

## Assessment Knowledge of Primary Schools Teachers About First Aid At Ismailia City

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### Abstract

**Background:** Teacher's awareness about first aid and basic life support constitute of life saving and protection form injuries. As injuries remain a threat to school students particularly in primary schools, therefore first aid and basic life support are important for them to be able to deal properly with these injuries. **Aim:** the study aimed to assess Knowledge of Primary Schools Teachers about First aid at Ismailia City. **Design:** A descriptive study design was used in this study. **Setting:** The study was conducted in seven primary schools in Ismailia city. **Sample:** Systematic random sample was used in this study; it consisted of all available teachers who are in contact with students from 1st grades to 4th grades in the selected primary about (140 teachers). **Tools:** Two tools were used. **First tool:** interviewing questionnaire which included two parts: Socio demographic data, and knowledge of primary school teachers regarding first aid. **Second tool:** Observational Checklist: It included: assessment of safety school environment. **The results:** There was statistically significant Correlation between studied sample knowledge and Years of Experience. **Conclusion:** The knowledge of primary school teachers about first aid was inadequate. **Recommendation:** Educational and training programs for teachers about first aid for early management of injuries and emergencies.

**Keywords:** First aid, school children, primary school teachers, knowledge.

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### I. Introduction

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. First aid provider should be able to evaluate the position rapidly and calmly, deal with life threatening conditions, meanwhile protecting themselves from the danger, obtain medical aid and call an ambulance in case of severe trauma or illness (Khatatbeh, 2016).

Children's times, mostly spend in school under direct oversight of instructors. Consequently, first-aid should be well-known by teachers who are the key force to deal with urgent health needs during school hours (Masih et al., 2014). Instructors are almost the first and the main caregiver represented the first cable to protect school children, in addition, teachers' role complements the parent's part. School teachers during the school hours, are the literal first-responding to emergencies, injuries resulting from school accidents. So, they sustain to be able to work accurately with health emergencies affected the school children (Sönmez et al., 2014).

Teachers are the first ones who should deliver first aid and save their lives and young adults at the school. Accordingly, schoolteachers should have enough knowledge regarding managing first aid in crises. Nonetheless, it was evidenced that most of the teachers do not have enough first aid knowledge and correct practice in some cases (Reveruzzi et al., 2013).

A major role of school health nurse is preventive. Primary prevention, such as an education program that helps teachers identifies, interpret and respond to minor injuries. Community health nurse is better placed to train teachers about most common child injuries and their first aids (Line et al., 2016).

### Significance of the study:

Availability of first aid measures is an important service in all public settings. The capability to provide prompt basic first aid is especially important in education and other educational services. Thus, students are highly predisposed to traumatic events. School staff members are frequently in proximity to children and are frequently called upon to provide for the initial emergency treatment (Geetha, 2016).

In Egypt, at there are little researches about first aid knowledge and practice measures among school teacher, also the researchers noticed that teachers were having poor knowledge and unfavorable practices in dealing with accidents and injuries in school(ElwardanyAly & Khalaf, 2017). So the present study aimed to assess knowledge and practices of teachers about first aid measures.

### **Aim of the study**

The aim of the study is to assess Knowledge of Primary Schools Teachers about First aid at Ismailia City.

### **Subjects and Methods**

#### **Research design**

Descriptive study design was conducted for this study.

#### **Study Setting:**

This study was conducted at primary schools in Ismailia city (North Ismailia administration). Ismailia is an urban city. Seven primary schools were selected randomly from the total number (69schools).

#### **Subjects:**

The subjects of the present study were selected randomly from previously mentioned schools; the subject consisted of 140 teachers who are in contact with students from 1<sup>st</sup> grades to 4<sup>th</sup> grades.

#### **Sampling**

The Multistage random sample was used in this sample:

1. **First stage:**The total number of primary schools in North Ismailia administration was (69) schools, 10% was chosen randomly from this primary schools and they are approximately 7 schools.
2. **Second stage:**All available teachers who are in contact with students from 1<sup>st</sup> grades to 4<sup>th</sup> grades in the selected primary schools were included in the sample.

#### **Tools of data collection:**

Two tools were used for data collection.

#### **First tool: An interviewing Questionnaire:**

It was developed by the researcher after reviewing related literature, which two parts to gather the following data:

**Part I:** Concerned with Socio demographic data of primary school teachers such as (age, years of experience and level of education, Place of residence).

**Part (II):** It included questions about primary school teachers' knowledge regarding first aid.

#### **Second tool: An Observational Checklist:**

It included:

**Observational Checklist for safety school environment** to assess school building, design, playground, classrooms, and ventilation, *Adapted from (Abd-Elstar, 2004&Jawad, 2004).*

- ❖ It's divided into 5 domains: (school place and building, school design, media access, trips and entertainments and health visitor) adapted from, *(Abd-Elstar, 2004).*

**Content validity:**-The tools were tested through five expertise from community health nursing departments, to assess the study tools for clarity, relevance, applicability, comprehensive, understandable and their recommendations were modified

#### **Administrative and ethical Design:-**

An official letters were issued from the Faculty of Nursing, Suez Canal University to the information security office in the Central Agency for Public Mobilization & Statistics (CAPMAS), to get an approval for data collection to conduct the study, which forwarded to the directorate of education and the Ismailia educational administration to obtain permission for collecting the necessary data for the selected schools.

Written approval was obtained from the manager of the selected schools based on the approval of the directorate of education in Ismailia. Before starting the data collection the agreements were obtained and the aim of the study explained to the schools managers to gain their cooperation during data collection.

**Ethical Consideration**

Written permission for the collection of data was obtained from the responsible managers of schools after explaining the aim of the study. Also, the aim was explained to teachers to be familiar with the importance of their participation. Promote the confidentiality of data and teacher’s freedom to withdraw from the study at any time.

**Pilot Study**

A pilot study was conducted on 14 primary teachers representing (10% of the estimated sample) to evaluate the feasibility of implementing the designed tools and time required to fill in each tool. According to the obtained results, modifications were done. The subjects included in the pilot study were excluded later from the study samples.

**Statistical Design:**

All Data were collected, tabulated and subjected to statistical analysis. Statistical analysis is performed by SPSS in general (version 17), also Microsoft office Excel is used for data handling and graphical presentation.

**Study limitations:**

There is no limitation faced the researcher during data collection and program implementations.

**Results**

The results of this study were presented as follows:

**Part I:** Sociodemographic characteristics of the studied subjects, their knowledge about most common types of school injury, and source of their knowledge about first aid.

**Part II:** Knowledge of studied sample about first aid throughout the program phase.

**Part III:** Association between dependent and independent variables throughout the program phase.

**Part IV:** Assessment of schools environment.

**Part I:** Sociodemographic characteristics of the studied subjects, their knowledge about most common types of school injury, and source of their knowledge about first aid:

**Table (1):** Distribution of studied sample according to their Socio-demographic characteristics (n=140)

Socio-demographic characters	No N=140	%
<b>Age (in years)</b>		
≤40	77	55
>40	63	45
<b>Mean± SD</b>	39.23±8.0	
<b>Gender</b>		
Males	64	45.7
Females	76	54.3
<b>Residence</b>		
Urban	124	88.6
Rural	16	11.4
<b>Marital status</b>		
Married	107	76.4
Unmarried	33	23.6
<b>Experience (years)</b>		
≤20	112	80.0
>20	28	20.0
<b>Educational level</b>		
Diploma	40	29.0
BSC	90	64.0
Post graduate	10	7.0

**Table (2):** Distribution of studied sample according to their knowledge about most common types of school injury (n=140):

Most common types of school injury	No N=140	%
<b>School Injury in your school:</b>		
Yes	140	100
No	0	0.0
<b>Types of school accident(n=140):</b>		
Wound	25	17.8
Fracture	25	17.8

Suffocation	17	12.4
Epistaxis	21	15
Burn	5	3.5
Poisoning	7	5
Fainting	15	10.7
Epilepsy	20	14.3
Others	5	3.5

**Table (3):** Distribution of studied sample according to the source of their knowledge about first aid (n=140):

Source of knowledge about first aid	No N=140	%
Attendance of training course before about first aid		
Yes	36	25.7
No	104	74.3
Information's from another source about first aid		
Yes	72	51.4
No	68	48.6
Sources of information(n=72)		
Books	11	15.4
TV	30	41.6
Internet	22	30.5
Other	9	12.5

**Part II:** Knowledge of studied sample about first aid throughout the program phase.

**Table (4):** General Knowledge of studied sample about first aid (n=140)

General Knowledge	Complete answer		Incomplete answer	
	No	%	No	%
1. Meaning of first aid	82	58.6	58	41.4
2. Importance of first aid	15	10.7	125	89.3
3. First aid principles	49	35	91	65
4. Patient's consciousness.	18	12.9	122	87.1
5. Examine airway in the affected person.	7	5	135	95
6. There is a first-aid bag.	134	97.3	6	4.3
7. Components of first aid bag.	22	15.7	78	84.3
8. Meaning of first aider.	123	87.9	17	12.1
9. Characteristics of a first aider.	8	5.7	132	94.3
10. Skill of first aider.	32	22.9	108	77.1
11. First aider protection.	18	12.9	122	87.1

**Part IV:** Association between dependent and independent variables throughout the program phase:

**Table (6):** Relation between studied sample knowledge and Level of education:

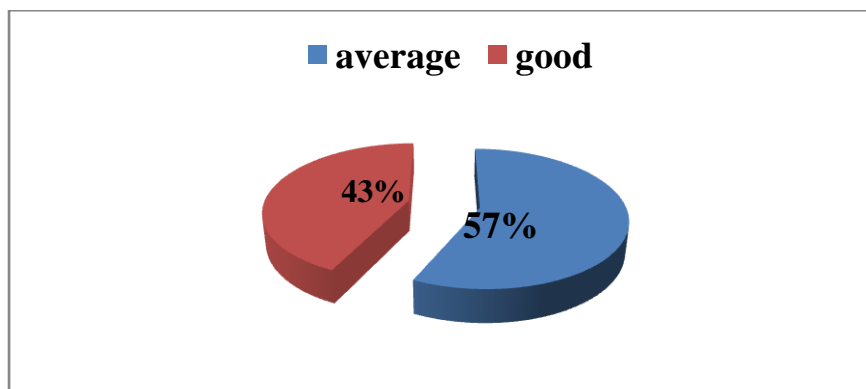
Level of education		N	Mean	Std. Deviation	t	P value
Total score of general Knowledge on first aid	Diploma	40	19.92	4.14	-0.35	0.72331
	B Sc	90	20.18	4.07		

**Table (7):** Correlation between studied sample knowledge and Years of Experience

Years of Experience	R	P
Total score of general Knowledge on first aid PRE	-.285	0.00064**

**Part V: School environment:**

**Figure (1):** Safety school environment (n=7)



## II. Discussion

School accidental injuries and accidental contamination during the school day are considered a threat to the life of the schoolchildren. The key problems in modern societies are accidental injuries, fainting; accidental falls, poisoning, cut injuries, fractures, epistaxis, suffocation and many of young adults lose their lives or become disabled in such situations (Dasgupta al., 2014).

### Regarding Sociodemographic characteristics of the studied sample:

The present study showed that about more than half of them aged  $\leq 40$  years; this result in agreement with Kumar et al., (2015), who studied "Knowledge of primary school teachers on first aid management of minor accidents among children at Ambala" and reported that equally 35% of teachers were in the age group 31-40. On the other hand this disagreed with Kumar et al., (2013), who studied "Perception and practices regarding first-aid among school teachers in Mysore" and mentioned that nearly half of the teachers were in the age group of more than 40 years.

In referral to sex of the participated teachers, it was observed that more than half of them were females; this agreed with Elwardany Aly & Khalaf, (2017), who studied "Impact of training program regarding first aid knowledge and practices among preparatory schools' teachers at Assiut City" and found that more than two thirds of them were females and with Kumar et al., (2015), who studied "Knowledge of primary school teachers on first aid management of minor accidents among children at Ambala" and reported that more than half of primary school teachers were females.

Our results were also in the line with Masih et al., (2014), who studied "Knowledge and practice of primary school teachers about first aid management of selected minor injuries among children" and found that majority of the school teachers were female. On the other hand these results disagreeing with Mersal & Aly, (2016), who studied "Developing disaster management and first aid guidelines for school teachers in Cairo Egypt" and mentioned that more than half of them were males.

From the researcher point of view, these findings may come back to that females are having better desire and more willing than males to attach in a program related to first aid and they have a desire to know everything about school injury and their first aid. They also want to know first aid to deal not only with school injury, but also daily incidents that occur to them at homes.

The present study revealed that two thirds of teachers had Bachelor degree; this in agreement with Arli & Yildirim, (2017), who studied "The Effects of Basic First Aid Education on Teachers' Knowledge Level", and mentioned that (87.5%) of them had bachelor's degree. Al-Samghan et al., (2015), who studied "Primary School Teachers' Knowledge about First-Aid" and found that majority of them had Bachelor degree. Also in the line with Sönmez et al., (2014), who studied "Knowledge levels of pre-school teachers related with basic first-aid practices, Isparta sample", and reported that most of them were university graduates.

Regarding teachers' years of experience, it was recorded that most of studied teachers had experience less than or equal 20 years. This finding was in agreement with Masih et al., (2014), who studied "Knowledge and practice of primary school teachers about first aid management of selected minor injuries among children", and found that majority of school teachers were having 0-15 years of teaching experience. Also in agreement with Kumar et al., (2013), who studied "Perception and practices regarding first-aid among school teachers in Mysore", and reported that 24.4% had teaching experience for 16-20 years.

On the other hand these results disagreeing with Mersal & Aly, (2016), who studied "Developing disaster management and first aid guidelines for school teachers in Cairo Egypt" and mentioned that nearly half had experience more than 20 years. From the researchers' point of view, years of experience increases the teachers' knowledge about most common injuries that the students are exposed to through dealing with students and thus make them more in need of first aid for these incidents.

The study findings also illustrated that most of school accidents were fracture, wound, epistaxis, epilepsy; these findings were in agreement with Al-Samghan et al., (2015), who studied "Primary School

Teachers' Knowledge about First-Aid" and found that wounds, fits and burning were the most common reported school incidents by teachers. Also our results are in the line with **Sönmez et al., (2014)**, who studied "Knowledge levels of pre-school teachers related with basic first-aid practices, Isparta sample", and reported that the most common situation requiring first-aid was bleedings. This was followed by fractures, fainting, burns, foreign body aspiration, and fits.

Regarding attending of training course before about first aid, the present study showed that only one quarter of teachers had attended training course about first aid before, These results were matching with **Kumar et al., (2013)**, who studied "Perception and practices regarding first-aid among school teachers in Mysore", and reported that only 16.4% of the teachers had received training about first aid. Our results are also in the line with **Al-Samghan et al., (2015)**, who studied "Primary School Teachers' Knowledge about First-Aid" and found that less than one third of primary school teachers had previous training in first aid.

Also in the line with our results **Younis and El-Abassy in (2015)**, who studied "Primary teachers' first aid management of children's school day accidents: Video-assisted teaching method versus lecture method", and stated that the highest percentage of the school teachers did not attend any training courses.

From the researchers' point of view these results reflect lacking awareness from the Ministry of Education concerning the provision of special courses for first aid to teachers, as well as there is no return for teachers to attend these courses. This also reflects deficient interest among teachers toward the importance of receiving training on first aid.

In the present study mass media (TV and internet) was the highest source of information for nearly three quarters of the studied teachers. These results were corresponding with **Al-Tameemi and Khudair, (2016)**, who studied "Knowledge and Attitudes of Primary School Teachers toward First Aid in Al-Najaf Al-Ashraf City", and reported that TV & mass media were more frequent sources of information about first aid. In the same line with our results **AL-Samghan et al, (2015)**, who studied "Primary School Teachers' Knowledge about First-Aid", and reported that most of the teachers obtained their information from mass media.

On the other hand these findings were in contrast with those of **Amro and Qtait, (2017)**, who studied "General Knowledge & Attitude of First Aid among School teachers in Palestine", and found that nurses and doctors were the main sources of teachers' knowledge about first aid. From the researchers' point of view, this is due to T.V. and internet are the most accessible sources of information for a large sector of people in our country.

#### **Regarding to the Knowledge and practice of studied sample about first aid:**

The present study mass media indicated that most of the teachers had inadequate knowledge, These results were on the same line with **(Ali et al 2010)** who assessed the effect of an educational program on the knowledge of newly graduated nursery teachers regarding common accidents and emergencies among preschoolers and their first aid management, indicated that most of the teachers had inadequate knowledge.

### **III. Conclusions**

In conclusion, knowledge about first aid is not satisfactory among teachers of primary schools. This is largely due to a lack of information and training. So, first aid educational and training programs should be introduced at school and college levels for early management of injuries and emergencies. Moreover, knowledge about first-aid should be incorporated in educational curricula.

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