



## Applying First Aids Curriculum in Riyadh High Schools

Authors

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### Abstract

**Background:** *Providing the school students by the knowledge and skills of first aid can play an important role in public health outcome.*

**Aim:** *To assess the awareness of the high school students about first aid, and their desire to get the knowledge by a first aid curriculum.*

**Methodology:** *156 high school students in Riyadh, Saudi Arabia were surveyed.*

**Result:** *The student age group was from 16 to 18 years. The number of the male students was 23 (14.7% of all students), while the female number was 133 (85.3% of all students). 109 of the students (about 69.9%) claimed that they have some knowledge about first aid, while 47 of them (30.1%) said that they do not have. In the other hand, 88 (56.4%) of the students stated that they do not have any experience about first aid. The number of the students who have the desire to learn the first aid was 134 (85.9%) compared to 22 (14.1%) who do not care about learning first aid. Also, 145 (about 92.9%) of the students agreed on applying first aid curriculum in the school, while 11(7.1%) of them did not agree. 149(95.5%) of surveyed students said that they think learning first aid will be helpful for them in their life, and 145 (92.9%) of them think that it will be also beneficial for the whole society.*

**Conclusion:** *It is very important to enhance the students to provide first aid by applying first aid curriculum to increase their knowledge and skills of first aid. This will be beneficial not only for the students, but also for the whole society in the future.*

### Introduction

First aid is to provide the basic health care to someone who is in need to the assistance due to any injuries or illnesses. It could be provided by any person who is trained to provide basic levels of first aid. First aid is not exclusive in training public cardiopulmonary resuscitation (CPR), but it is about giving general instruction of pre-hospital care. For example, knowing how to control

bleeding with bandage, or how to deal with minimal burns. In developed countries people, should know specific number to call for help, for example, 997 in Saudi Arabia. There are many countries focusing in giving public people training courses about first aid. However, in some countries the awareness of the people is still not enough. There are many studies shows that the students have insufficient knowledge and

experience about first aid. Also, the studies shows that most of the students have the desire to learn about first aid. Because the students spend a lot of their time in the school, we need to take advantage of that and provide knowledge and skills of first aid for the students. This will make the student more confident to provide basic health care when the need it in their life. Applying first aid curriculum in high school will develop the awareness of the community in the future.

Applying first aid curriculum in high schools lead to increased knowledge, skills and enhance the students to provide first aid. Also, it reduces the common mistakes committed by untrained people. This will improve the health outcome for the whole society.

### Review of the literature

First aid is to provide the basic health care to someone who is in need the assistance due to any injuries or illnesses, It could be provided by non-professional, with many people trained in providing basic levels of first aid. So, it is very important to raise awareness of society about first aid. Applying first aid curriculum is not exclusive in training public cardiopulmonary resuscitation (CPR), but it is about giving general instruction of pre-hospital care. <sup>(1)</sup>

The decreased level of awareness about first aid in society results in complications to the ill/injured patient. There are many statistics that demonstrate the decreased level of awareness among school students. For example, 360 male secondary school children in Taif, Saudi Arabia were surveyed. The mean students' age was 16 - 18 years. The mean participants' FA knowledge score was 11%. Also, many studies have suggested that school teenagers can learn and provide first aid and life supporting first aid, and have advocated that school teenagers should learn first aid in schools. <sup>(2)</sup>

To summarize, applying first aid curriculum in high schools lead to increased knowledge, skills and enhance the students to provide first aid. Also, it reduces the common mistakes committed by

untrained people. This will improve the health outcome for the whole society.

### Materials and Methods

**Study design:** the study design will be cross-sectional survey.

**Study Area/Setting:** The study will be conducted in high schools in Riyadh.

- 1) Asheafa school
- 2) Almnhal school
- 3) 149 school

### Study Subjects

#### Inclusion Criteria

- All high school students in Riyadh include age 16-18 female and male

#### Exclusion Criteria

- Non-high school students in Riyadh.
- All students outside Riyadh.

Data was obtained in the data collection form (questionnaire) the form was self-prepared. Validity and reliability of the questionnaire was obtained by preliminary study.

### Results

Table 1 shows the gender and nationality of participants, the gender was 23 (14.7%) male and 133 (85.3%) female and nationality was 141(90.4%) Saudi and 15 (9.6%) non-Saudi. Figure 1 shows the high school grade of participants which was 45(28.8%) First grade, 69 (44.2%) second grade and 42 (26.9%) third grade. Table 2 shows the opinion of study participants regarding first aid with gender. In question 1 "Do you have any knowledge about First Aid?" 8 (34.8%) male and 101 (75.9%) female answered yes, while 15 (65.2%) male and 32 (24.1%) female answered no. In question 2 "Do you have any experience about First Aid?" 2 (8.7%) male and 66 (49.6%) female answered yes, while 21 (91.3%) male and 67 (50.4%) female answered no. In question 3 "Do you have desire to learn about First Aid?" 16 (69.6%) male and 118 (88.7%) female answered yes, while 7 (30.4%) male and 15 (11.3%) female answered no. In question 4 "Do you agree to apply First Aid in school?" 22 (95.7%) male and

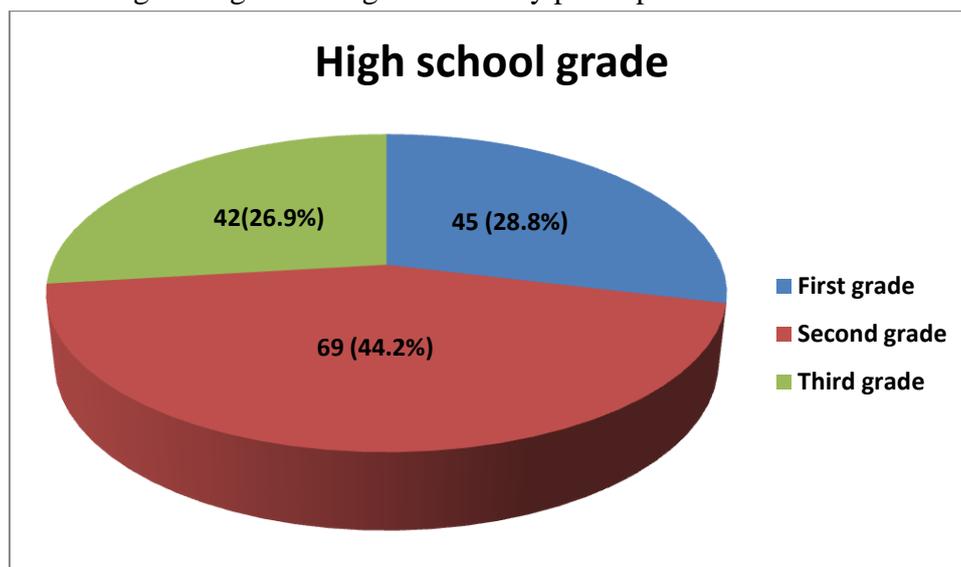
123 (92.5%) female answered yes, while 1 (4.3%) male and 10 (7.5%) female answered no. In question 5 “Do you think that First Aid will help the student?” 21 (91.3%) male and 128 (96.2%) female answered yes, while 2 (8.7%) male and 5 (3.8%) female answered no. In question 6 “Do you think that First Aid will improve the society?” 19 (82.6%) male and 126 (94.7%) female answered yes, while 4 (17.4%) male and 7 (5.3%) female answered no. Table 3 shows the opinion of study participants regarding first aid with nationality. In question 1 “Do you have any knowledge about First Aid?” 98 (69.5%) Saudi and 11 (73.3%) non-Saudi answered yes, while 43 (30.5%) Saudi and 4 (26.7%) non- Saudi answered no. In question 2 “Do you have any experience about First Aid?” 63 (44.7%) Saudi and 5 (33.3%) non- Saudi answered yes, while 78 (55.3%) Saudi and 10 (66.7%) non- Saudi answered no. In question 3 “Do you have desire to learn about First Aid?” 121 (85.8%) Saudi and 13 (86.7%) non- Saudi answered yes, while 20 (14.2%) Saudi and 2 (13.3%) non- Saudi answered no. In question 4 “Do you agree to apply First Aid in school?” 130 (92.2%) Saudi and 15 (100.0%) non- Saudi answered yes, while 11 (7.8%) Saudi and 0 (0.0%) non- Saudi answered no. In question 5 “Do you think that First Aid will help the student?” 136 (96.5%) Saudi and 13 (86.7%) non- Saudi answered yes, while 5 (3.5%) Saudi and 2 (13.3%) non- Saudi answered no. In question 6 “Do you think that First Aid will improve the society?” 133 (94.3%) Saudi and 12 (80.0%) non- Saudi answered yes, while 8 (5.7%)

Saudi and 3 (20.0%) non- Saudi answered no. Table 4 shows the opinion of study participants regarding first aid with grade. In question 1 “Do you have any knowledge about First Aid?” 34 (75.6%) first grade, 43 (62.3%) second grade and 32 (76.2%) third grade answered yes, while 11 (24.4%) first grade, 26 (37.7%) second grade and 10 (23.8%) third grade answered no. In question 2 “Do you have any experience about First Aid?” 23 (51.1%) first grade, 25 (36.2%) second grade and 20 (47.6%) third grade answered yes, while 22 (48.9%) first grade, 44 (63.8%) second grade and 22 (52.4%) third grade answered no. In question 3 “Do you have desire to learn about First Aid?” 38 (84.4%) first grade, 56 (81.2%) second grade and 40 (95.2%) third grade answered yes, while 7 (15.6%) first grade, 13 (18.8%) second grade and 2 (4.8%) third grade answered no. In question 4 “Do you agree to apply First Aid in school?” 40 (88.9%) first grade, 65 (94.2%) second grade and 40 (95.2%) third grade answered yes, while 5 (11.1%) first grade, 4 (5.8%) second grade and 2 (4.8%) third grade answered no. In question 5 “Do you think that First Aid will help the student?” 42 (93.3%) first grade, 66 (95.7%) second grade and 41 (97.6%) third grade answered yes, while 3 (6.7%) first grade, 3 (4.3%) second grade and 1 (2.4%) third grade answered no. In question 6 “Do you think that First Aid will improve the society?” 44 (97.8%) first grade, 63 (91.3%) second grade and 38 (90.5%) third grade answered yes, while 1 (2.2%) first grade, 6 (8.7%) second grade and 4 (9.5%) third grade answered no.

**Table (1):** This table describes Demographic characteristics of participants.

Demographic characteristics	No. (%)
Gender	
Male	23 (14.7)
Female	133 (85.3)
Total	156 (100.0)
Nationality	
Saudi	141 (90.4)
Non Saudi	15 (9.6)
Total	156 (100.0)

**Fig 1:** Pie diagram showing the high school grade of study participants



**Table 2:** Opinion of study participants regarding first aid with gender

Questions	Gender		Total	Chi square	P value
	Male	Female			
Do you have any knowledge about First Aid?					
Yes	8 (34.8)	101 (75.9)	109 (69.9)	15.78	0.001*
No	15 (65.2)	32 (24.1)	47 (30.1)		
Total	23 (100.0)	133(100.0)	156 (100.0)		
Do you have any experience about First Aid?					
Yes	2 (8.7)	66 (49.6)	68 (43.6)	13.36	0.001*
No	21 (91.3)	67 (50.4)	88 (56.4)		
Total	23(100.0)	133(100.0)	156(100.0)		
Do you have desire to learn about First Aid?					
Yes	16 (69.6)	118 (88.7)	134 (85.9)	5.94	0.015*
No	7 (30.4)	15 (11.3)	22 (14.1)		
Total	23(100.0)	133(100.0)	156(100.0)		
Do you agree to apply First Aid in school?					
Yes	22 (95.7)	123 (92.5)	145 (92.9)	0.30	5.83
No	1 (4.3)	10 (7.5)	11 (7.1)		
Total	23(100.0)	133(100.0)	156(100.0)		
Do you think that First Aid will help the student?					
Yes	21(91.3)	128(96.2)	149(95.5)	1.115	0.291
No	2(8.7)	5(3.8)	7(4.5)		
Total	23(100.0)	133(100.0)	156(100.0)		
Do you think that First Aid will improve the society?					
Yes	19(82.6)	126(94.7)	145 (92.9)	4.401	0.036*
No	4(17.4)	7 (5.3)	11 (7.1)		
Total	23(100.0)	133(100.0)	156(100.0)		

**Table 3:** Opinion of study participants regarding first aid with nationality

Questions	Gender		Total	Chi square	P value
	Saudi	Non Saudi			
Do you have any knowledge about First Aid?					
Yes	98 (69.5)	11 (73.3)	109 (69.9)	0.094	0.759
No	43 (30.5)	4 (26.7)	47 (30.1)		
Total	141(100.0)	15(100.0)	156(100.0)		
Do you have any experience about First Aid?					
Yes	63 (44.7)	5 (33.3)	68 (43.6)	0.710	0.399
No	78 (55.3)	10 (66.7)	88 (56.4)		
Total	141(100.0)	15(100.0)	156(100.0)		
Do you have desire to learn about First Aid?					
Yes	121 (85.8)	13 (86.7)	134 (85.9)	0.008	0.928
No	20 (14.2)	2 (13.3)	22 (14.1)		
Total	141(100.0)	15(100.0)	156(100.0)		
Do you agree to apply First Aid in school?					
Yes	130 (92.2)	15(100.0)	145 (92.9)	1.259	0.262
No	11 (7.8)	0 (0.0)	11 (7.1)		
Total	141(100.0)	15(100.0)	156(100.0)		
Do you think that First Aid will help the student?					
Yes	136 (96.5)	13 (86.7)	149 (95.5)	3.030	0.082
No	5 (3.5)	2 (13.3)	7 (4.5)		
Total	141(100.0)	15(100.0)	156(100.0)		
Do you think that First Aid will improve the society?					
Yes	133 (94.3)	12 (80.0)	145 (92.9)	4.246	0.039*
No	8 (5.7)	3 (20.0)	11 (7.1)		
Total	141(100.0)	15(100.0)	156(100.0)		

**Table 4:** Opinion of study participants regarding first aid with grade

Questions	Grade			Total	Chi square	P value
	First	Second	Third			
Do you have any knowledge about First Aid?						
Yes	34 (75.6)	43(62.3)	32 (76.2)	109(69.9)	3.357	0.187
No	11 (24.4)	26(37.7)	10 (23.8)	47(30.1)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		
Do you have any experience about First Aid?						
Yes	23(51.1)	25(36.2)	20(47.6)	68(43.6)	2.832	0.243
No	22(48.9)	44(63.8)	22(52.4)	88(56.4)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		
Do you have desire to learn about First Aid?						
Yes	38(84.4)	56(81.2)	40(95.2)	134(85.9)	4.382	0.112
No	7(15.6)	13(18.8)	2(4.8)	22(14.1)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		
Do you agree to apply First Aid in school?						
Yes	40(88.9)	65(94.2)	40(95.2)	145(92.9)	1.633	0.442
No	5(11.1)	4(5.8)	2(4.8)	11(7.1)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		
Do you think that First Aid will help the student?						
Yes	42(93.3)	66(95.7)	41(97.6)	149(95.5)	0.937	0.626
No	3(6.7)	3(4.3)	1(2.4)	7(4.5)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		
Do you think that First Aid will improve the society?						
Yes	44(97.8)	63(91.3)	38(90.5)	145(92.9)	2.278	0.320
No	1(2.2)	6(8.7)	4(9.5)	11(7.1)		
Total	45(100.0)	69(100.0)	42(100.0)	156(100.0)		

### Discussion

In our study, we determined the answers for all high school students in our 150 sample from high school in Riyadh. Their age ranged between 16 – 18 years. We found the majority have some knowledge about first aid which is not considered in previous study. In the other hand, there are many statistics that demonstrate the decreased level of awareness about first aids among secondary school students. For example, 360 male secondary school students in Taif, Saudi Arabia were surveyed. Knowledge of students about first aids was scored 11%. In other hand, the majority of students don't have experience about first aid. So, that mean when we apply first aids curriculum, should have a practical session. Which was unexpected, about three quarters (85.9%) of the students have the desire to learn about first aid. And about 93% of students agree to apply first aids in schools. The majority of students think that first aids will help the student and improve the society. About 96% of students think that first aids will help the students and about 95% of students think that first aids will improve the society. To sum up, applying first aid curriculum in high school will help to increase knowledge, skills and enhance the students to provide first aid.

### Limitations

The Limitation there was some schools they do not give us the permission to do the questionnaire with the students. Also, there was few students refuse answer the question.

### Conclusion

In conclusion, applying first aid curriculum in high schools lead to increase knowledge, skills and enhance the students to provide first aid. Also, it reduces the common mistakes committed by untrained people. This study is cross-sectional study. The participants were 150 high school students (23 male and 133 female). In addition, we distributed the questionnaire manually among

the high school students. In addition, most of the students have the desire to learn about first aid and the think first aid will help them and will help to improve the society.

### References

1. Georg Bollig, Effects of first aid training in the kindergarten - a pilot study <http://www.sjtre.com/content/19/1/13#abs> retrieved on 22<sup>nd</sup> February 2016.
2. Ali S. Mobarak<sup>1</sup>, Raouf M. Afifi<sup>2,3\*</sup>, AmaniQulali , First Aid Knowledge and Attitude of Secondary School Students in Saudi Arabia <http://www.scirp.org/journal/PaperDownload.aspx?paperID=60709> retrieved on 22<sup>nd</sup> February 2016
3. De Buck, Emmy<sup>a,\*</sup> Van Remoortel, Hans<sup>a</sup>Dieltjens, Tessa<sup>a</sup>Verstraeten, Hans<sup>a</sup>Clarysse, Matthieu<sup>a</sup>Moens, Olaf<sup>b</sup>Vandekerckhove, Philippe, Simulation and education: Evidence-based educational pathway for the integration of first aid training in school curricula <http://search.ebscohost.com/login.aspx?direct=true&db=edselp&AN=S0300957215002531&site=eds-live> retrieved on 22<sup>nd</sup> February 2016.