pISSN 2394-6032 | eISSN 2394-6040

Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20173348

Study of knowledge and attitudes to first aid among school children of Doiwalablock, Dehradun

Jayanti Semwal¹, Ravleen Kaur Bakshi², Ruchi Juyal¹, Deepshikha¹, Shaili Vyas¹*, SD Kandpal¹

¹Department of Community Medicine, Himalayan Institute of medical sciences, SRHU, Dehradun, Uttarakhand, India ²GMCH, Sector 32, Chandigarh, India

Received: 19 March 2017 Revised: 18 June 2017 Accepted: 21 June 2017

*Correspondence: Dr. Shaili Vyas,

E-mail: shailivyas7@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: First-aid (FA) is the providing of initial care for an illness or injury, by a non-expert but trained person, till medical treatment can be accessed. Aim of the study is to impart knowledge in first aid among students to build a safe and healthier community. The objectives of the study were to assess the basic knowledge and understanding of it among the school children, to find out their attitude and to provide appropriate education regarding first aid.

Methods: This cross-sectional study was conducted in randomly selected public school of Doiwala, Dehradun among all the school children of classes 9th to 12th. A pretested oral questionnaire was used to assess their knowledge and attitude about first aid. Knowledge, attitude and practices (KAP) about the first aid for common medical emergencies were assessed. Following which, education and training regarding first aid was provided to them. The data were presented as frequencies and percentages. Chi squared test was used as tests of significance.

Results: Out of 441 students, majority (91%) had heard about the first aid of which the proportion of boys and girls were almost similar i.e. 92: 92.2. Only 17% of students complete knowledge of first aid and 33.3% of students had partial knowledge. On an average complete knowledge and partial knowledge was present only in 0.04 and 0.06 respectively.

Conclusions: Students have revealed that first aid study is in the curriculum of the course but it seems from the study that practically no stress is being given in imparting knowledge regarding first aid in these schools. To conclude all students had shown their keen interest and positive attitude towards getting knowledge about first aid.

Keywords: First aid, Knowledge, Attitude, Practice, Students

INTRODUCTION

A basic knowledge and understanding of first aid can be invaluable for individuals to be able to provide emergency care in the event of an accident, possibly saving lives and minimizing injury. First aid is the providing of first and early care for an illness or injury, by a non-expert but trained person, till medical treatment can be accessed. Immediate first aid when provided to patients who require emergency care makes a huge

difference to the outcome. In certain self-limiting medical conditions, correct first aid measures are sufficient to avoid a medical consultation.² It may on occasion obviate the need to visit a hospital or clinic, lessening demand on medical facilities. Many experts believe that even a limited understanding of first aid would be an invaluable service to individuals who find themselves in emergency situations. This awareness can help the people to provide a solution if a tragedy ever happens. First aid training courses are suitable for the people of all over the world, belonging to different age

groups of more than 10 years. Essential first aid training will offer them the ABC of treatment and guiding principles of most minor injuries and emergency medical conditions. Building skills in first aid with the vulnerable people can help to build safer and healthier communities.

Glendon et al suggested that the teaching of first aid to students is probably cost-effective in terms of saving lives.³ They also recommended that first aid should be taught within schools. Engeland, Roysamb, Smedslund and Sogarrd studied the implementation of training of first aid to junior high students. The researchers measured the implementation of the program by teachers and the attitudes and knowledge of their students.⁴ They discovered that students whose teachers implemented the program enthusiastically had better attitudes toward first aid implementation and were more knowledgeable in first aid.

In the hills of Uttarakhand, injuries are very common either due to natural calamities or other man-made situations. Health facilities are usually located at very far off places due to typical topography of this hilly state. It is therefore of utmost importance to equip the people of Uttarakhand with the skills of First Aid right from their school level, so that they are able to handle any situation requiring first aid before the qualified medical help reaches the point. Keeping these facts in view, this study has been planned to assess the knowledge and attitude of the school children regarding first aid and later impart them training. The objectives of this study are to assess the basic knowledge & understanding of first aid among the school children, to find out their attitude about first aid and to provide appropriate education regarding first aid. This will be beneficial for prevention of many morbidities and mortalities in future.

METHODS

It is a descriptive cross-sectional study conducted in public school of Doiwala, Dehradun for one year (2009-2010) among school children of classes 9th to 12th. The Research and Ethical Committee of SRHU approved this study and permission was obtained from Principal of Public School to conduct the study. Consent was taken from the students participating in the study. Using simple

random sampling method one public school in Doiwala, Dehradun was selected and total enumeration of all the students studying in classes 9th to 12th were included in the study during the study period to get appropriate representation of study population. A detailed plan was explained to the School Principal and their consent was taken prior to discussion with students. A pretested oral questionnaire was used to assess their knowledge and attitude about first aid. After rapport building with the students, consent was taken from them. KAP of the common first aid emergencies like drowning, heat strokes, external bleeding (including epistaxis), choking, fractures, poisoning, fits, heat burns, etc. was assessed. Sufficient time was given to the students to reply to the questions. After completion of the assessment & data compilation; education and training regarding first aid was provided to the school children and teachers. The outcome of this project was very useful, because all students had shown their keen interest and positive attitude towards getting knowledge about first aid and practical implication of first aid in day-to-day medical problems. The collected data was tabulated and analyzed using SPSS software version 20. The data were presented as frequencies and percentages. Chi-squared test was used as tests of significance. P<0.05 was considered significant.

RESULTS

Out of 441 students, proportion of boys and girls were 224:217. Majority (91%) had heard about the first aid of which the proportion of boys & girls were almost similar i.e. 92: 92.2. Among these students, only 17% had complete knowledge of first aid and partial knowledge was found in 33.3% of students. Regarding first aid kit, 87.5% of students have heard about the kit of which the proportion of boys and girls was 86.6: 88.5. Only 51% had complete knowledge of contents of first aid kit. Out of these 23.1% had adequate knowledge i. e. when, where and how it is to be used 55.8% of students have ever used it. On an average complete knowledge and partial knowledge was present only in 0.04 and 0.06 respectively. Students in our study have revealed that first aid study is in the curriculum of the course but it seems from the study that practically no stress is being given in imparting knowledge regarding first aid in these schools.

Table 1: Distribution of students according to knowledge and attitude (N=441).

Sex	Heard about first-aid		Total	P value		
	Yes number (%)	No number (%)	Total			
Boys	206 (92.0)	18 (08.0)	224			
Girls	200 (92.2)	17 (07.8)	217	0.92		
Total	406 (91)	35 (09)	441			
Heard about first-aid kit						
	Yes number (%)	No number (%)	Total			
Boys	194 (86.6)	30 (13.4)	224			
Girls	192 (88.5)	25 (11.5)	217	0.55		
Total	386 (12.5)	55 (12.5)	441			

Contents of first-aid kit							
	Complete knowledge no. (%)	Partial knowledge no. (%)	Don't know no. (%)	Total			
Boys	97 (43.3)	71 (31.5)	56 (25.0)	224			
Girls	128 (59.0)	54 (24.9)	35 (16.1)	217 0.0035			
Total	225 (51.0)	125 (28.3)	91 (20.6)	441			
Use of first aid kit							
	Complete knowledge no. (%)	Partial knowledge no. (%)	Don't know no. (%)	Total			
Boys	39 (17.4)	115 (51.3)	70 (25.0)	224			
Girls	63 (29.0)	111 (51.2)	43 (16.1)	217	0.0024		
Total	102 (23.1)	226 (51.3)	113 (25.6)	441			
Steps in	Steps in first aid T/t						
	Complete knowledge no. (%)	Partial knowledge no. (%)	Don't know no. (%)	Total			
Boys	02 (0.8)	02 (0.9)	220 (98.2)	224			
Girls	00 (-)	01 (0.5)	216 (19.8)	217	0.32		
Total	02 (0.5)	03 (0.7)	436 (49.0)	441			

DISCUSSION

According to study by Khan et al; in 2010 found that approximately 98% of school-based injuries are unintended that took place during playing, striking blunt objects, falls and heat as the common mechanisms of school injuries.⁵ Study done by Mobarak et al about first aid knowledge and attitude of Secondary School Students in Saudi Arabia in 2015 revealed that the inadequate first aid preparedness is there in the Saudi student community, which is comparable to the students in Lublin, Poland, where 67% of the students had insufficient knowledge and skills to conduct first aid.^{6,7} In Cambodia the assessment of knowledge of the students revealed significant inadequacies in knowledge about burn prevention and first aid in general.8 In the study conducted in Sri Lanka in 2015 shows similar results as our study that the knowledge of first aid was not widespread among senior school prefects in two schools. Comparable result was found in a Turkish study which emphasized that first aid knowledge among university students were insufficient and were only exposed to theoretical training. 10 In study conducted by Li et al, in 2012 in China had similar result among the personals that took care of children.11 However, Deepak and Nayak in 2012 studied the KAP on first aid practices among selfhelp group in India suggest that 62% had good knowledge and 38% had average knowledge which is in contrast of our study findings.¹² It was found by Priyangika and Hettiarachchi in Sri Lanka in 2015 that more than 50% of students knew basic first aid for burn and fracture.9 Further they found that very few had knowledge for first aid for cut injury and epistaxis which is similar to our study findings. Study conducted in Pakistan by Khan et al. in 2010 and in UK by in 1998 shows that 7.4% and 11.3% students respectively had knowledge about correct management of epistaxis which was 0.4% in our study.^{5,13} In the study conducted in Sri Lanka in 2015, found that none of the participants had correct knowledge about chocking scenario, where as in our study 5.7% had complete knowledge and 31.3% had partial knowledge about it.9 Thein et al in 2005 found

primary care givers in Singapore, had good knowledge about first aid in chocking. ¹⁴ In contrast to our study findings where only 3.7% students had KAP of first aid in epileptic seizures, 42% of participants from two schools responded correctly in study conducted by Priyangika and Hettiarachchi in Sri Lanka in 2015.5 Whereas study conducted by Pandian et al in 2006 show that 35.7% of rural school children had knowledge about first aid measures for fits. 15 Students in our study have revealed that first aid study is in the curriculum of the course but it seems from the study that practically no stress is being given in imparting knowledge regarding first aid in these schools. It is suggested that in this school any of the teacher may be assigned responsibility to sensitize children regarding first aid measures from time to time as the knowledge of first aid is very useful & sometime it may even be lifesaving. In study conducted by Afrasyab et al in Karachi, Pakistan showed that 94% recognized that first aid training should be part of their curriculum and 84% proposing that it should be part of pre-university curriculum.⁵ These results are comparable to the study conducted in Singapore in 2005, where 85.5% of respondents said that first aid course will be useful. ¹⁴ According to study conducted by Altintas et al in 2005 in Turkey suggest that first aid training programs can be extended to programs where trained medical students formed effective peer first aid trainers for other university students.¹⁶ A study carried out in Pakistan revealed that the knowledge on first aid was not adequate even after training and thus, have suggested that training programs should be reinforced periodically.¹⁷ These measures if implemented in Uttarakhand will ensure that there are increased numbers of first aid providers available at a time of any emergency or accident or at a time of any calamity faced by the people. One of the limitations of the study is that as only one school was taken for the purpose of the study hence the findings of the study could not be generalized to the entire school going children. The strength of our study lies in the fact that, the study is first of its own kind in Uttarakhand region where the knowledge of first aid is being assessed of school going children.

Table 2: Distribution of students according to knowledge, attitude and practice (N=441).

	Characteristic	Knowledge and practices				P value
Variables		Complete knowledge Partial knowledge		Don't know	Total	
T/t for		Number (%)	Number (%)	Number (%)		
D 1	Boys	41 (18.3)	48 (21.4)	135 (60.3)	224	
Deep wound	Girls	39 (18.0)	50 (23.0)	128 (59.0)	217	0.91
Total		80 (18.1)	98 (22.2)	263 (59.7)	441	•
DI 11	Boys	18 (08.0)	42 (18.3)	164 (73.2)	224	
Bleeding	Girls	15 (06.9)	29 (13.4)	173 (79.7)	217	0.24
Total		33 (07.5)	71 (16.1)	337 (76.4)	441	
n	Boys	03 (01.3)	09 (04.0)	212 (94.6)	224	0.28
Burn	Girls	04 (01.8)	16 (07.4)	197 (90.8)	217	
Total		07 (01.6)	25 (05.7)	409 (92.7)	441	•
CI 1 11	Boys	04 (01.8)	02 (01.0)	218 (97.2)	224	
Chemical burn	Girls	01 (0.5)	03 (01.4)	213 (98.1)	217	0.37
Total		05 (01.1)	05 (01.1)	431 (97.8)	441	-
	Boys	01 (0.4)	02 (0.8)	221 (98.8)	224	
Sunburn	Girls	01 (0.4)	09 (04.1)	207 (95.5)	217	0.09
Total		02 (0.5)	11 (04.9)	428 (97.1)	441	-
Electric	Boys	01 (0.4)	06 (02.7)	217 (96.9)	224	
shock	Girls	01 (0.5)	03 (01.4)	213 (98.1)	217	0.62
Total		02 (0.5)	09 (02.0)	430 (92.5)	441	
Fracture and	Boys	01 (0.4)	01 (0.4)	222 (99.1)	224	
sprain	Girls	0 (-)	0 (-)	217 (100)	217	0.37
Total		01 (0.4)	01 (0.4)	439(99)	441	
Heat	Boys	12 (05.3)	25 (11.2)	187 (83.4)	224	
exhaustion	Girls	14 (06.5)	14 (6.5)	189 (87)	217	0.2
Total		26 (05.9)	39 (8.8)	431 (97.2)	441	
	Boys	00 (-)	11 (04.9)	213 (95.1)	224	
Frost bite	Girls	02 (0.9)	09 (04.5)	206 (94.9)	217	0.33
Total	OHIO	02 (0.5)	20 (04.5)	419 (95.0)	441	
	Boys	01 (0.4)	04 (09.8)	219 (97.4)	224	1.07
Dog bite	Girls	01 (0.5)	04 (01.8)	212 (97.7)	217	
Total		02 (0.5)	08 (01.8)	431 (97.7)	441	
	Boys	03 (01.3)	15 (06.7)	206 (92.0)	224	0.9
Snake bite	Girls	03 (01.4)	17 (07.8)	197 (90.8)	217	
Total	OHIO	06 (01.4)	32 (07.2)	403 (91.4)	441	0.5
	Boys	79 (35.3)	28 (12.5)	117 (52.2)	224	
Burr-sting	Girls	89 (41.0)	36 (16.6)	92 (42.4)	217	0.106
Total	J.1.1.5	168 (38.1)	64 (14.5)	209 (47.4)	440	0.100
	Boys	01 (0.4)	0 (-)	223 (99.6)	224	
Nasal bleeding	Girls	0 (-)	0 (-)	217 (100)	217	0.61
Total		01 (0.4)	- (-)	440 (29.6)	441	0.01
Vomiting and	Boys	02 (0.8)	0 (-)	222 (99.2)	224	
diarrheoa	Girls	0 (-)	0 (-)	217 (100)	217	0.37
Total	3	02 (0.5)	00 (-)	439 (99.5)	441	0.07
	Boys	17 (07.6)	41 (18.3)	166 (74.1)	224	
Choking	Girls	08 (03.7)	53 (24.4)	156 (71.9)	217	0.083
Total	3	25 (05.7)	94 (31.3)	322 (73.0)	441	0.000
	Boys	02 (2.8)	00 (-)	222 (99.2)	224	
Fits	Girls	01 (0.5)	00 (-)	216 (99.5)	217	0.86
Total	3	03 (03.7)	00 (-)	438 (99.3)	441	0.00
	Boys	08 (03.6)	03 (01.3)	213 (95.1)	224	
Drowning	Girls	16 (07.4)	05 (02.3)	196 (90.3)	217	0.152
Total	01110	24 (05.4)	08 (01.8)	409 (92.8)	441	0.132
	Boys	01 (0.4)	00 (01.8)	223 S(99.6)	224	
Chest pain	Girls	03 (01.4)	00 (-)	214 (98.6)	217	0.58
Total	JIIIo	04 (0.90)	00 (-)	437 (99.1)	441	0.58
ı viai		UT (U.)U)	00 (-)	731 (33.1)	771	

CONCLUSION

Our study findings highlighted that the first aid knowledge, attitudes and practices (KAP) among school students in public school of Doiwala, Dehradun was insufficient. Considering these results, there is need of having first aid training program in school curriculum with special teacher and period in school assigned for it. Further, these courses should be updated with latest developments and improvements. There were no large-scale studies of first aid, basic life support knowledge and skills within Indian communities.

ACKNOWLEDGEMENTS

Authors are highly thankful to SRH University for permitting this research study and for providing all assistance for the same.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- Kendrick D, Mulvaney CA, Ye L, Stevens T, Mytton JA, Stewart-Brown S. Parenting interventions for the prevention of unintentional injuries in childhood. Cochrane Database Syst Rev. 2013;28:3.
- 2. Hecht BK. First aid: from witchdoctors and religious knights to modern doctors. Available at: http://www.medicinenet.com/script/main/art.asp?art iclekey=52749. Accessed on 25 April 2016.
- 3. AI Glendon, SP McKenna, SS Blaylock, K Hunt. Evaluating mass training in cardiopulmonary resuscitation. Br Med J. 1987;294(6581):1182–3.
- 4. Engeland A, Roysamb E, Smedslund G, Sogaard AJ. Effects of first-aid training in junior high schools. Inj Control Saf Promot. 2002,9:99–106.
- 5. Khan A, Shaikh S, Shuaib F, Sattar A, Samani SA, Shabbir Q, et al. Knowledge attitude and practices of undergraduate students regarding first aid measures. J Pak Med Assoc. 2010;60(1):68-72.
- Mobarak AS, Afifi RM, Qulali A. First Aid Knowledge and Attitude of Secondary School Students in Saudi Arabia. Health. 2015;7:1366-78.
- 7. Goniewicz M, Chemperek E, Mikula A. Attitude of Students of High Schools in Lublin towards the problem of first aid. Wiadomosci Lekarskie. 2002;55:679-85.

- 8. Hsiao M, Tsai B, Uk P, Jo H, Gomez M, Gollogly JG, et al. "What Do Kids Know": A Survey of 420 Grade 5 Students in Cambodia on Their Knowledge of Burn Prevention and First-Aid Treatment. Burns. 2007;33:347-51.
- Priyangika KGG, Hettiarachchi M. Knowledge, Attitudes and Practices on First Aid Measures among Senior School Prefects in Galle Education Division, Sri Lanka. Proceedings of 8th International Research Conference, KDU, 2015.
- 10. Ozelikay G. A study on the level of knowledge about firstaid of the university students. JFac Pharm Ankara. 1996:25:43-8.
- 11. Li F, Jiang F, Jin X, Qiu Y, Shen X. Pediatric first aid knowledge and attitudes among staff in the preschools of Shanghai, China. BMC Pediatr. 2012;12:121.
- 12. Deepak M, Nayak S. A study on knowledge on assessment of knowledge on practices regarding first aid measures among self-help groups in Mangalore with a view to develop information module. Nitte University J Health Sci. 2012;2(3):68-71.
- 13. Strachan D, England J. First-aid treatment of epistaxis--confirmation of widespread ignorance. Postgrad Med J. 1998;74(868):113-4.
- 14. Thein MM, Lee BW, Bun PY. Knowledge attitudes and practices of childhood injuries and their prevention by primary care givers in Singapore. Singapore Med J. 2005;46(3):122.
- 15. Pandian JD, Santosh D, Kumar TS, Sarma PS, Radhakrishnan K. High school students knowledge, attitude, and practice with respect to epilepsy in Kerala, southern India. Epilepsy Behav. 2006;9:492–7.
- Altintaş KH, Aslan D, Yildiz AN, Subaşi N, Elçin M, Odabaşi O, et al. The evaluation of first aid and basic life support training for the first year university students. Tohoku J Exp Med. 2005;205(2):157-69.
- 17. Abbas A, Bukhari SI, Ahmad F. Knowledge of first aid and basic life support amongst medical students: a comparison between trained and un-trained students. J Pak Med Assoc. 2011;61(6):613-6.

Cite this article as: Semwal J, Bakshi RK, Juyal R, Deepshikha, Vyas S, Kandpal SD. Study of knowledge and attitudes to first aid among school children of Doiwalablock, Dehradun. Int J Community Med Public Health 2017;4:2934-8.