

# Knowledge, Attitudes and Practices on First Aid Measures among Senior School Prefects in Galle Education Division, Sri Lanka

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**Abstract**— *First aid is needed in daily life at any situation. So every citizen shares a responsibility of having basic first aid knowledge and practices. First aider should be able to assess, provide care and direct to appropriate medical care. This study was planned to assess knowledge, attitudes and practices on first aid among senior school prefects in relation to the gender and previous exposure to first aid training. A descriptive cross sectional study was undertaken in two selected schools out of five girls' schools and five boys' schools in Galle educational division which are already having first aid trainings. All senior prefects in the two schools were eligible for the study. Data were collected using an interviewer administered questionnaire which contain both open ended and closed ended questions under four parts (Part 1-Socio-demographic data, Part 2- knowledge on first aid, part 3-attitudes on first aid, part 4 - practical scenarios on first aid). There were 66 senior prefects; 35 males and 31 females. All of them had heard the term of "First aid". However, primary assessment in first aid (DRABC-Danger, Response, Airway, Breathing, and Circulation) was known to 17 (10 males and 7 females) subjects. Nearly 70% (25 males, 22 females) heard the term "cardiopulmonary resuscitation". But of them only 12 males and 5 females were able to mention the ratio of chest compressions to rescue breaths as 30:2. There was positive attitude towards first aid as the mean  $\pm$  SD score was 24.23 $\pm$ 2.4 out of 30 marks. Nearly 3/4 of them had the view of having first aid in their school curriculum and wants to improve their first aid knowledge and practices. Overall, there were significant difference in attitudes of females than males ( $p=0.04$ ). Overall mean  $\pm$ SD value that was scored for the practices section was 4.53 $\pm$ 1.48. Only 9 individuals, each from both schools were able to obtain scores over 5 out of 10. There was a significant effect of previous first aid education on knowledge ( $\chi^2=13.08$ ,  $p<0.05$ ), attitudes ( $\chi^2=6.52$ ,  $p<0.05$ ) and practices ( $\chi^2=11.47$ ,  $p<0.05$ ) of senior prefects. Though there were positive attitudes towards learning first aid, the knowledge and practices on first aid was insufficient among senior prefects of Galle educational division.*

**Keywords**— KAP, First aid, senior prefects

## I. INTRODUCTION

First aid, as the name implies is the first care given to a victim of an accident, injury or sudden illness, before the provision of advanced medical care. First aid should be aimed to preserve life, promote recovery and prevent worsening of the victim's condition. First aider should be able to assess the victim, then provide the basic care accordingly and then directed to an appropriate medical care as soon as possible. At the present day, first aid might be need in daily life at any moment. Knowledge on first aid for preventive care is of great interest to every ones' life. Person that will use First aid must know its rules and practices.

Every year, 150,000 people may die in situations where first aid could have given them a chance to live (St John Ambulance, 2012). Almost, 35% of deaths occur within 5 minutes of an accident while another 54% would die within 30 minutes. However, by giving first-aid at the site of the injury deaths can be decreased in 20% (Metin & Mutlu, 2010). According to the reports injuries are a leading cause of death, hospitalization and disability throughout the world accounting for 9% of all deaths and 16% of the burden of disability annually (World Health Report, 2006).

Every citizen shares a responsibility of having basic first aid knowledge in case of emergency as we have to undergo such situations in our day today life. Younger generation is the future of the country and they have good capacity to learn new things and act immediately. Schools are the most suitable places where proper education on first aid to be delivered. In Sri Lanka no studies have been found on first aid knowledge, attitudes and practices among school prefects or school children. Thus, there is a need for this type of study in order to develop educational programs.

Only senior prefects were selected for this study as they are the people who are encountering with school accidents frequently. This study was planned to assess

knowledge, attitudes and practices on first aid measures among senior school prefects in Galle educational division and through that my study aims to promote adequate firstaid knowledge and practices among school children in Galle educational division.

## II. METHODOLOGY

A descriptive cross sectional study was undertaken in two selected schools out of five girls' schools and five boys' schools in Galle educational division which are already having firstaid trainings. The study population were the senior prefects in both Sacred Heart Convent (n=31) and Saint Aloysius' College (n=35) in Galle educational division. All members of the senior prefect's board were eligible for the study.

Data were collected using an interviewer administered questionnaire which consisted of both open ended and close ended questions. There were four separate sections in the questionnaire including socio-demographic data, knowledge, attitudes and practices.

After the approval from the Ethical Review Committee was obtained; permission was sought from the principals of both Sacred Heart Convent & St. Aloysius College. The participants were fully informed about the purpose of the study and obtained the written consent from each participant. The privacy and confidentiality of each participant taking part in the study was ensured. All participants were instructed regarding importance of accurate information. The convenient time was used for getting answers for the questions, which was not interfering to their education. The questionnaire was introduced to the participants separately and the answers were marked by the investigator. It took 30 minutes to complete the questionnaire.

Data were analysed by using Microsoft Excel 2007 and SPSS 17.0. The chi-square test was used to investigate whether distribution of categorical variables (i.e. knowledge on primary assessment, attitudes and marks for practices with previous first aid education) differ from one another. Statistical significance was set as  $p < 0.05$ . The t-test was used to compare attitudes of two schools. P-values  $< 0.05$  were considered as statistically significant (one-sided).

## III. RESULTS

### A. Socio-demographic data

There were 66 senior prefects; 35 males and 31 females. Though 53(80.30%) of prefects were doing extracurricular activities in the school only 17(32.08%) had previous experience in first aid. Out of this 17, only 2 females and

4 males had followed first aid at school under St. John Ambulance Brigade. Rest of the subjects (11) had some first aid exposure as a component of extra-curricular activity such as guiding/scouting and cadetting.

Table 1. Distribution of socio-demographic variables among the study population

Variable	Category	No of students	Percentage
Sex	Male	35	53.0%
	Female	31	47.0%
A/L subject Scheme	Science	16	24.3%
	Maths	15	22.7%
	Commerce	15	22.7%
	Arts	20	30.3%
First aid related education	Yes	17	25.8%
	No	49	74.2%

### B. Knowledge on first aid

All of them had heard the term of "First aid". Out of them, only 20 senior prefects (11males and 9 females respectively) knew that there are three aims in first aid. But, only 12 of them were capable to mention all the three aims correctly. Person that will use First aid must know its' rules and practices. The primary assessment in first aid (DR ABC -Danger, Response, Airway, Breathing, and Circulation) was known to 17 (10 males and 7 females) subjects. The responses were statistically significant among those who had previous first aid experience ( $\chi^2=13.08 > 3.84$ .) Only 15(22.7%) of prefects including 9 males and 6 females knew that safety of others and self should be the first priority in an emergency situation. Summary of the component on Cardio Pulmonary Resuscitation (CPR) was in Table 2.

Table 2. Summary for knowledge on CPR component

Questions	Correct responses- n (%)		
	Male	Female	Total
Heard the term CPR	25(38.0%)	22(33.2%)	47(71.2%)
chest compressions: rescue breaths ratio	12(18.18%)	5(7.58%)	17(25.76%)
Depth of chest bone compression	3(4.55%)	8(12.12%)	11(16.67%)

Considering the percentages obtained for knowledge part, it can be stated that the knowledge of first aid was

not widespread among senior school prefects in both Saint Aloysius College and Sacred Heart Convent.

**C. Attitudes of first aid**

There was positive attitude towards first aid as the mean±SD score was 24.23±2.4 out of 30 marks suggesting that they have positive attitudes towards first aid (Figure 1).

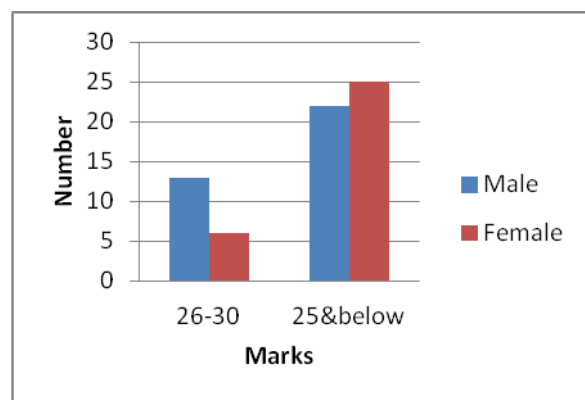


Figure 1. Score distribution for attitudes among senior prefects

Sixty three students (95%) agreed that every person should learn first aid. Further, 91% of them believed that practical training was essential to provide effective first aid and nearly 3/4 of them had the view of having first aid in their school curriculum as a subject. Seventy percent of students agreed that they need to improve their first aid knowledge and practices and other avoided situations due to lack of confidence. There was a significant difference of attitudes among prefects who had previous first aid exposure. ( $\chi^2=6.52>3.84$ ). Overall, there was a significant difference in attitudes among senior prefects in both schools ( $p=0.04$ ). However, it is encouraging that younger students have a more positive view of importance of first aid.

**D. Practices on first aid**

As a whole, more than 50% of study participants had the basic knowledge on firstaid for fainting attack, eye injury, fire and the usage of arm sling. However, these students had poor responses on firstaid procedures for cut injury, epistaxis and emergency actions. More than 3/4 of the prefects didn't know that safety of self and others must be the first priority in an emergency. Practices were strongest on practices for fainting attack and weakest on first aid for chocking.

Even though, students who did first aid programs before scored higher than those who didn't, the mean±SD score (4.53±1.48) on practical scenarios was low among both categories. However, it was focused upon adult training. It was difficult to find a research to demonstrate whether

training in college might be more effective in terms of long term understanding and retention. However, there was a significant effect of previous first aid education on practices ( $\chi^2=11.47, p<0.05$ ) of senior prefects.

**IV .DISCUSSION**

Though 53(80.30%) of prefects were doing extracurricular activities in the school only 17(32.08%) had previous experience in first aid. Out of this 17, only 2 females and 4 males had followed first aid at school under St. John Ambulance Brigade. Rest of the subjects (11) had some first aid exposure as a component of extra-curricular activity such as guiding/scouting and cadetting. There was no significant difference in distribution of prefects who had previous first aid exposure ( $\chi^2=2.90<3.84$ ). Many studies conducted in other countries highlighted that study samples haven't had first aid training or education before, 17.5% of Pakistan university students (Khan et al., 2010) and 34% in Turkey (Metain & Mutlu,2010). However, all most all subjects in this study knew the term of "first aid" before as both schools have St John ambulance Brigade membership. But different result was observed among rural mothers in Egypt where 25% of them haven't heard the term of "first aid" before (Eldosoky,2012).

According to the American heart Association guide lines, the chest compression: rescue breaths ratio should be 30:2 in Cardio Pulmonary Resuscitation for adults(American Heart Association,2010).Though nearly 70% had heard the term of "Cardio Pulmonary Resuscitation" only 26% student knew the correct ratio of chest compressions: rescue breaths as 30:2.However, 53% of university students in Turkey knew correct answer(Metain&Mutlu,2010).A study carried out in USA has shown that attitudes regarding CPR training may influence willingness to perform CPR(Winkelman, 2009).But in my study I couldn't assess the attitudes of participants towards CPR.

Considering the percentages obtained for knowledge part, it can be stated that the knowledge of firstaid was not widespread among senior school prefects in both Saint Aloysius College and Sacred Heart Convent. Similar outcome was found in a Turkish study which highlighted that firstaid knowledge among university students were insufficient as they were only exposed to theoretical firstaid training(Ozelikayet al.,1996).Similar result was observed among personals that care for children in China (Li et al,2012).Further, knowledge and attitudes found to be moderate in a study carried out among relief workers about firstaid procedures. But they have poor knowledge on CPR(Delavar,2012).In contrast a study carried out in

India among self-help groups suggested that 62% of them had good knowledge and 38% has average knowledge on first aid practices (Deepak & Nayak, 2012).

Study subjects had obtain high mean±SD score (24.23±2.4) for attitudes out of 30 suggesting that they have positive attitudes towards first aid. Sixty three students (95%) agreed that every person should learn first aid. A study found that even students who had some level of disabilities are capable of learning basic first aid procedures (Gast & Wintering, 1992). Further, 91% of them believed that practical training was essential to provide effective first aid and nearly ¾ of prefects suggested that first aid should be introduced to the school curriculum as a subject. In a study conducted in Pakistan among university students, where 94% of students realized that first aid training should be a part of the curriculum (Khan et al., 2010). In a study in Singapore (Thein et al., 2005) 85% of respondents said that first aid course will be helpful. There was a significant difference of attitudes among prefects who had previous first aid exposure. ( $\chi^2=6.52>3.84$ ). Seventy percent of students agreed that they need to improve their first aid knowledge and practices and other avoided situations due to lack of confidence. A study found that attitudes toward giving and learning first aid were important for giving and acquiring knowledge (Engeland, 2002). However, it is encouraging that younger students have a more positive view of importance of first aid.

Even though, students who did first aid programs before scored higher than those who didn't, the mean±SD score (4.53±1.48) on practical scenarios was low among both categories. Researchers have shown that first aid training must be repeated periodically in order to maintain adequate levels of skills and expertise (Berdin et al., 1993). However, it was focused upon adult training. It was difficult to find a research to demonstrate whether training in college might be more effective in terms of long term understanding and retention.

As a whole, more than 50% of students knew basic first aid for fainting attack, eye injury, fire and usage of arm sling. This was in contrast to the knowledge of students who had poor response for first aid for cut injury and epistaxis. It was only 7.4% among Pakistan university students (Khan et al., 2010) and in UK (Strachen & England, 1998), only 11.3% respondents knew the correct management of epistaxis. In contrast none of our prefects selected the correct answer for choking scenario, but relatively good practice was seen among primary care givers in Singapore, because half of them knew how to deal with a child who was choking (Thein et al., 2005). Forty two percent of my study

subjects knew basic measure for epileptic seizure. In India, only 35.7% of rural school children knew some of the currently recommended first aid measures for epileptic seizures (Santhosh et al., 2006).

Considering these results, the need of having first aid training program in school curriculum can be stressed. Further, these courses should be updated with latest developments and improvements though we did not ascertain the level of first aid training that these students have had in the past. There were no large scale studies of first aid, basic life support knowledge and skills within Sri Lankan communities. About 98% of school based injuries are unintentional in nature and they were taken place during playing, falls, striking blunt objects and fire/heat as the common mechanisms of school injuries (Khan et al., 2013). My survey highlighted that the first aid knowledge, attitudes and practices among school senior prefects of Galle Educational division was insufficient. First aid training programs can be extended to programs conducted in Turkey where trained medical students formed effective peer first aid trainers for other university students (Altintas et al., 2005). But a study carried out in Pakistan revealed that the knowledge on first aid was not satisfactory even after training. So they have suggested that programs should be reinforced every year (Abbas et al., 2006). I also think it is a good option for Sri Lanka. These measures will ensure that increased numbers of first aid trainers were available at a time of any emergency or accident faced by the people in Sri Lanka.

## V. CONCLUSION

In conclusion, senior prefects across two schools had inadequate knowledge on main aims of first aid, primary assessment and Cardio Pulmonary Resuscitation. The attitude of prefects regarding their own ability to give first aid was poor. However the attitudes towards the perceived need for knowledge regarding first aid and the willingness to receive training on first aid were encouraging. The knowledge and practices on first aid among school senior prefects was poor as only a few number of school children had first aid training. Even though prefects who had previous exposure scored better, they are having the theoretical knowledge only. First aid training programs should be introduced to the school curriculum and also the standard of all the existing programs should be raised.

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