

*Original Research Article*

# Assessment of Knowledge, Attitude and Practice among Sudanese Primary School Teachers towards Childhood First Aid Emergencies

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Abstract

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First aid is the help given to any individual suffering a sudden disease or injury. A descriptive cross sectional study was carried out to assess the knowledge, attitude and practice (KAP) among 384 primary school teachers in 32 schools of Bahri locality in Sudan. The data was collected using self administered questionnaire for a period of two weeks. The data was tabulated and analyzed using SPSS version 23 and the chi square test was done. 44% of school teachers had good knowledge, 33% had fair knowledge and 22% had poor knowledge. 100% had positive attitude toward the first aid training, and 98% strongly agree to establish first aid courses. Regarding the practice part, about 34% of the participants had contact with pediatric emergencies, 30.7% was epistaxis and 15.9 % was fractures which were more common. There was a significant association between the level of knowledge and degree of qualification, as well as previous first aid course attendance. Teachers were knowledgeable about pediatric emergencies which are common in primary schools and can be life threatening.

**Keywords:** KAP, primary School Teachers. First Aid emergencies, Bahri Locality, Sudan

## INTRODUCTION

A sudden disease or injury for any individual requiring first aid assistance (First aid, 2009), with care given to rescue life, prevent the condition from deterioration, or to accelerate recovery. It comprises initial intervention in a serious condition prior to arrival of professional medical help. First aid is generally done by someone with basic medical training.

There are a lot of situations which may necessitate first aid, and many countries have guidance with a

specific minimum level of first aid. This can include the availability of specific training or equipment in the workplace, the provision of specialist first aid cover at public assemblies, or obligatory first aid training within schools (Duct tape for the win! Using household items for first aid needs, 2014).

Unintentional injuries continue to be the fifth leading cause of death overall, exceeded only by heart disease, cancer, stroke, and chronic obstructive pulmonary

**Table 1.** Percentages of Correct and Incorrect Answers of Primary School Teachers in Bahri Locality regarding the First Aid Childhood Emergencies.

<b>Knowledge regarding pediatric emergencies</b>	<b>Percentages of correct answers</b>	<b>Percentages of incorrect answers</b>
knowledge regarding management of asthmatic attack	75.5%	24.5%
knowledge regarding the pathophysiology of epilepsy	65.9%	34.1%
knowledge regarding management of tonic and clonic phase of epileptic seizure	47%	53%
knowledge regarding the appropriate action during recovery phase of epileptic seizure	58%	42%
knowledge regarding management of diabetic coma	74.5%	25.5%
knowledge about the first degree burns	65.6%	34.4%
knowledge about the second degree burns	60.9%	39.1%
knowledge regarding management of burns	62%	38%
knowledge regarding management of contaminated wounds	81.5%	18.5%
knowledge regarding management of external bleeding	69.8%	30.2%
knowledge regarding management of big implanted object in patient body	63.3%	36.7%
knowledge regarding management of epistaxis	36.7%	63.3%
knowledge regarding management of sever injured patient with multiple fractures	73.4%	26.6%
knowledge regarding management of open fracture with severe bleeding	81.8%	18.2%
knowledge regarding management of choking	72.1%	27.9%
knowledge regarding management of electric shock	87.1%	12.8%
knowledge regarding management of allergy to bee sting	8.3%	91.7%
knowledge regarding management of scorpion sting	22.1%	77.9%

diseases (Bhatia et al., 2010). Injuries and accidents are the leading causes of death in children worldwide (The University of Alabama at Birmingham Health System Home). Schools and playgrounds are the most common location for falls (40.4%) (Krug et al., 2000).

The objective of the current study is to assess the level of knowledge, attitude and practice of the primary school teachers in Bahri locality regarding childhood emergencies (trauma, choking, diabetic hypoglycemia, airway obstruction, acute asthmatic attack, seizure and electric shock).

## METHODOLOGY

A descriptive cross sectional study comprised 32 primary schools conducted in three areas in Bahri locality (Samrab, Shambat, Halfaia) in Khartoum State.

Primary school teachers of Bahri locality schools were the study population without exclusion criteria. Cluster sampling technique was used, the three areas in Bahri locality were selected conveniently and then the schools were chosen by simple random technique.

The data was collected in a period of the first two weeks of January, 2018 after getting a permission from the schools' managers and a verbal consent from schools' teachers, using a self administered questionnaire (after thorough literature review , revising

the guidelines and first aid exam). The questionnaire consisted of four parts: the first part was about socio-demographic data, the second part contained 18 questions assessing the knowledge of primary school teachers toward pediatrics' first aid emergencies, the third part was about attitude of primary school teachers and the fourth part consisted of three questions regarding the practice of the first aid. Data obtained was analyzed by SPSS version 23 using Chi square and odd ratio statistical tests.

## Ethical Clearance

Ethical clearance was obtained from the department of community medicine, university of Khartoum.

## RESULT

A total of 384 primary school teachers were recruited in the current study. 84.9% male and 15.1% female. 45.1% of the participants were between 30 - 49 years old. According to the knowledge part: Most of the questionnaire enquiries have been answered correctly by the respondents (Table 1). The knowledge score was done: 44% score above 70%, 33% score from 50% -70%, and 22% score below 50% (Table 2).

**Table 2.** Knowledge Score of Primary School Teachers in Bahri Locality regarding the Childhood first aid Emergencies

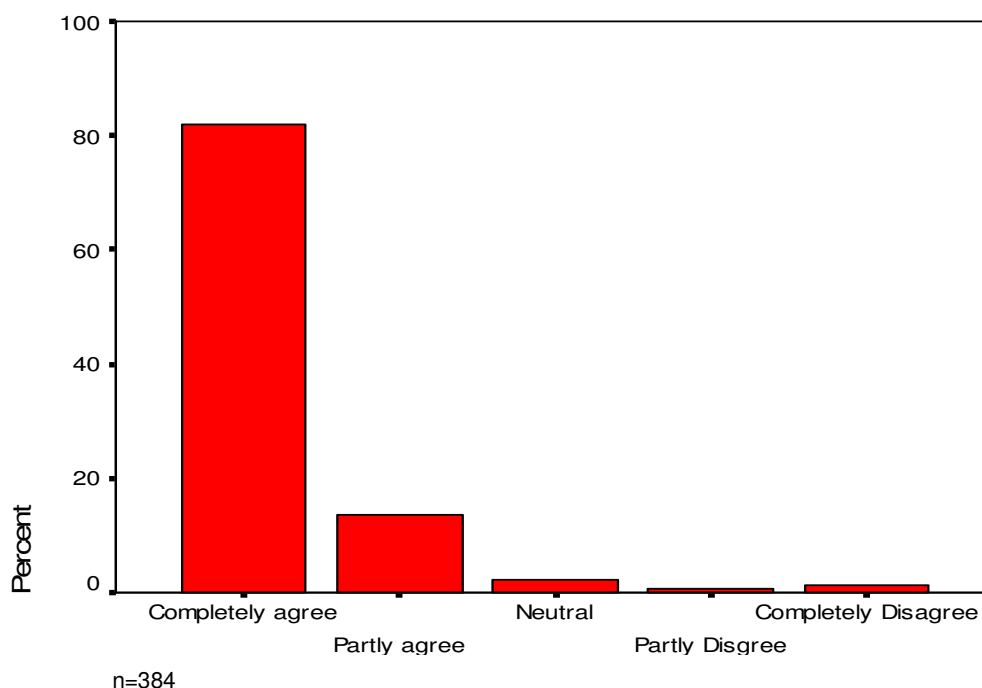
Knowledge score	Frequencies	Percentages
Good knowledge (>70%)	170	44.3%
Fair knowledge (50%-70%)	127	33.1%
Poor knowledge (<50%)	87	22.7%

**Table 3.** Correlation between Knowledge about Childhood first aid Emergencies and Qualification Level of Primary School Teachers in Bahri Locality using Chi<sup>2</sup> test.

P value	Odd ratio	Confidence interval
0.035	1.296	0.786-2.1382

**Table 4.** Correlation between Knowledge about Childhood first aid Emergencies among Primary School Teachers and Previous first Aid Course in Bahri Locality using Chi<sup>2</sup> test.

P value	Odd ratio	Confidence interval
0.0001	1.2731	0.7501-2.1608



**Figure 1.** Attitude score of primary school teachers in Bahri locality towards establishment of first aid training courses according to study done.

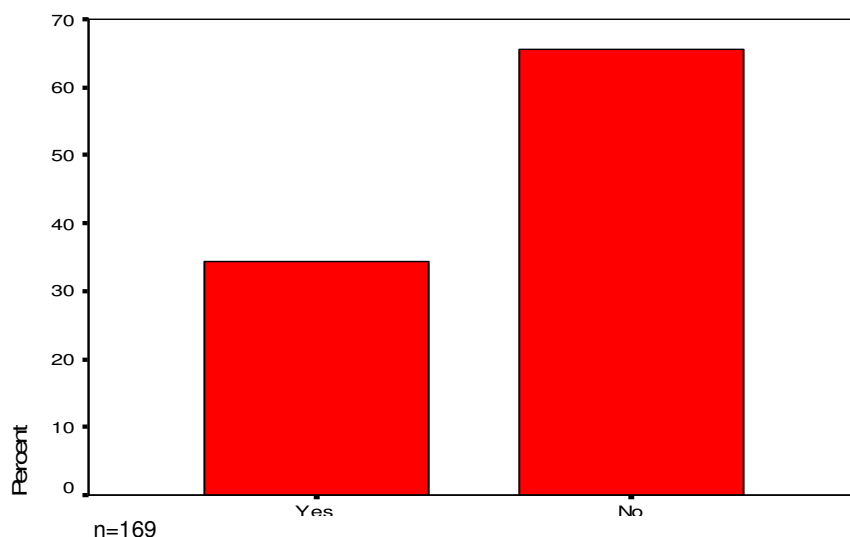
Chi square test was done and showed significant association between level of knowledge and qualification where the p value <0.05 (Table 3).

Also there was a significant association between the level of knowledge and previous first aid course regardless to the type of the course using Chi square

test, P value <0.001 (Table 4).

Regarding attitude, about 82% are strongly agreed to attend first aid courses (Figure 1).

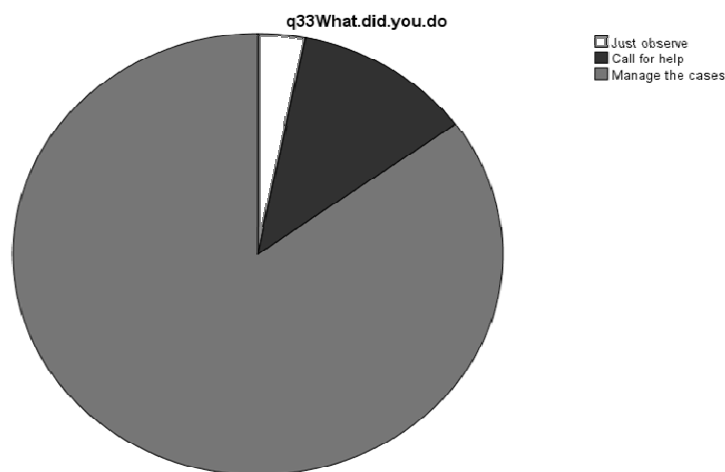
The practice part showed that, about 34% of the participants (Figure 2) had contact with pediatric emergencies of which epistaxis (30.7%) was the key



**Figure 2.** The percentages of the primary school teachers in Bahri locality that had contact with pediatric emergencies in primary schools.

**Table 5.** The frequencies and percentages of emergency cases that faced the teachers under study during their experience in primary schools, Bahri locality

The Cases	Frequencies	Percentages
epistaxis	52	30.7%
fracture	27	15.9%
bleeding	26	15.3%
asthma	23	13.6%
epilepsy	15	8.8%
Diabetic coma	11	6.5%
Electric shock	8	4.7%
Other	7	4.1%
Total	169	100%



**Figure 3.** The Action of Primary School Teachers in Bahri Locality toward Childhood Emergencies

emergency (Table 5). The majority of the teachers acted actively to manage the cases (Figure 3) which led to improvement of most cases.

## DISCUSSION

A sample of 384 primary school teachers in Bahri locality was studied. The level of knowledge of the teachers about the pediatric emergencies was good. The current study revealed that, a great number of school teachers believed that epilepsy is a psychiatric illness and some said spiritual illness. Not a few percentage of the target population deal with the case as a dangerous infectious person that has to be isolated from other normal children. This finding could be compared with that obtained by Savarese G. (Savarese et al., 2015) who reached to the same finding.

The research findings of the present study, showed that, there is a highly significant association between previous first aid course and knowledge increment about first aid ( $P < 0.001$ ) which is in line with Fathi A. from Cairo who found the same result (Mersal, 2016), but it is strange enough that, there was no difference in the level of knowledge regarding the type of course. This may indicate that, the practical part was not done in a perfect beneficial way.

The current study showed that, there was a significant association between the level of first aid knowledge and qualification among school teachers of Bahri locality ( $P < 0.05$ ) which reverses what has been reported by Sönmez Y. who found insufficient first-aid knowledge among pre-school teachers (Sönmez et al., 2014). This could be attributed to a good quality of first aid training course given in my country.

The research finding revealed that, the teachers were knowledgeable about external bleeding and fractures. This finding was not in agreement with Yosrak from Baghdad who documented the opposite (Hannon Al-Robaiaay, 2013). This could be attributed to a high frequency of these two emergencies as reported in my study.

The study of interest showed that, the knowledge of school teachers about scorpion and bee stings is very poor which agreed with the study findings reported by Başer et al. (2007). These two emergencies are not as common as others and may be neglected to be considered in the first aid courses.

## CONCLUSION

Based on the research findings, the primary school teachers were knowledgeable about first aid emergencies; but the knowledge and practice regarding some fatal conditions were extremely poor. There was a significant statistical association between the level of knowledge, previous first aid course and qualification.

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