716
	Fair	16	4	5	1	26	
	Poor	7	0	1	1	9	
Coma & epilepsy	Good	53	13	17	2	85	0.031
	Fair	38	8	10	2	58	
	Poor	1	0	0	1	2	
Fracture	Good	68	20	23	4	115	0.003
	Fair	23	1	4	0	28	
	Poor	1	0	0	1	2	
Teeth fracture	Good	47	13	13	4	77	0.008
	Fair	44	8	14	0	66	
	Poor	1	0	0	1	2	
Burn	Good	69	17	23	3	112	0.023
	Fair	22	4	4	1	31	
	Poor	1	0	0	1	2	
Electric shock	Good	37	11	13	1	62	0.491
	Fair	55	10	14	4	83	
Total		**92**	**21**	**27**	**5**	**145**	

As it shown in Table 2 below, only 44 (30.3%) applied First-Aid previously 30 (77.27%) of their applied once time and 17 (38.63%) applied this First-Aid at school. As shown In Figure 3 most of the teachers (104) do not involved in First-Aid training courses and only 23 teachers involved and 18 teachers did not remember that the involve in such activity. The distribution of primary school teachers according to their knowledge in general and in each type of injures can be happened in schools, (83.4%) had good knowledge about First-Aid in general & (77.2%, 51.0%, 42.8%, 26.2%, 75.9%, 58.6%, 79.3%, 53.1% & 77.2%) about injures, epistaxis, electric shock, asphyxiation, poisoning, coma and epilepsy, fracture, teeth and burn respectively, as shown in Table 3, Fig. 4. In current study the distribution of the teachers according to their information source as shown in Table 4, more than 33.8% their information source from college and institution of years. Table 5 shown the relation between the teachers' age and their knowledge in general and in each type of injures can be happened in schools, this relation was statistically significant. First-Aid general knowledge (P=0.004), poisoning knowledge (P=0.009), fractures (P=0.032), burn (P=0.012), while in others not significant. Table 6 shows the relation between the teachers' educational level and their knowledge in general and each type of injures can be happened in schools, this relation was statistically significant in knowledge about coma and epilepsy, fractures, teeth fractures and burn (P=0.031, P=0.003, P=0.008 and P=0.023) respectively. Most of the teachers preferable to have the training courses in their schools as shown in the Fig. 6.

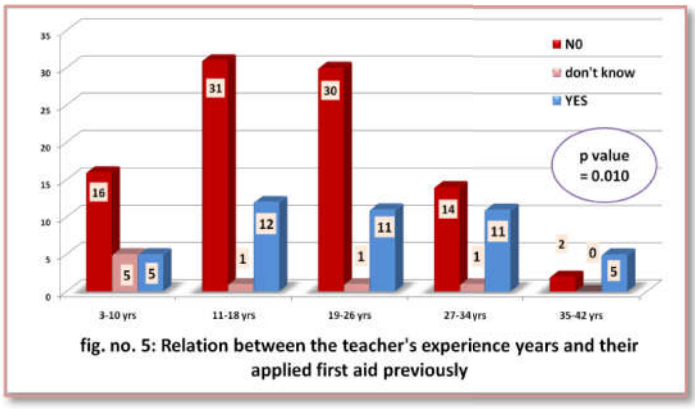

fig. no. 5: Relation between the teacher's experience years and their applied first aid previously

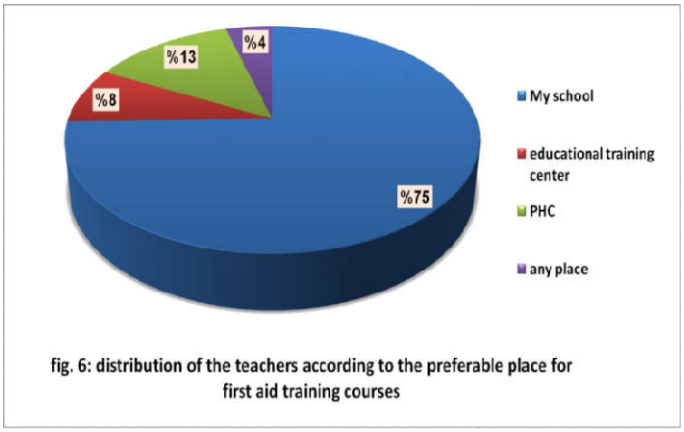

fig. 6: distribution of the teachers according to the preferable place for first aid training courses

DISCUSSION

The present study, In which 145 primary school teachers included, most of them aged more than 40 years old this finding similar to study done by Kummar 2016 Also female was the dominant gender and represent (93.8%) of participants, this because the working time in schools are most appropriate for females in Iraq. This is agreed the study done in Al-Najaf Al-Ashraf city 2016 and Masih study 2014 (Hussein, 2016; Masih *et al.,* 2014). Majority of participants in present study had an experience in education (11-18) years (30.3%) and this attributed to reduction in the employment rate by Iraqi Ministry of Education in the last years which lead to reduction of numbers of recently employment teachers this similar to study done in Al-Najaf Al-Ashraf city 2016 (Hussein, 2016).

Concerning previous experience of participants in the current research only (30.3%) of primary school teachers had previous training or applied 1st aid previously this is may be reflect deficient interest among teachers toward the importance of receiving training on First-Aid also its may be due to few series accidents happening in Iraqi schools or due to the absence of records that confirm such situations. This study similar to tow studies Al-Samghan 2015 and Al Nassir study 2004 (Al-samghan *et al.,* 2015; Alnasir, 2004) and disagree with study done and in India-Nitin Joseph, 2014; in which (61.9%) and (88%) respectively of teachers had previous training in the First-Aid. And also disagreed with other study done in Turkey 1997 Knowledge assessment of over all teachers on general information about First-Aid, current-finding revealed that (83.4%) of the participant had an overall good knowledge; which giving the impression that the teachers having a good general perception and information on First-Aid. This finding is similar to Kumar study 2016 (Kumar *et al.,* 2016). Also in the present study only (51.0%) had good knowledge about epistaxis and (75.9%) about poisoning, this is nearly to Awad Al-Samghan study 2015 were knowledge of First-Aid about epistaxis and poisoning (43.3%) and (31.0%) and Feldens study 2010 in Turkey (Feldens *et al.,* 2010) were the knowledge about poisoning was (31.0%). In present study the primary teachers had good knowledge about epilepsy and coma (58.6%), this is similar to Al-Samghan study 2015 while many studies demonstrated deficient knowledge about epilepsy among teachers both in developing and developed countries Kumar study 2016. In present study knowledge of teachers about teeth trauma was good (53.1%) compare to Fux-Noy study 2011 in occupied palastine (Fux-Noy *et al.,* 2011).

Concerning previous information on First-Aid among participants one third of participants had previous information about First-Aid and their source of information was appeared from college and institutional years and only (17.2%, 8.3%) from internet and TV, this is unlikely with Al-Samghan, 2015. From Saudi Arabia which report that (76.3%) of teachers gained their information from TV and mass media. Regarding internet, the present study showed that only seventeenth percent of participant were obtained information from this sources in which it is similar to the findings of Abd-Ghay study in 2014 in which revealed that the internet had the low source (14.1%) among all sources of information. In the present study there was significant relationship between teacher's age and knowledge about First-Aid in general, and that is may be as the age of the teacher's increases, appropriate First-Aid practice and confidence become more and more, this unlike the finding in Al-Robaiaay study in Baghdad 2013; in which stated that the level of knowledge had no significant associated with age (Al-Robaiaay *et al.,* 2013) and also in Joseph study 2014 (Joseph *et al.,* 2014). Finally there are significant association between teacher's educational level and knowledge in general, and this is similar to finding in Kumar study 2016.

Conclusion

In spite of primary school teachers had good knowledge about the First-Aid in general and in each type of accident, (except in asphyxiation and electric shock were fair knowledge); Most of them not involve in First-Aid training courses, and didn't applied any of First-Aid. Teachers' age had statistically significant with First-Aid general knowledge, knowledge about poisoning, fractures and burn. And their educational level had statistically significant with knowledge about coma/epilepsy, fractures/teeth fractures and burn.

Recommendations

Involve the teachers in practical training courses of First-Aid to encourage them to applying First-Aid when it's needed, and concentrated on asphyxiation and electric shock. Also enhance First-Aid practice in the school heath symposium not only to the teachers but to the students and other staff.

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