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Research Article

**KNOWLEDGE, ATTITUDE AND PRACTICE (KAP)  
REGARDING FIRST AID AMONG MEDICAL STUDENTS OF  
DIFFERENT MEDICAL COLLEGES**<sup>1</sup>Dr. Ahmad Nawaz, <sup>2</sup>Dr. Mariam Rafiq, <sup>3</sup>Misbah Munir<sup>1</sup>Nawaz Sharif Medical College, Gujrat<sup>2</sup>Aziz Bhatti Shaheed Teaching Hospital Gujrat<sup>3</sup>Sahiwal Medical College Sahiwal**Abstract:**

*First Aid is the immediate help provided to a sick or injured person and is concerned not only with physical injury or illness but with other initial care. A cross sectional study was conducted from august 2017 to September 2017 among medical students to investigate the basic knowledge and understanding of First Aid among the medical students. It is very important that general public especially medical students know about First Aid in order to save the lives and prevent the early morbidity and mortality in emergency situation. If First Aid is not given properly it can sometimes hurt rather than help an injured person or even be harmful to the person giving the First Aid. When an accident happens, a First Aid program that meets the requirement and is tailored to the type and size of emergency can literally make the difference between life and mortality, or recovery and permanent disability.*

**Key words:** *First aid, awareness, medical students, morbidity, mortality***Corresponding author:****Dr. Ahmad Nawaz,**Nawaz Sharif Medical College,  
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**INTRODUCTION:**

First aid is the treatment for the purpose of preserving life and minimizing the consequences of injury and illness until help from a medical practitioner or a nurse is obtained.[1]It includes self help and home care if medical assistance is not available or delayed. It also includes well selected words of encouragement, evidence of willingness to help and promotion of confidence by demonstration of competence. First aid awareness is an introduction to the practical application of first aid.

The person giving the first aid, first aider, deals with the whole situation, the injured person, and the injury or illness. He knows what to do and what not to do. He avoids error that is frequently made by untrained persons through well-meant but misguided efforts. He knows, too, that his first aid knowledge and skill can mean the difference between life and death, between temporary and permanent disability, and between rapid recovery and prolonged hospitalization.

First aid training is of value in both preventing and treating sudden illness or accidental injury and caring a large number of persons caught in a natural disaster. First aid training is of particular importance in case of catastrophe, when medical and hospital services are limited or delayed. Catastrophe may take a form of a hurricane, a flood, an earthquake, a tornado, an explosion, or a fire. It may also take the form of a single accidental death or a life threatening illness. Knowing what to do in an emergency helps to avoid the panic and disorganized behavior that are characteristic of unprepared persons at such times.

First aid is treatment for the purpose of preserving life and minimizing the consequences of injury and illness until help from a medical practitioner and nurse is obtained. Among natural disasters earthquakes, floods and wind storms are not uncommon in Pakistan. The Northern Areas of Pakistan lie in an earthquake zone. An earthquake (8th October 2005) in the North-West frontier Province and Azad Kashmir claimed 50000 lives and left more than 80000 injured. Roads were badly damaged after the

earthquake and many remote areas were cut off by landslides and consequently medical teams could not reach the villages for 3-4 days. First aid provided by local people could have reduced the death toll drastically. [1]

At some point in a medical curriculum students are taught how to handle emergencies in a hospital emergency setting where drugs and other necessities are available but the adequate knowledge required for handling an emergency without hospital setting at the site of accident or emergency is not sufficient. The main objective of the study is to find out the level of knowledge of students in providing first aid care and to find out the number of students who have received formal first aid training. We also assess the preferred response of students to whereas emergency situations. This study also aims to assess the need for further training in first aid for medical; students and whether they feel that their knowledge is sufficient in this regard or not. We will also be able to assess if the student themselves feel the need for first aid training or not.

**REVIEW OF LITERATURE**

In a study in Italy it was concluded that 25% to 50% earthquake victims who were injured and died slowly could have been saved if first aid have been rendered immediately. [2]There is a rising trend in the number of motor vehicle accidents and the number of fatalities due to motor vehicle accidents in Pakistan. In a 40 year period from 1956-96 there was a 14 fold increase in the number of motor vehicle accidents and a 16 fold increase in the number of deaths due to motor vehicle accidents.[3]A study conducted in UAE on the efficacy of the first aid training program of first year medical students showed that the program provides students with sound first aid knowledge and practical basic life saving skills.[4]

First aid provided by the bystanders is very crucial and is life saving at times. In a study among public school teachers in the US one third had no training in first aid and 87% of them agreed that emergency care training should be included in teacher's preparatory programmes.[5]A study conducting in

Edinburgh reveals that only 13% of people could correctly handle pediatric emergencies. [6]The ability of drivers to give first aid was assessed in a study which revealed that a very few drivers could give first aid at the accident sites. [7]In another study carried in Kenya, it was revealed that only 45.5% of the soccer team coaches could administer first aid to the soccer players. [8]First aid training offer by the Red Crescent society in Pakistan trained a few people in three years either as volunteers or if required by their employment status. [9]

Another study done in Turkey stated that it was highly effective to teach medical students First aid and Basic life saving skills as they can form effective peer first aid trainers for other university students.[10]In Brazil, a study was conducted to evaluate the first aid skills of adult population. It was concluded that those who had a previous exposure to televised first aid training performed 9-96% of the skills correctly while in the control group 1-34% correctly performed the skills. [11]A study conducted in Germany showed that vast majority of bystanders had little or no first aid training and that there was a direct relationship between the level of first aid training and quality of first aid measures taken by the bystanders. [12]In a study of 166 resuscitations before reaching hospital, all of

them were done by medical personnel who were there by chance at the time, and 28.3% were successful, thus this further stresses the need for proper first aid training. [13]

### METHODOLOGY:

#### Study design:

Cross sectional study

#### Place of study:

Medical Students of Nawaz Sharif Medical College Gujrat.

#### Duration of study:

August2017-September2017

#### Type of sampling:

Non probability convenient sampling

#### Sample size:

30 medical students

#### Inclusion criteria:

Medical students of fourth year and final year MBBS

#### Exclusion criteria:

Medical students of first year, second year and third year MBBS

#### Ethical issues:

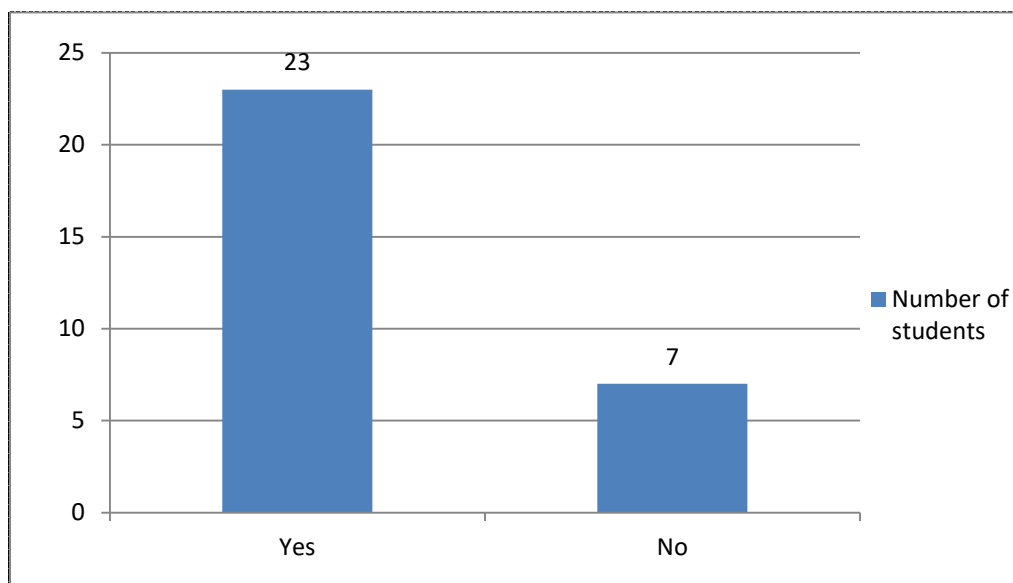
Informed consent was taken and absolute confidentiality was preserved.

#### Data analysis:

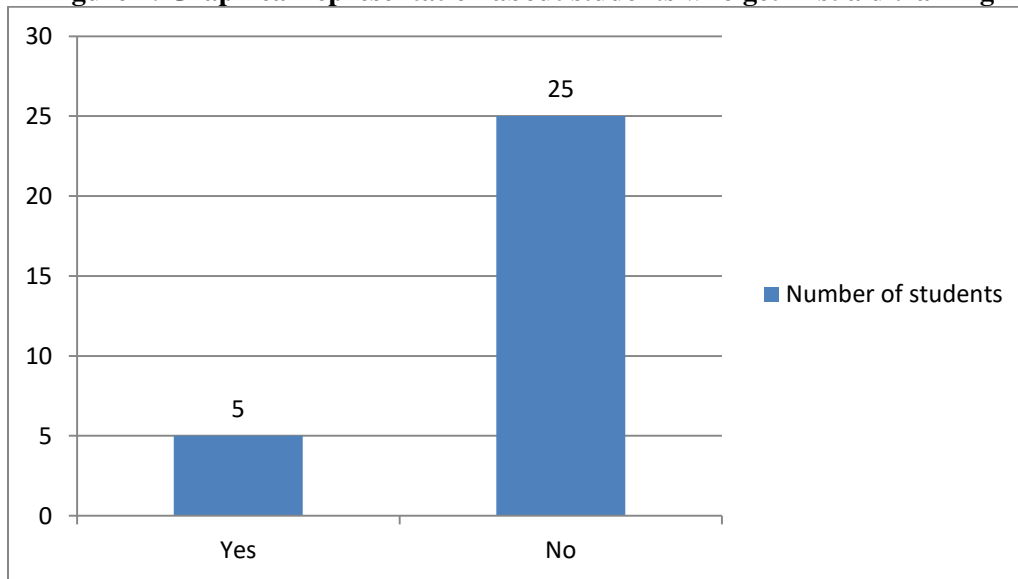
Data was analyzed and graph were generated on Microsoft excel.

### RESULTS:

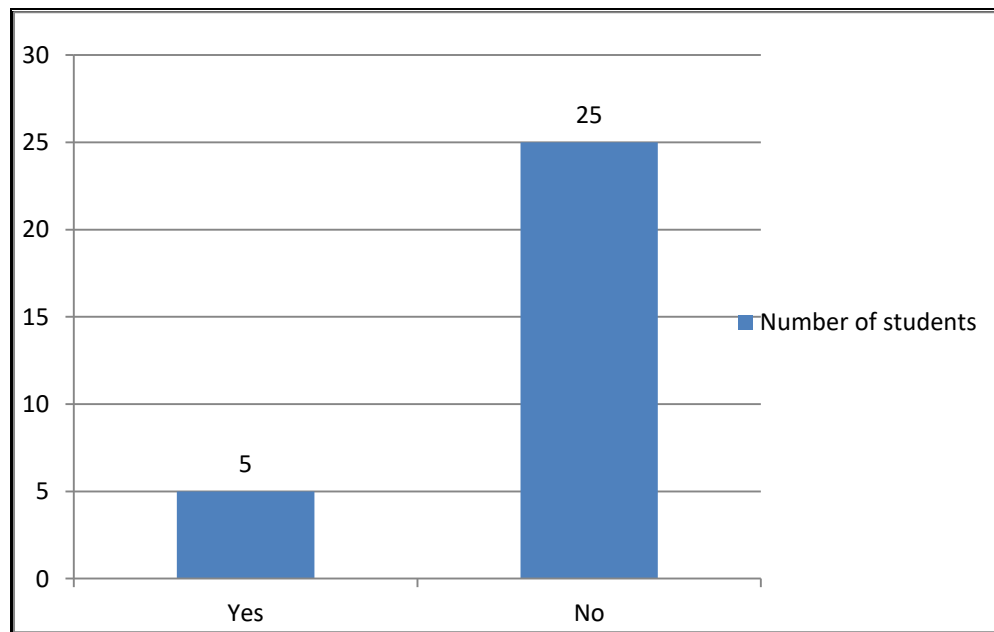
**Figure 1: Graphical representation of student's knowledge about basics of first aid**

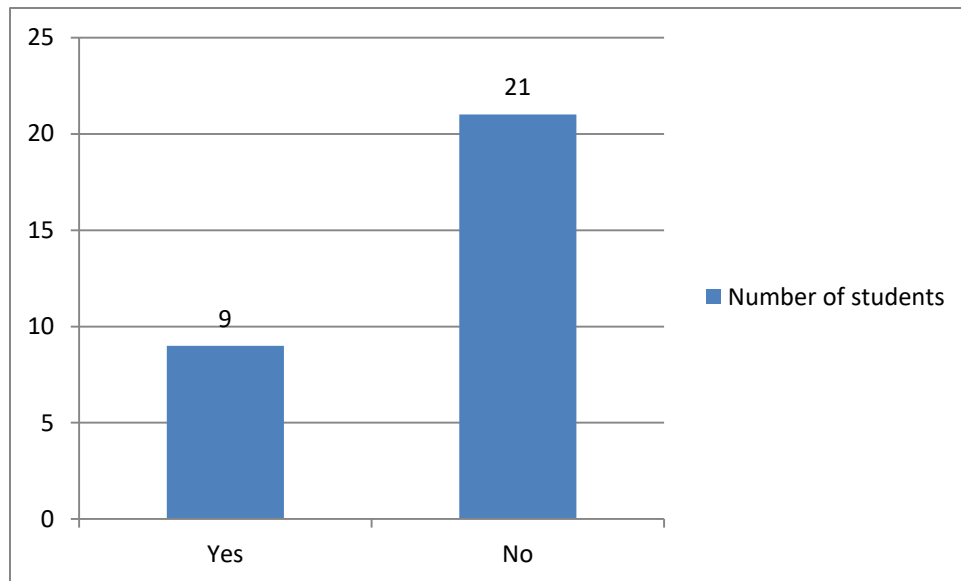
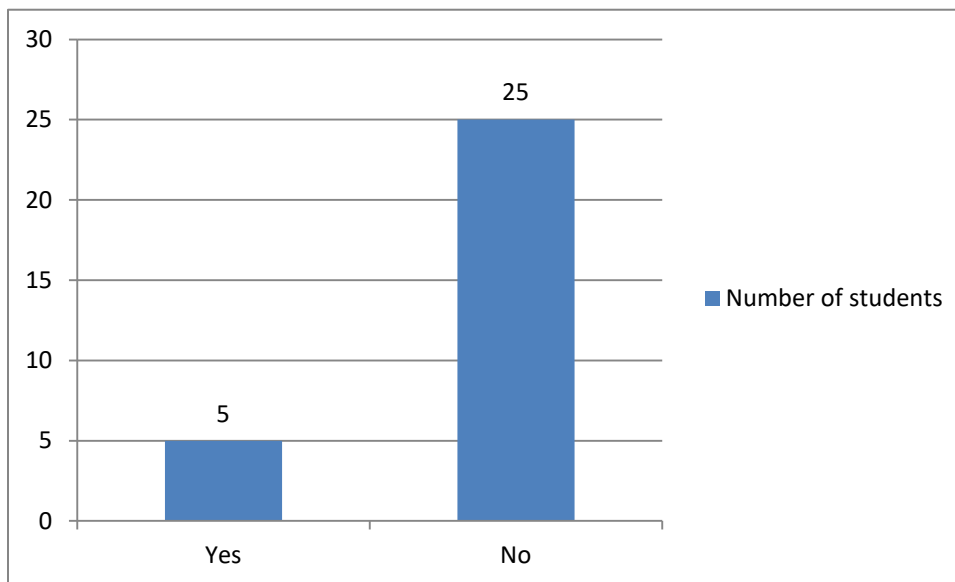


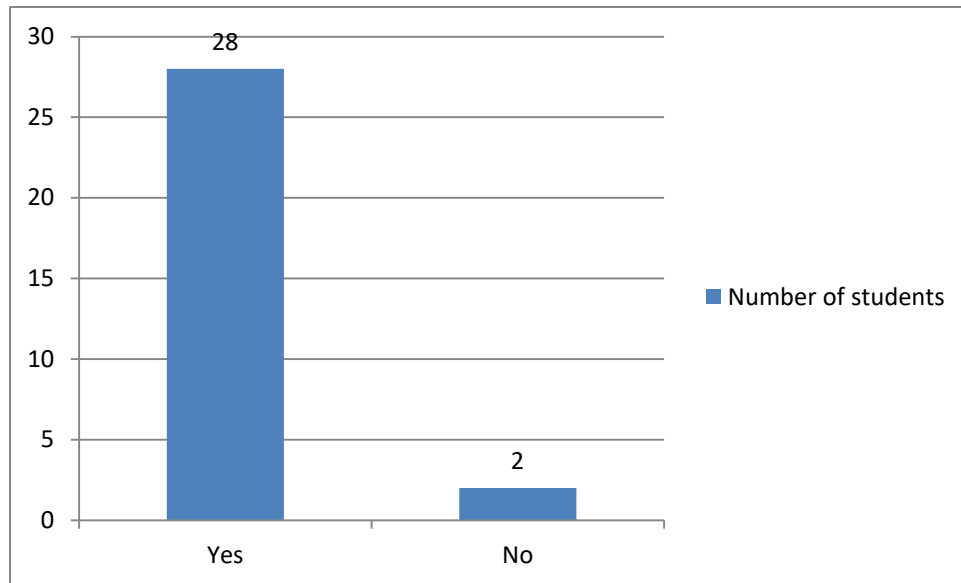
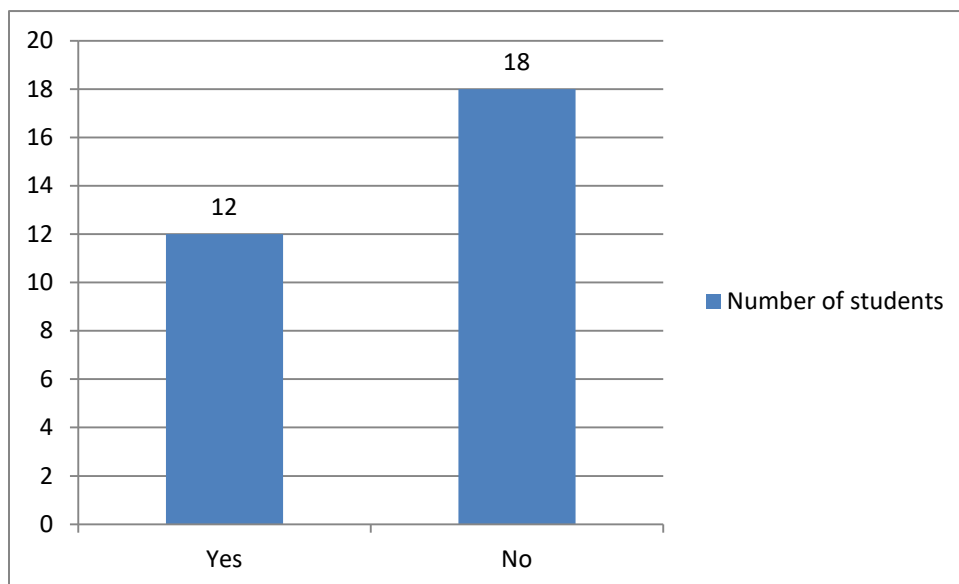
**Figure 2: Graphical representation about students who get first aid training**



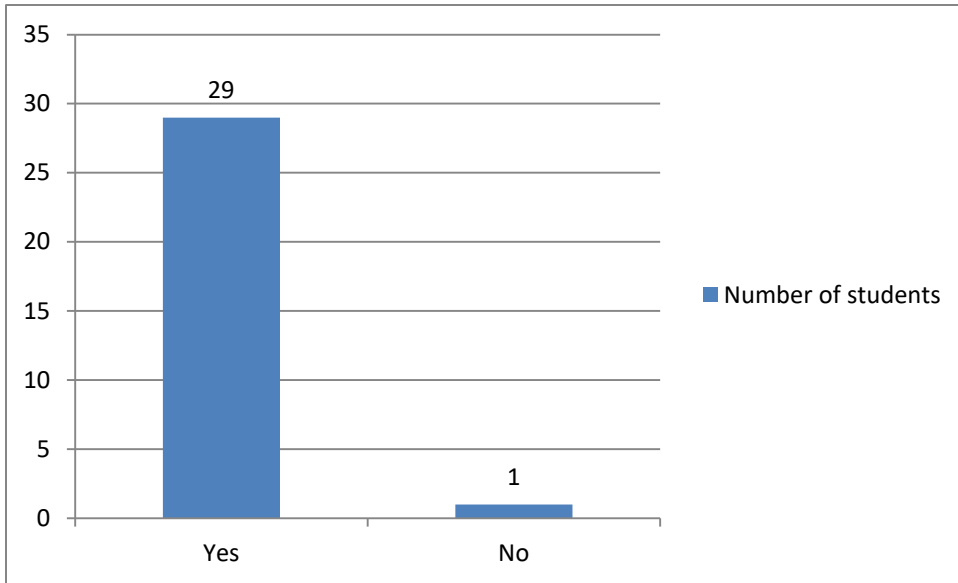
**Figure 3: Students who feel that they should have knowledge about first aid**



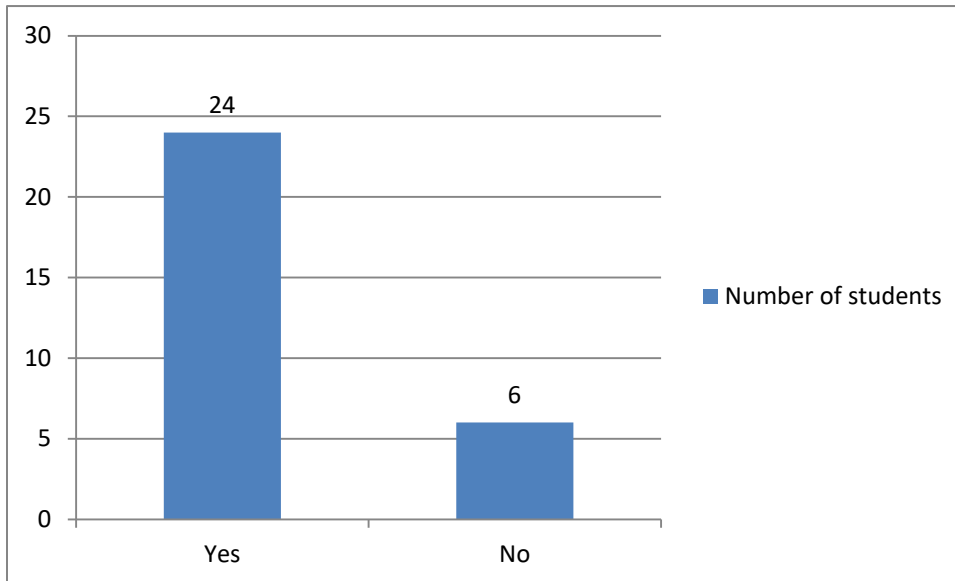
**Figure 4: Graph showing students who have met emergency situation****Figure 5: Graph showing no. of students who manage emergency situation by themselves**

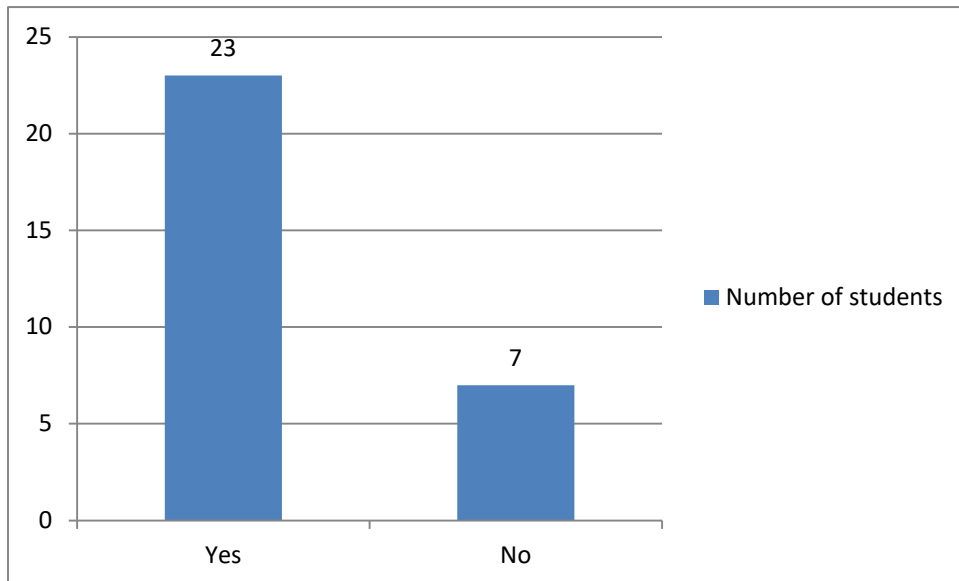
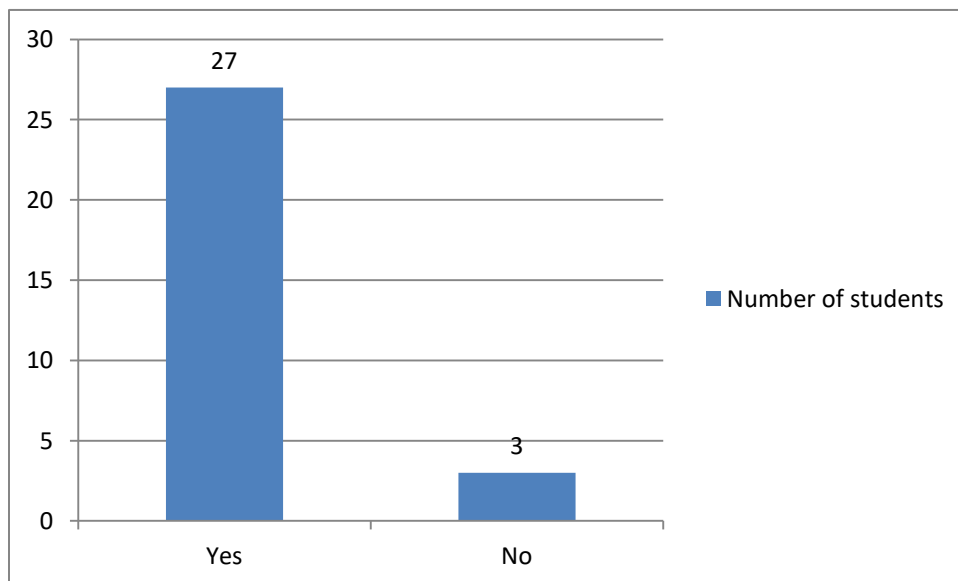
**Figure 6: Graph showing that first aid training should be a part of high school syllabus****Figure 7: Graph showing students capable of checking vitals**

**Figure 8: Graph showing ability to save a drowning Patient**

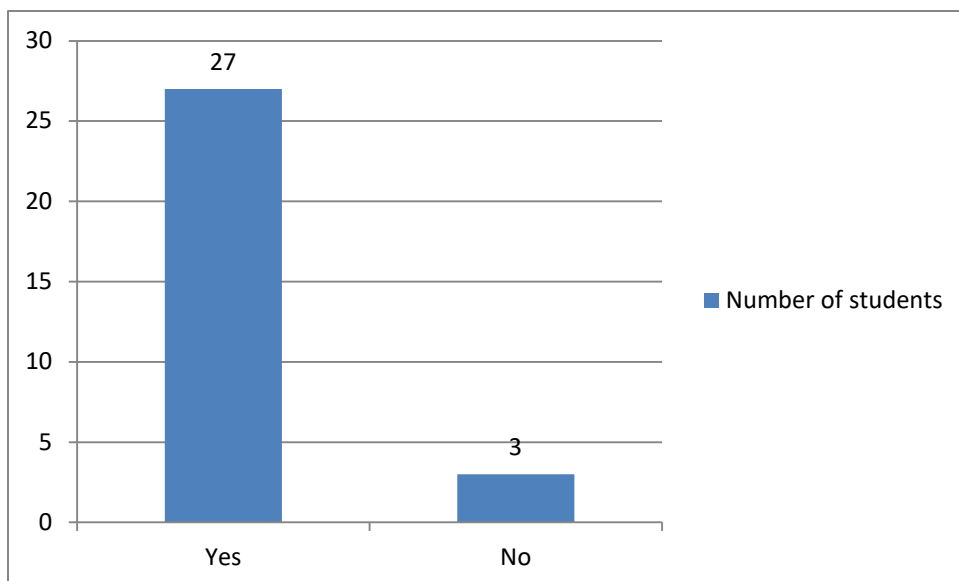
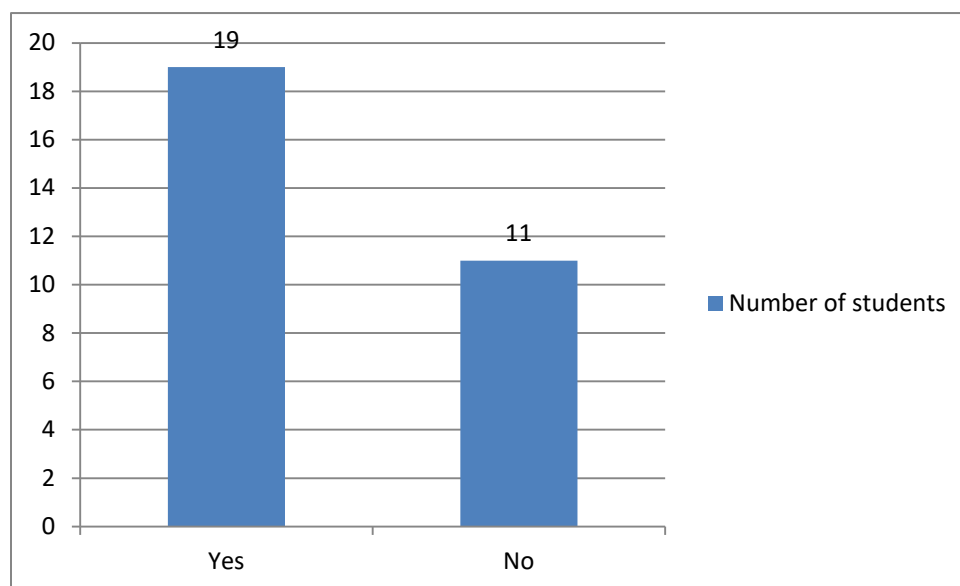


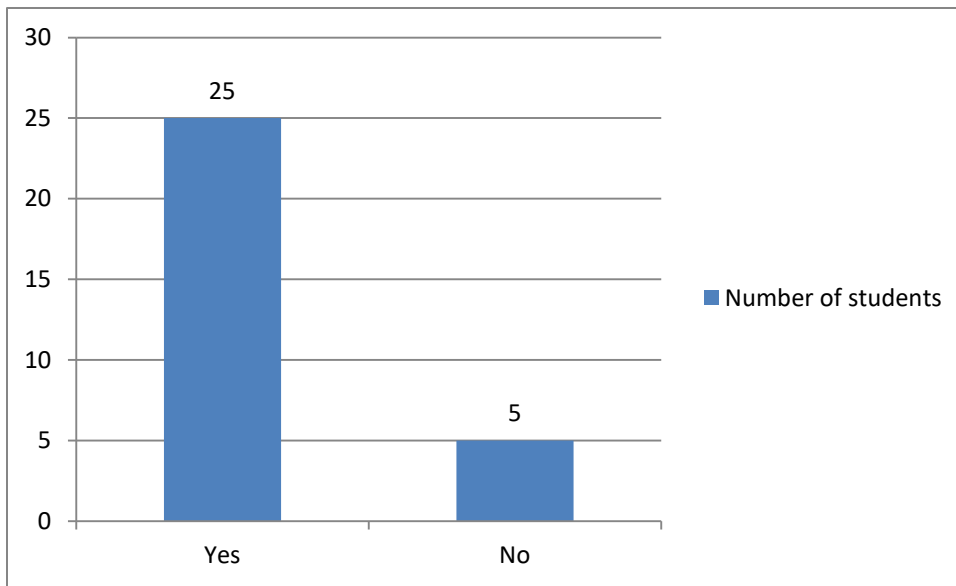
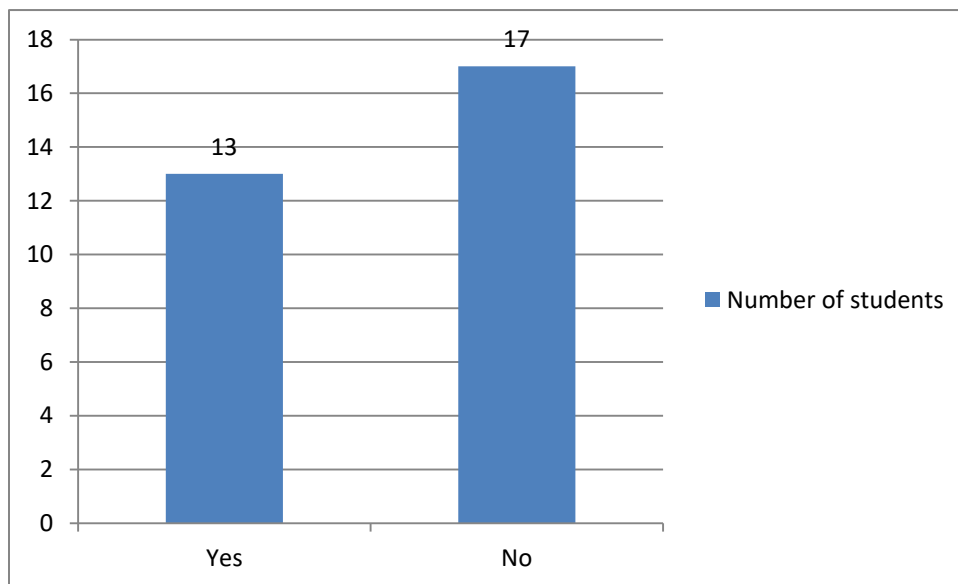
**Figure 9: Graph showing knowledge of students to control external Bleeding/ Epistaxis after an injury**

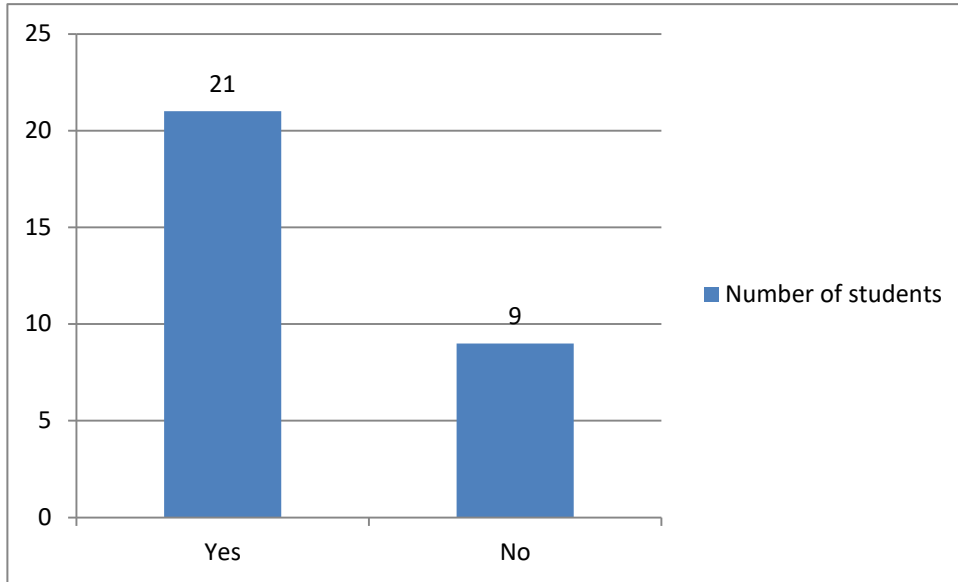
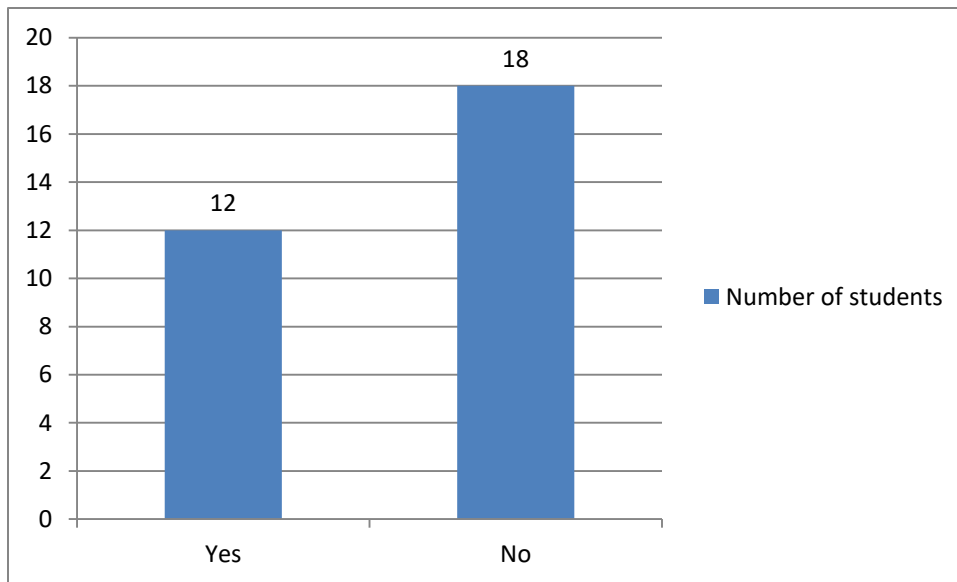


**Figure 10: The graph showing ability of student to manage a patient of hypothermia****Figure 11: Graph showing students' knowledge about CPR**



**Figure 12: Graph showing students' knowledge about ABC****Figure 13: Graph showing students' knowledge about counter medicines useful in emergency situation**

**Figure 14: Graph showing students ability to manage a hypoglycemic patient****Figure 15: Graph showing students ability to maintain airway of unconscious patient**

**Figure 16: Graph showing students ability to manage a case of I****Figure 17: Graph showing students ability to manage a patient of choking****DISCUSSION:**

Out of 30 students 20 were female and 10 were male participants. Mean age was 23( $\pm$ 2).

Commonly witnessed injuries were fractures, bleeding, electrocution, choking & fractures. Out of total 30 64% had knowledge about

measures regarding first aid required to rescue patients in emergency before proper medical treatment is provided and 36% had not adequate knowledge to tackle with emergency situation. 6 students (20%) had formal first aid training. 9 students (30%) met an emergency of whom 5 (16.6%) had managed the situation by themselves. 25 (83.4%) students had not met or not able to manage the situation. 28 students (93.3%) wanted first aid training be a part of their education. 29 students (96.6%) had knowledge to check the vitals and 1 (3.4%) had no knowledge to check the vitals. 24 (80%) students had knowledge to control external bleeding/ epistaxis and 6 (20%) had no knowledge to handle such situation. 13 students 43.3% had knowledge to manage an unconscious patient and 17 (56.7%) don't know how to manage unconscious patient. Knowledge of students about ABC and CPR 27 (90%) is adequate and 3 (10%) had no knowledge about it. 12 students (40%) have knowledge to manage a patient of drowning and 16 (60%) don't know how to manage such patient. 25 (83.3%) students are able to manage a hypoglycemic patient and 5 (15.7%) are not. 23 (76.6%) students are able to manage a hypothermic patient and 7 (23.4%) are not. 19 (63.3%) have knowledge about counter medicine and 11 (36%) have not. 21 (70%) have knowledge to manage a patient of electric shock and 9 (30%) have not. 12 (40%) students have knowledge how to manage a patient of choking and 18 (60%) have no knowledge how to manage them.

The overall mean score of the students was very low. This lack of knowledge of first aid amongst the medical students is indicative of the fact that only a few people have formal first aid. The low rate of first aid training was also observed in a study conducted in Karachi by students of Agha Khan Medical University. Out of a maximum possible score of 22, the mean of the number of questions answered correctly for whole sample was  $8.8 \pm 3.92$ . The mean number of correct answers of students with prior FA training was  $10.3 \pm 3.50$  as opposed to  $8.58 \pm 4.0$  for those without any FA training ( $p < 0.001$ , 95% confidence interval) with a mean difference of 7.84%.<sup>1</sup> The low rate of first aid training was also observed in a study conducted on primary

caregivers of children in Singapore, where 80% had not attended a first aid course.<sup>14</sup> A study conducted in USA on public school teachers showed that only one third of them were trained in first aid. The majority of public school teachers (87%) thought that emergency care training should be a part of teacher preparatory.<sup>5</sup> Even if students wanted to get first aid training very few (12.3%) knew of places in Pakistan that offered first aid courses. The effect of age-old misconception about handling of different medical emergencies was evident as 32% of students confirmed their parents as their source of information. Many students 63.5% realized that first aid training should be part of the curriculum with 84% suggesting that it should be part of pre-university curriculum. This percentage is comparable to the one stated in the study conducted in Singapore, where 85.5% of respondents said that first aid course will be useful.<sup>14</sup> Students having received formal first aid training scored better than those who had no first aid training but still the mean score itself is quite low emphasizing the need for recertification/ refresher courses so as to keep oneself updated with latest developments and improvements. We also had not been able to ascertain the level of first aid training that these students have had. A study in Vienna conducted on bystanders showed a clear relationship between the level of first aid training and the quality of first aid measures employed by bystanders.<sup>12</sup> The medical training and teaching seemed to have had effect in enhancing knowledge of medical students regarding first aid. Even though many students had encountered epistaxis only 15% selected the correct option. In another study done in UK, it was seen that only 11.3% of the respondents knew the correct first aid management of epistaxis.<sup>15</sup> This is in contrast to the knowledge of students on fractures, where 34% of students chose to immobilize the limb when suspecting a fracture. The students did not seem to know that grease should never be applied to a fresh burn as it is occlusive, non-sterile, promotes bacterial proliferation on the surface of the wound.<sup>16</sup> A study conducted in Turkey on occupational physicians showed that only 31.7% used up to date modalities with many having inadequate knowledge.<sup>17</sup> A study conducted in Ireland also

showed that only 23.2% of people presenting to plastic surgery department knew the correct management of burns.<sup>18</sup> Even though medical students scored higher than nonmedical yet their knowledge was not sufficient, suggesting the necessity of introduction of first aid training programme in medical curriculum like UAE.<sup>4</sup> This programme can be extended to the one like conducted in Turkey where trained medical students formed effective peer first aid trainers for other university students.<sup>11</sup> Education about first aid in school, colleges & universities through proper demonstration & practical will ensure that an increased number of first aid trainers are available at a time of any calamity faced by the people.

### CONCLUSION:

First aid training programmes should be introduced at school and college level in developing Countries to decrease the early mortality and morbidity of accidents and emergencies.

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