

# ASSESSMENT OF PRIMARY SCHOOL TEACHERS' KNOWLEDGE, ATTITUDE AND REPORTED PRACTICE TOWARD FIRST – AID IN HOLY KARBALA –IRAQ " A CROSS-SECTIONAL STUDY"

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## ABSTRACT

Children spend most of their time in schools, so they are more vulnerable to injuries and they may facing to severe accidents especially in the primary school stage. First aid becomes as important to keep children while they arrive at the medical facility. This study was aimed to assess the Primary School Teachers' Knowledge, Attitude and Practices regarding First-Aid.

**Methodology:** A descriptive cross-sectional study was conducted in 32 primary schools (selected randomly) in holy Karbala Province during the period from January - June 2019. The study included direct interviews and using a verified questionnaire. 438 Primary School's Teachers (PSTs) aged (23-62) years were engaging in study. The association between knowledge, attitudes, and practices, and various demographic factors were assessed using the *Chi*-squared test.

**Results:** Of 438 participants who responded (94.3% response rate), 266 (61 %) were male with mean  $\pm$  SD of their ages were (40.4 $\pm$ 8.7) years. Overall knowledge of PSTs was poor 62%. While the overall attitude of the participants was positive with accepted practices. It was shown that knowledge and attitude had a substantial positive relationship. Participants responded that the mass media was their primary source of first-aid information (80.0 %).

**Conclusions:** The findings indicate that participants lack a basic understanding of first aid. We suggest that all instructors should take first-aid training in cooperation with the school health unit within the primary health care centers.

**Key words:** Primary School, knowledge, Attitude, Practices, First-Aid.

## I. INTRODUCTION

Accidents may happen anywhere and at any moment, whether on the street, at home, or at school. They may even happen during school athletic events and while participating in extracurricular activities sponsored by the school. School pupils are more at risk of unintentional accidents because they are in their active hours and have gaps between lessons to play and be refreshed<sup>(1,2,3)</sup>.

First aid is the provision of immediate and basic care for an accident or disease by a person who is an untrained person until medical help arrives. The schools do not have primary care physicians on staff. As a result, instructors should have appropriate knowledge and experience in basic first aid skills in order to reduce morbidity and mortality among students as a result of injury-related problems<sup>(4)</sup>.

School instructors are the key ones who can assist pupils and administer first aid to them in the event of an unintentional school injury, preventing complications and, in rare cases, death. The early minutes are the optimum time to deal with an emergency. As a result, having a strong foundation in first-aid knowledge and techniques might potentially save a student's life. Therefore, teachers are the primary individuals who need to have first-aid knowledge and experience<sup>(5)</sup>. According to studies, 88 % of student injuries were caused by their physical activities, with over 20 percent - 24.5 percent of all activity-related injuries occurring during school hours. For example, only 5.4 percent of instructors in the United States have completed first-aid training,

moreover, it was indicated that many other institutions lack adequate knowledge and abilities in this area<sup>(6)</sup>. This research was aimed to assess Knowledge, Attitudes, and Practices for primary school teachers toward First-Aid skills.

## II. METHODOLOGY

**Study design:** A descriptive cross-sectional study was conducted during the period between January - June 2019, by using a pre-validated questionnaire-based survey with direct interviews. Prior, each teacher gave their verbal approval. Response rate was 94.3%.

**Sample size and technique:** To represent elementary schools in sacred Karbala Governorate, a two-stage random cluster sampling procedure was used to choosing 32 schools appropriate to size. A total of 438 educators, ranging in age from 23 to 72 years, were selected for this research using a simple random sampling method.

**Ethical approval:** It was gained from the Research Ethics Committee Directorate of Education in Karbala Governorate.

**Analysis of the data:** We used SPSS application version 24 for data analysis. The data were displayed as in numbers (N) and percentage (%), and Chi-square ( $\chi^2$ ) was used to perform the inferential statistical test, to examine the relationship between demographic information and participants' Knowledge, attitude, and practice after being coded. P-values  $\leq 0.05$  were considered significant. Knowledge, attitude, and practice domains of the school instructors connected with basic first-aid practices were assessed by 22 questions.

Rating & Scaling score determined based on the number of questions answered by the skill score graded as insufficient or adequate, each correct answer assigned (1) point, and wrong or uncertain responses assigned (0) points then, the sum of the responses for each members were calculated for Knowledge, attitude, and practice levels<sup>(7)</sup>.

## III. RESULTS

Four hundred and thirty-eight teachers completed their questionnaire form, among all instructors' 60.7% were males ( male : female ratio was 1.5:1) with no significant association. The mean $\pm$ SD of age for the teachers was (40.4 $\pm$ 8.7) years and 38.6% they were between the ages of 31 and 40 with statistically significant (P-value =0.04).

Most of the participants were married (72.2%)and (60.5%) had a Bachelor degree with highly statistically associations. The mean $\pm$ SD of professional working experience was (13.93  $\pm$  8.31) years and the highest percent was 37.9% worked for less than 10 years with positive relationship in Knowledge's and attitudes ( Table 1 & 2).

Table (1) distribution of study sample according to Knowledge and Attitude.

Variable's		Knowledge score						Attitudes score							
		POOR		ACCEPT		GOOD		P-	POOR		ACCEPT		GOOD		P-
		No.	%	No.	%	N	%		N	%	No.	%	No.	%	
Age (year)	20-30	49	11.	16	3.7	1	0.	0.04	3	0.7	14	3.2	49	11.	0.02
	31-40	10	23.	62	14.	5	1.		21	4.8	56	12.	92	21.	
	41-50	83	18.	44	10.	11	2.		16	3.7	25	5.7	97	22.	
	>50	36	8.2	25	5.7	4	0.		8	1.8	15	3.4	42	9.6	
Gender	Male	16	38.	85	19.	13	3.	0.7	32	7.3	65	14.	16	38.	0.7
	Female	10	23.	62	14.	8	1.		16	3.7	45	10.	11	25.	
Marital Stat	Married	19	43.	10	24.	19	4.	0.1	23	5.3	67	15.	22	51.	0.00

us	Unmarried	78	17.	41	9.4	2	0.		25	5.7	43	9.8	53	12.	
Qualification	Diploma	49	11.	55	12.	21	4.	0.00	5	1.1	24	5.5	96	21.	0.00
	Bachelor	17	40.	90	20.	0	0.		40	9.1	80	18.	14	33.	
	Postgraduate	46	10.	2	0.5	0	0.		3	0.7	6	1.4	39	8.9	
Experience (years)	<10	10	24.	55	12.	2	0.	0.00	28	6.4	46	10.	92	21.	0.04
	10-20	95	21.	61	13.	8	1.		16	3.7	44	10.	10	23.	
	20-30	64	14.	25	5.7	8	1.		3	0.7	19	4.3	75	17.	
	>30	2	0.5	6	1.4	3	0.		1	0.2	1	0.2	9	2.1	
Total		27	61.	14	33.	21	4.		48	11.	11	25.	28	63.	

Table (2) distribution of study sample according to Practice.

Variable's		Practices score								Total	
		POOR		ACCEPT		GOOD		P-Value			
		No.	%	No.	%	No.	%		No.	%	No.
Age (year)	20-30	28	6.4	24	5.5	14	3.2	0.009	66	15.1	
	31-40	37	8.4	105	24.0	27	6.2		169	38.6	
	41-50	38	8.7	75	17.1	25	5.7		138	31.5	
	>50	25	5.7	32	7.3	8	1.8		65	14.8	
Gender	Male	75	17.1	153	34.9	38	8.7	0.09	266	60.7	
	Female	53	12.1	83	18.9	36	8.2		172	39.3	
Marital Status	Married	97	22.1	163	37.2	57	13.0	0.2	317	72.4	
	Unmarried	31	7.1	73	16.7	17	3.9		121	27.6	
Qualification	Diploma	35	8.0	59	13.5	31	7.1	0.009	125	28.5	
	Bachelor	72	16.4	155	35.4	38	8.7		265	60.5	
	Postgraduate	21	4.8	22	5.0	5	1.1		48	11.0	
Experience (years)	<10	45	10.3	95	21.7	26	5.9	0.3	166	37.9	
	10-20	44	10.0	92	21.0	28	6.4		164	37.4	

	20-30	36	8.2	44	10.0	17	3.9		97	22.1
	>30	3	0.7	5	1.1	3	0.7		11	2.5
Total		128	29.2	236	53.9	74	16.9		438	100

\* mean±SD of age (40.4±8.7) years.

\* mean±SD of professional working experience (13.93 ± 8.31) years.

In knowledge domain. Totally, as overall assessment there was 62% of all participants had poor knowledge as showed in figure (1). Meanwhile, in table 3 only 60.3% from the study sample have awareness of the normal value of the vital signs.

Table 3: Distribution of the sample based on their knowledge .

Total participants N=438				
Knowledge Domain: Have awareness the first aid for...	Correct		Incorrect	
	No.	%	No.	%
What is the normal value of the vital signs	264	60.3	174	39.7
How to Measuring the vital signs	134	30.6	304	69.4
How to inject insulin into a diabetic patient	110	25.1	328	74.9
Cardiopulmonary resuscitation	95	21.7	343	78.3
In an emergency, how to use a fire extinguisher	85	19.4	353	80.6

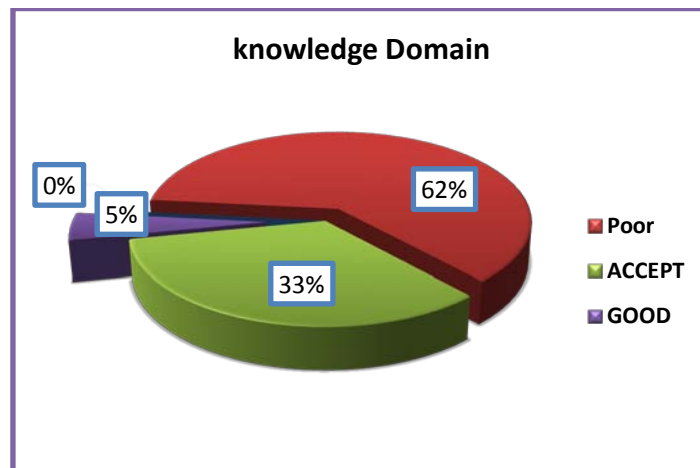


Figure ( 1 ): The Knowledge overall assessment

Regarding the Attitudes domain, the results shows the most of teachers have appositive attitudes 64% as in figure (2) and table (4).

Table (4):The Attitudes about First-Aid

Total participants N=438				
AttitudesDomain.	Agree		Disagree	
	No.	%	No.	%
It is the obligation of the instructor to provide first aid to children in distress.	368	84.0	70	16
Would you like to learn first aid.	364	83.1	74	16.
It is proper to provide extra attention to injured children.	345	78.9	93	21.

Are you prepared to provide emergency first aid to someone?	344	78.5	94	21.
Do you think important knowledge measuring the vital signs.	266	60.7	172	39.

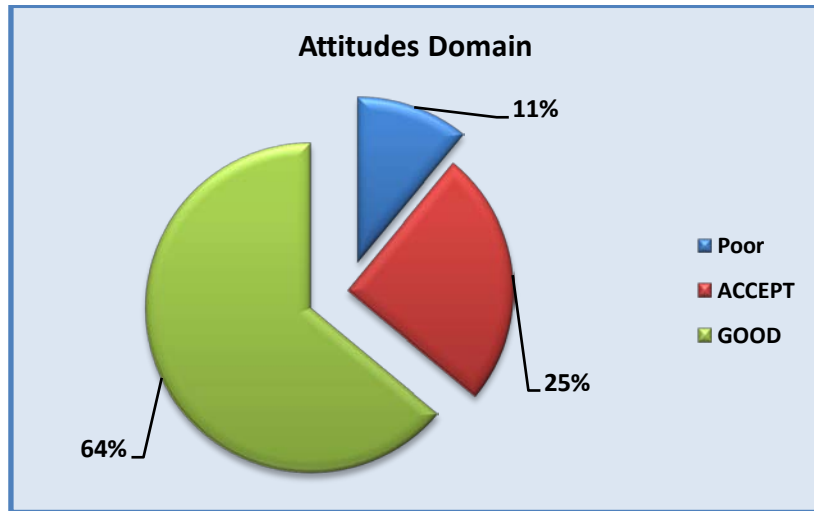


Figure ( 2 ): The Attitudes overall assessment.

In the Practices domain, Results referring to the existence of good practices for the recruited teachers toward first aid ( 54% & 17% ) for good and accepted practices as in figure (3), and It is supported by table (5).

Table (5):The distribution of studied sample according to their Practices about First-Aid

Total participants N=438				
Practices Domain.	Yes		No	
	No.	%	No	%
Can you given of first aid for Electric shock	297	67.8	14	32.2
Have you ever given first aid to someone who is having a fit?	246	56.2	19	43.8
Have you ever utilized your school's first-aid kit?	227	51.8	21	48.2
Can you given first aid for Children with seizure/epilepsy	220	50.2	21	49.8
Can you given first aid for Nose bleeding/epistaxis	216	49.3	22	50.7
Did you measuring the vital signs for anyone	200	45.7	23	54.3
Can you given first aid for burns	198	45.2	24	54.8
Can you given of first aid for fracture	174	39.7	26	60.3
Did you participant by first aid training Previously	137	31.3	30	68.7
Have you ever tried pushing on an open wound damage to stop the bleeding?	136	31.1	30	68.9
Are you able to provide first assistance to someone who is having difficulty breathing?	135	30.8	30	69.2

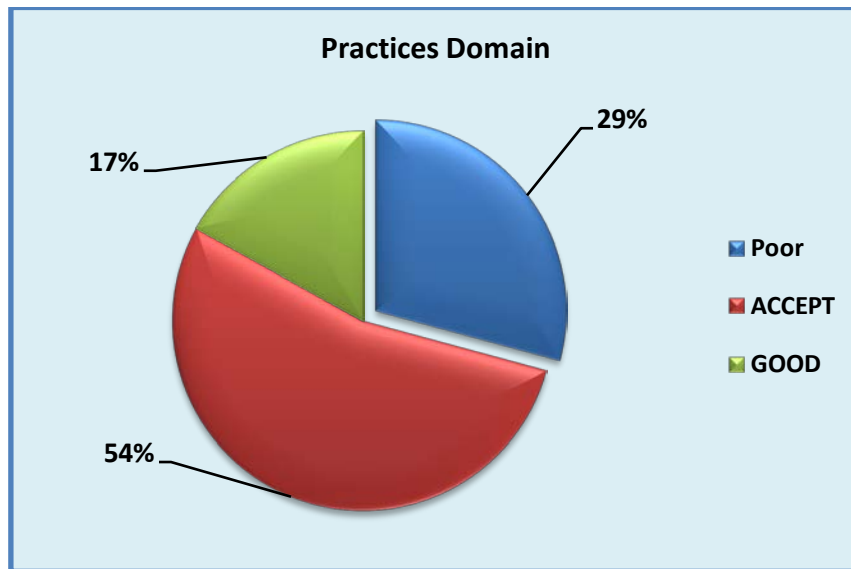


Figure ( 3 ): The Practices overall assessment.

Mass media was the most often mentioned source of first-aid administration (80%), Followed by posters and booklets (58%) , while the lowest percentage was within health institution 34% as indicated in figure (4).

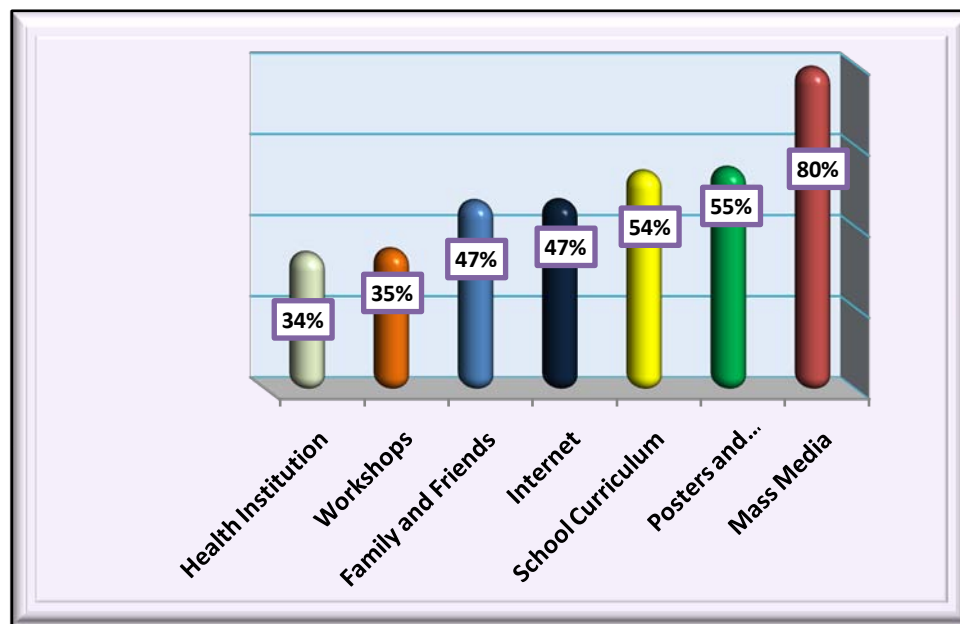


Figure ( 4 ):The sources of information for First-Aid

#### IV. DISCUSSION

In modern societies school, accidental injuries and accidental contamination during the school day are considered the most threat to the life of schoolchildren, especially the accidental injuries, fainting; accidental falls, poisoning, cut injuries, fractures, epistaxis, suffocation, and because of that many of young adults lose their lives or become disabled. Therefore, first aid becomes as important to keep children while they arrive at the medical facility to preserve their lives as possible. In this study, we try to assessed the Knowledge, Attitude and Practices regarding first aid for teachers in primary school.

A descriptive cross-sectional survey was carried out in to 32 primary schools and using a pre-validated questionnaire form to achieve the aims of the study.

Out of 438 participated teachers, there were 60.7% males ( male: female ratio was 1.5:1) and 72.4% was married with no significant association, this study indicated that there was distinct males preponderance with mean  $\pm$  SD of their ages (40.4 $\pm$ 8.7) years, with age range between (23-62) years, This finding is similar to a study done in Al-Najaf Al-Ashraf City by Hussein M.A and Fatima W. Khudair<sup>(8)</sup> and a study done by Masih, S., et al, 2014<sup>(9)</sup>. Meanwhile, the present study revealed that 60.5 % of teachers had a Bachelor degree; this in agreement with Arli&Yildirim, 2017<sup>(10)</sup>. On the other hand, the study showed that more than three-quarters of the sample had an experience of less than 20 years, and this, in turn, showed a significant correlation with the level of knowledge and attitudes but did not affect the level of their practices, this result was in line with prior research conducted in Iran by Adib-Hajbaghery, M., &Kamrava, Z. in 2019<sup>(11)</sup> and previous study in Iraq by Hussein M.A and Fatima W. Khudair<sup>(8)</sup>.

In general, the study showed, as indicated in Tables (1&2), that increasing age has a role in enhancing the knowledge, attitudes, and practices of teachers toward first aid with no differentiation between genders and marital status. moreover, the study showed that the Qualification of teachers has an effective and clear role in improving awareness of the importance of first aid, supported by the progress in years of experience. In the present investigation, teachers showed a lack of first-aid expertise " only 5% had good knowledge" as illustrated in figure (1), This result was in agreement with prior research in Turkey that revealed a lack of Knowledge<sup>(12)</sup>.

In figure 2, which represents the overall assessment of teachers attitude the study shows most of them have appositve attitudes 64%, these results were agreed with Alshammari, K. O. study in Hail city / Iraq (2021) that evaluates school teachers' first-aid knowledge, attitude, and practice, as well as the variables influencing them<sup>(13)</sup>. For the practices domain, the results indicate in figure (3) that more than half of the study sample had good & accepted practices toward the emergency situations, that corresponds to a study of Alshammari, K. O. in Hail city / Iraq and AlYahya, I. A., Almohsen, H. A., AlSaleem et al, in Riyadh, Saudi Arabia<sup>(5)</sup>.

In our study, (80%) depend of the participants on mass media to gain information regarding first-aid principles, followed by posters and booklets (58%) , and the lowest percentage was within health institution 34% (figure 4). AlYahya et al.<sup>(5)</sup> found that the majority of instructors (21.6 percent) cited social media as a source of information, which is consistent with our findings. However, according to another survey, the majority of instructors (74%) learned about first aid via journals, health newspapers, and health-related materials, as well as from family, friends, and health experts<sup>(9)</sup>.

## V. CONCLUSIONS

Most of the teachers had insufficient knowledge on first aid in spite of, they have a good and adequate attitude and practices. As they did not pass any training on first aid. Urgent action seems necessary for training teachers on first aid through in-service training programs. We believed the reason there was a low percentage of teachers having the first-aid education is because it was not mandatory in-service training programs.

## Recommendation

We recommend that teachers must support by a first-aid training program in cooperation with the school health unit within the primary health care centers.

Conflicts of interest: Non

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