

General Knowledge & Attitude of First Aid among Schoolteacher's in Palestine

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Abstract:

First aid is the initial assistance or treatment given at the site of accident to someone who is injured or suddenly taken ill, before the arrival of ambulance. However, first aid provider should be able to assess the situation quickly and calmly, deal with life threatening conditions meanwhile protecting him/her self from the danger, obtain medical aid and call an ambulance in case of serious injury or illness. A cross-sectional study was carried out among schoolteacher's in southern of Hebron, simple random sampling was used to selected the schools and 150 schoolteacher's was selected from 8 schools by using convenience (purposive) sampling. A self-administered survey was distributed to a proportionate sample of 150 schoolteacher's designed from several studies to achieve the goal of this study. The total mean score knowledge of general first aid is 71.41%. Most of teachers answered correct of important balanced diet and the suitable management for hypoglycemic for diabetic patients (87.3%) and (77.3%) respectively.

Conclusions: the school teachers' knowledge of first aid concerning external bleeding and fractures and trauma, dealing with epilepsy, diabetes and burn is high, the knowledge of CPR is medium, the school teacher need more training in CPR .

Keyword: Knowledge, attitude, first aid, schoolteacher's

Introduction

The life of an individual is influenced by various factors including the condition of health, education, occupation, and socioeconomic status. Among the various factors, the condition of health influences the life of an individual to a greater extent(Narayan, Biradar, Reddy, & BK, 2015).First aid is the initial assistance or treatment given at the site of accident to someone who is injured or suddenly taken ill, before the arrival of ambulance. However, first aid provider should be able to assess the situation quickly and calmly, deal with life threatening conditions meanwhile protecting him/her self from the danger, obtain medical aid and call an ambulance in case of serious injury or illness(Abbas, Bukhari, & Ahmad, 2011). First aid knowledge is effective way to help people, In northern areas of Pakistan lie in an earthquake zone. An earthquake (October 8, 2005) in the Northwest Frontier Province and Azad Kashmir claimed 50,000 lives and left more than 80,000 injured. Roads were badly damaged after the earthquake, many remote villages were cutoff by landslides, and consequently medical teams could not reach the village for 3-4 days. Furthermore, first aid provided by the local people could have reduced the death toll drastically (Khan et al., 2010). In addition, Road traffic injuries are a major threat to individuals and national health systems. Each year, road traffic injuries result in the death of more than five million people worldwide(Delavar,

Gholami, Ahmadi, & Moshtaghian, 2012) as well as 195,000 deaths occur annually from burns worldwide(Kattan, AlShomer, Alhujayri, Addar, & Aljerian, 2016).

Children are more vulnerable to injuries and carry a higher risk because of developmental and behavioral properties including unawarenes of hazards and being active as well as physical properties including narrower airways, smaller body mass and thinner and more vulnerable skin(Sönmez, Uskun, & Pehlivan, 2014).Moreover, children and young adults, injuries cause more childhood deaths than all other diseases combined, and also Life-threatening emergencies can happen in any school at any time(Hazinski et al., 2004). Furthermore, more than half of the world population is below the age of 25 years, 29% are between 10 and 25 years of age, of which 80% live in developing countries. Due to technological advancement and health promotion activities, children who in the past would have died in infancy are surviving into childhood, adolescence and adulthood. Due to limited resources in developing countries, it is important to utilize all available cost-effective resources to improve the health care. However, schoolteachers are best resource for implementation of school health programmers (Bhatia, Puri, Mangat, & Kaur, 2011).

A study of (Sharma, 2014) was done among primary school teachers to evaluate the effectiveness of teaching program on knowledge and practice regarding first aid management of selected minor injuries in children, the result: Majority (94%) of the teachers were female, paired sample t-test revealed that the mean posttest knowledge score regarding first aid management of selected minor injuries was significantly higher (34.76 ± 4.35) than that of mean pretest knowledge score (27.32 ± 5.73) ($P < 0.005$); mean posttest practice score was significantly higher (18.52 ± 2.63) than mean pretest practice score (14.52 ± 2.39) ($P < 0.005$). There was a significant positive correlation between knowledge score and practice score of participants ($r = 0.9$; $P < 0.001$), the study conclusion the training program was effective in significant improvement of knowledge and practice score regarding first aid management of selected minor injuries among study participants.

Many factors had been shown to be associated with better knowledge, for instance, having a driving license, or having a higher level of education (Tomruk, Soysal, Gunay, & Cimrin, 2007).

Moreover, Schünemann, Brożek, Guyatt & Oxman, (2013) added that first aid can be introduced by any person in any location. However, it should be refined according to circumstances, need, and regulatory controls. Accordingly, they strongly believe that education in first aid should be worldwide: everyone can and should learn first aid. International Federation of Red Cross and Red Crescent Societies, [IFRCS], (2009) reported that first aid measures can be life-saving at work, school, home and in community setting. This could include performing procedures such as: placing an unconscious patient into the recovery position, performing CPR, and stopping bleeding using pressure and evaluation.

Several studies assessed the first aid knowledge, attitude, perception and practice among schoolteacher's worldwide (Devashish, Gaurav, & Bharat, 2013; Joseph et al., 2015; kerim, 2016; Krishna, 2013; Kumar et al., 2013; Masih, Sharma, & Kumar, 2014) and most of them reported poor level and unsatisfactory first aid knowledge as well as poor perception and practice regarding first aid. To the best of researcher's knowledge and experience, no studies have been conducted about general first aid knowledge in Palestine. This gives the research a unique importance in building the cornerstone of the research background in the Palestinian context.

Methods

Study design, population & Sample size

The research design was a cross-sectional descriptive research design. Simple random sampling was used to

choice the schools that included in this research. The study population included all of male and female schoolteacher's in primary and secondary schools in southern of Hebron (Dura city). However, this study was conducted at primary and secondary Male and Female schools between Jan to Mar 2017. The inclusion criteria were male and female Palestinian schoolteacher's who currently work in schools. In addition, sample size was selected by using Convenience (purposive) sampling, which is a non-probability sampling method. The study included 150 schoolteacher's from 8 schools.

Survey instrument & pilot study

All schoolteacher's completed a self-administered questionnaire in Arabic language designed from (Awad S. Al-samghan, 2015) and some modifications done by authors to achieve the goal of this study. However, the questionnaire measured the knowledge and attitude of first aid amongst primary and secondly schoolteacher's in southern of Hebron. The test-retest reliability of the questionnaire was determined in a pilot study among 20 schoolteacher's who were excluded from the main study. The internal consistency of the questionnaire was found to be (73.6) on Cronbach's alpha. Questionnaires distribution to the teachers in the break time between classes and given them a comfortable time to complete it after get permission from each school manager. Moreover, all participants in the pilot study indicated that the instrument was clear and they were able to finish the questionnaire within fifteen minutes. Based on the results of these participants, a few minor modifications were made to the original version of the questionnaire. In addition, the tool of this study consisted of three parts. Part I demographic data including previous training in first aid, age, marital status, level of education, teaching experience and sources of information about first aid. Part II designed of 8 items to assess the attitude regarding first aid and basic life support. Part III consisted of 20 items divided into 6 categories to assess the knowledge of first aid.

Statistical Analyses

Data were calculated and analyzed using the IBM Statistical Package of social science program (SPSS) version 23. Descriptive and inferential statistics were used to given a mean score of knowledge and also tested the hypothesis using independent t-test and one way ANOVA to determine if there is a significance difference between the knowledge of first aid and socio-demographic variables.

Ethical considerations

Permissions from participants and school directors were acquired. Schoolteacher's was fully voluntary to participate in the study. In addition, the confidentiality of the employers

was completely secured by providing serial number for each participant at both collection and analysis process.

Results

Socio demographic variables: A total of 150 schoolteachers were selected and welcomed to fill out the self-administered questionnaire. Table 1 gives information of the respondents

including socio demographic variables and general characteristics. More than one third of participants were between 30 to 39 years of age and (30.7%) were between 40 to 49 years, (83.3%) were married, most of participants were carried Bachelor's degree. The most resources of information were nurses & Drs and TV about First Aid to the teachers with (32%) and (28.7) respectively. However, more than half were not have previous training of first aid.

Table (1).

Variables	n=150	Percentages (%)
Age-group		
Between 20 to 29 years	36	24
Between 30 to 39 years	54	36
Between 40 to 49 years	46	30.7
More than 50 years	14	9.3
Gender		
Male	59	39.3
Female	91	60.7
Marital status		
Single	25	16.7
Married	125	83.3
Level of education		
Diploma	18	12
Bachelor's	123	82
Master	9	6
Sources of information about CPR		
University	21	14
TV	43	28.7
Internet	29	19.3
Articles	5	3.3
Newspaper	4	2.7
Nurses and Drs	48	32
Previous training in First Aid		
Yes	63	42.0
No	87	58.0

General Knowledge of First Aid: Table (2) illustrated the general knowledge of first aid among schoolteachers. The total mean score knowledge of general first aid is 71.41%. Most of teachers answered correct of important balanced diet and the suitable management for hypoglycemic for diabetic patients (87.3%) and (77.3%) respectively, two

third answered correct of care with bleeding wound and noise. Regarding the knowledge of basic life support, (81.3%) successfully recognized the number of emergency services, while (50.7%) answered correctly of the location of hands during CPR.

Table (2)

Items	Correct answers	
	n	%
<i>Bleeding:</i>		
Care of bleeding wound	103	68.6
Care of epistaxis	100	66.4
<i>Burns:</i>		
Care of scald	119	79.1
<i>Accidents/injuries:</i>		
Cut wound	120	80
Fall with suspected fracture	117	77.7
<i>Diabetes:</i>		

Importance of balanced diet	131	87.3
Management of hypoglycemia at school	116	77.3
Epilepsy:		
Etiology: Not genetic	76	50.7
Not communicable	123	82
Management of fits	121	80.6
Basic Life Support		
Recognized cardiac arrest	70	46.7
Number of Emergency service	122	81.3
Location of hands for CPR	76	50.7

Analysis of knowledge by socio-demographic characteristics of respondents: In comparing the total knowledge scores, there is a significant difference between Male and Female ($p = .001$), whereas, there is no significant difference between Previous training in first aid and Marital status, ($p=.738$) and ($p=.533$) respectively. The full results

are shown in Table 3 However, there is a significant difference in Source of information about First Aid ($p = .014$) in favor of who have source from nurses & Drs. While, significant difference was not found between Age and Teaching experience, ($p=.749$) and ($p=.332$). The full results are shown in Table 4.

Table (3). Comparison of total knowledge score between previous training in CPR, Seeing CPR before and marital status. Independent T test (n=155).

Variable	Group (n)	Mean (SD)	F statistic (df)	P value
Previous training in First Aid	Yes (63)	14.87(3.45)	.931 (148)	.738
	No (87)	14.67(3.54)		
Gender	Male(59)	13.49(3.58)	5.873 (148)	.001
	Female(91)	15.58(2.98)		
Marital status	Single(25)	14.36(4.15)	1.534 (148)	.533
	Married (125)	14.84(3.36)		

Table (4). Comparison of total knowledge score between Age, Teaching experience and sources of information about first aid. One Way ANOVA test (n=150).

Variable	Group (n)	Mean (SD)	F statistic (df)	P value
Age	Between 20 to 29 years(36)	14.36(4.12)	.406 (3)	.749
	Between 30 to 39 years(54)	14.92(3.33)		
	Between 40 to 49 years(46)	15.04(3.19)		
	More than 50 years(14)	14.21(3.53)		
Teaching experience	Less than 5 years(18)	14.38(3.92)	1.112 (2)	.332
	Between 6 to 19 years(123)	14.92(3.40)		
	More than 20 years(9)	13.22(3.83)		
Source of information about First Aid	University(21)	12.57(3.78)	2.983 (5)	.014
	TV(43)	15.48(3.05)		
	Internet(29)	14.03(3.64)		
	Articles(5)	14.20(3.96)		
	Newspaper(4)	14.75(3.34)		
	Nurses and Dr"s(48)	15.56(3.07)		

Discussion

Children spend their part of day in schools along with their peers and teachers. They are at larger risk of injuries and emergencies due to the higher level of involvement in sports and extracurricular activities. School teachers acting as the guardians of these students as long as they are in the school need to be equipped with the adequate knowledge regarding first aid practices.

In this study an attempt was made to explore the knowledge of school teachers in first aid and what actually they practice at the incident requiring first aid. Rapid administration of first aid may help to decrease morbidity and mortality. Nurse s and physicians are not present at schools in palestain. Because rapid administration of first aid may minimize morbidity and mortality from injuries, teachers should be proficient in basic first aid skill.

The reasons that about 29 % of the teachers in this study showed lack of knowledge regarding first aid and have in previous training about first aid are most probably because of the absence of the training session, educational.

posters or movies that illustrate how to give first aid and highlight its importance in dealing with injuries and accidents and the decrement in morbidity and mortality of these accidents after dealing with it using proper first aid procedure.

The result of study general knowledge of schoolteacher good 71% and accept with study of Kumar (2015) Knowledge of primary school teachers on first aid management of minor accidents among children at Ambala.

The result of study of general knowledge about diabetes good with result 77% it good and accept with study of (Joseph, 2015) Awareness, attitudes and practices of first aid among school teachers in Mangalore, South India. And some study appear less knowledge in diabetes mellitus as study of Warne, J. (1988), the study was designed to investigate teachers' knowledge and sources of information about diabetes and the benefits of diabetes nurse specialists to teaching staff. Of a sample of secondary school teachers in Birmingham, only one third were found to have an adequate overall knowledge of diabetes, just over one quarter were unaware that a pupil with whom they had contact had diabetes. The report offers suggestions for improvements using a multi-team approach.

The results of present study about bleeding nearly 69%, are consistent with the results of a study done In (Thein, 2007), which was conducted to determine the knowledge and attitudes of a sample of Turkish teachers regarding the administration of first aid, it shows that most of the teachers have correct knowledge and attitudes about first aid and about knowledge of first aid.

Bout knowledge in epilepsy is high in pale stain is high with percent 80 % this may be due most of them training first aid and internet available and can a take knowledge easy and can watch video, and some of teacher deal with a person with epilepsy.

Several studies have demonstrated limited retention of first aid knowledge and rapid deterioration of knowledge after initial training and bout BLS knowledge medium with result 50%, most study appear less than medium as the study Behairy (2015) 44.1% of the study sample had secondary education. Only 22% among the study group were previously attended training about BLS. The study participants, generally, had poor knowledge and incorrect situational practice in the pretest.

Conclusion

The school teachers' knowledge of first aid concerning external bleeding and fractures and trauma, dealing with epilepsy, diabetes and burn is high, the knowledge of CPR is medium, the school teacher need more training in CPR .

Recommendation

- First aid and basic life support training should be compulsory for all SHAs in the schools. This training should be periodically continued re-assessment and updated at regular intervals. It should be a part of school health advisors' continuous professional development.
- Replication of this program with larger sample size for confirmation and improvement of its procedures and content. Furth more, researches are needed to assess the impact of such programs on the incidence and consequences of school-age student injuries.
- More study about this topic in female school
- Therefore, the need for more studies that address the promotion and protection of health in school environments is highlighted, thus enabling the transformation of teachers in relation to the knowledge of first aid actions. This way, such training will make the teachers skilled to face and know how to act when facing situations that generate a greater complexity in their daily lives.

Acknowledgements

We are grateful to all the participating schools and teachers for their support and there initiative

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