

## Perception of a first aid workshop conducted for training lay responders in two professional colleges in North India

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### Abstract

**Introduction:** Road traffic accidents (RTA's) are a leading cause of mortality in India. Emergency medical services are few and far between especially in rural areas of the country. The transport of victims is often the responsibility of passers-by, relatives or police personnel, most of whom are untrained in delivery of basic life-saving first aid. Lay first responders can fill the gap and provide first aid during the crucial 'golden hour', thus saving precious lives.

**Aim:** To collect feedback from and assess the perception of participants of a First Aid Workshop conducted for Lay Responders

**Methodology:** 2 faculty members from our college conducted a Hands-On First Aid Training Workshop at 2 institutions. Common emergency situations were discussed and the students were shown how to respond to each situation. The correct method of performing cardio-pulmonary resuscitation was demonstrated on a mannequin. An Automated External Defibrillator was used to teach bystander defibrillation. All the students and faculty members were then invited for a hands-on training of CPR.

**Results:** All the students in both the institutions agreed that they were able to learn the basics of First-Aid by attending the workshop. 98.8% students in Institution A and 100% students in Institution B expressed confidence that they would be able to provide first-aid/CPR in an emergency situation.

**Keywords:** First Aid, Emergency Medical Services, Accidents, Traffic.

### Introduction

Road traffic accidents (RTA's) are a leading cause of mortality in India. As per WHO statistics, more than 90% of the injury related deaths across the world occur in low and middle income countries.<sup>1</sup> The WHO estimates that RTA's will become the 5th leading cause of death globally by 2030, and the bulk of these fatalities will be in middle and low income countries, including India.<sup>2</sup> Better road infrastructure e.g. high-speed expressways along with lack of adherence to traffic rules makes for a deadly combination. Emergency medical services are few and far between especially in rural areas of the country. The transport of victims is often the responsibility of passers-by, relatives or police personnel, most of whom are untrained in delivery of basic life-saving first aid.<sup>3</sup>

In such a scenario, lay first responders can fill the gap and provide first aid during the crucial 'golden hour', thus saving precious lives. Moreover, emergency medical and surgical conditions can arise in anyone's life and it is a good idea to be prepared to handle the situation before trained medical help arrives. Training programmes that teach lay responders how to recognize and manage emergency medical conditions have been shown to reduce overall morbidity and mortality from injuries or illness.<sup>4</sup>

### Aim

To collect feedback from and assess the perception of participants of a First Aid Workshop conducted for Lay Responders

### Methodology

2 faculty members from our college conducted a Hands-On First Aid Training Workshop at 2 institutions (professional colleges) located in Delhi NCR. The workshops started with a short powerpoint presentation which introduced the concept and of First-Aid and the utility of having knowledge of basic first-aid skills. After this a discussion was initiated by the faculty in which students were asked about their perceptions regarding basic first aid skills. Common situations which require urgent first aid e.g. road traffic accidents, falls from stairs, heat stroke, nose bleeds, electric shock, drowning, bone fractures etc. were discussed with the students and the students were shown how to respond to each situation. To correctly depict these situations, volunteers were invited from the audience and were requested to depict these situations as a role-play. After this, the faculty members demonstrated the correct method of performing cardio-pulmonary resuscitation (CPR) and giving rescue breaths on a mannequin. An Automated External Defibrillator (AED) trainer machine was used to teach the correct method of performing bystander defibrillation in an emergency. Students were then shown how to make splints from everyday items to immobilize bone fractures, how to bandage and dress wounds and how to use tourniquets to arrest bleeding. Towards the end of the session, all the students and faculty members were invited for a hands-on training of CPR and rescue breathing on the mannequins. Finally, questions were invited from the audience and the session was brought to a close.

After attending the workshop, the students of both institutions were asked to fill an online feedback form. There were separate forms for both institutions but both forms were similar and consisted of the same statements/questions. The feedback form consisted of both open-ended and closed-ended questions with many questions using a 5-point Likert Scale.

## Results

The results are presented separately for Institution A and Institution B.

For accurate analysis, a 5-point Likert Scale is used in the questionnaire.

To indicate agreement with any given statement (positive response) answers marked as 'agree' and 'strongly agree' are considered together.

Similarly, to indicate disagreement with any given statement (negative response) answers marked as 'disagree' and 'strongly disagree' are considered together.

**Institution A:** 83 students of Institution A responded to the feedback form.

1. 55 students (66.3%) and 26 students (31.3%) ranked the level of effort put in by the instructors as 5 (Very Good) and 4 (Good) respectively, on the 5-point Likert Scale. (Fig. 1)
2. 68 students agreed that the instructors seemed knowledgeable and covered the basics of first aid. 65 students agreed that the instructors encouraged active participation in the discussion while 66 students agreed that the instructors provided guidance on conducting CPR and used appropriate mannequins and teaching aids to demonstrate the same. 67 students were in agreement with the statement that the instructors demonstrated steps of CPR/resuscitation through live demonstrations and appropriate video aids and 65 students agreed that the instructors encouraged them to learn hands-on CPR on the mannequins. 66 students were in agreement that the instructors covered most of the common emergencies. 60 students agreed that the instructors encouraged them to ask questions while 67 students agreed that the instructors answered all questions satisfactorily.
3. 59 students agreed that the workshop started as per schedule, 66 students agreed that the workshop was of an appropriate duration and 72 students agreed that the workshop was conducted in a safe and non-threatening environment. 70 students were in agreement with the statement that the workshop was conducted without unnecessary interruptions while an overwhelming majority of 71 students agreed that the workshop met all their expectations.
4. 75 students (90.4%) felt that they were able to discuss their queries with the instructors while 77 students (92.8%) felt that the instructors were able to understand and address their queries. (Fig. 2, 3)
5. All 83 students (100%) agreed that they were able to learn the basics of First-Aid by attending the workshop. When asked whether after attending the workshop they

would be able to provide first-aid/CPR in an emergency, 82 students (98.8%) were in agreement while 1 student (1.2%) disagreed. (Fig. 4) The only student who disagreed gave the following reason for his/her disagreement – “*Not sure. The visual presentation is not enough to get a practical idea on how to save victim's life without confusion.*”

6. Finally, students were asked to suggest any additional topics which they would like added to future workshops. 23 students replied to this question and some of the responses are mentioned verbatim below.
  - a. “As summers are approaching shortly it would be better to add snake bites and measures to be taken in that case, thank you it was a good session.”
  - b. “Situation in case of Low blood sugar level.”
  - c. “All the basics are covered in the workshops. We can also add first aid during natural hazard like lightning strike etc.”
  - d. “This training should be given on half yearly basis.”
  - e. “Precaution regarding/related to mental health.”
  - f. “No. Workshop is impeccable.”
  - g. “Snake bite.”
  - h. “First aid session on serious injuries should be more extensive.”

**Institution B:** 55 students of Institution B responded to the feedback form.

1. 31 students (56.4%) and 24 students (43.6%) ranked the level of effort put in by the instructors as 5 (Very Good) and 4 (Good) respectively, on the 5-point Likert Scale. (Fig. 5)
2. 51 students agreed that the instructors seemed knowledgeable and covered the basics of first aid. 48 students agreed that the instructors encouraged active participation in the discussion, 51 students agreed that the instructors provided guidance on conducting CPR and 48 agreed that the instructors used appropriate mannequins and teaching aids to demonstrate the same. 51 students were in agreement with the statement that the instructors demonstrated steps of CPR/resuscitation through live demonstrations and appropriate video aids and 47 students agreed that the instructors encouraged them to learn hands-on CPR on the mannequins. 50 students were in agreement that the instructors covered most of the common emergencies. 46 students agreed that the instructors encouraged them to ask questions while 47 students agreed that the instructors answered all questions satisfactorily.
3. 41 students agreed that the workshop started as per schedule, 47 students agreed that the workshop was of an appropriate duration and 48 students agreed that the workshop was conducted in a safe and non-threatening environment. 45 students were in agreement with the statement that the workshop was conducted without unnecessary interruptions while an overwhelming majority of 46 students agreed that the workshop met all their expectations.

4. 50 students (90.9%) felt that they were able to discuss their queries with the instructors while 52 students (94.5%) felt that the instructors were able to understand and address their queries. (Fig. 6,7)
5. All 55 students (100%) agreed that they were able to learn the basics of First-Aid by attending the workshop. When asked whether after attending the workshop they would be able to provide first-aid/CPR in an emergency, all 55 students (100%) were in agreement. (Fig. 8)
6. Finally, students were asked to suggest any additional topics which they would like added to future workshops.

23 students replied to this question and some of the responses are mentioned verbatim below.

- a. "Asthmatic attack and emergency."
- b. "Workshop on snake bite."
- c. "Such workshops should be held on regular basis."
- d. "Normal dressing of wound and types of knots."
- e. "No, it was sufficient for us it helps in our future definitely. And thank u so much that u came here and guide us."

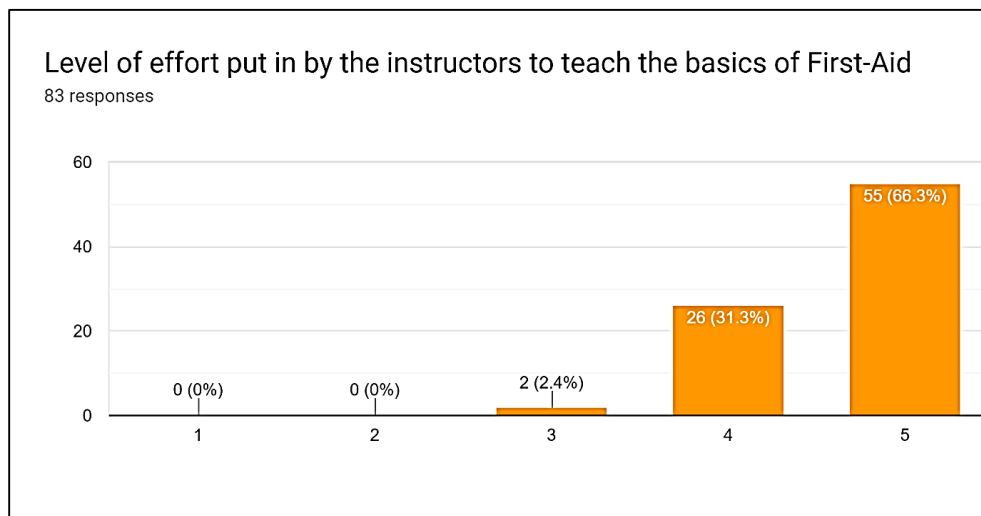


Fig. 1

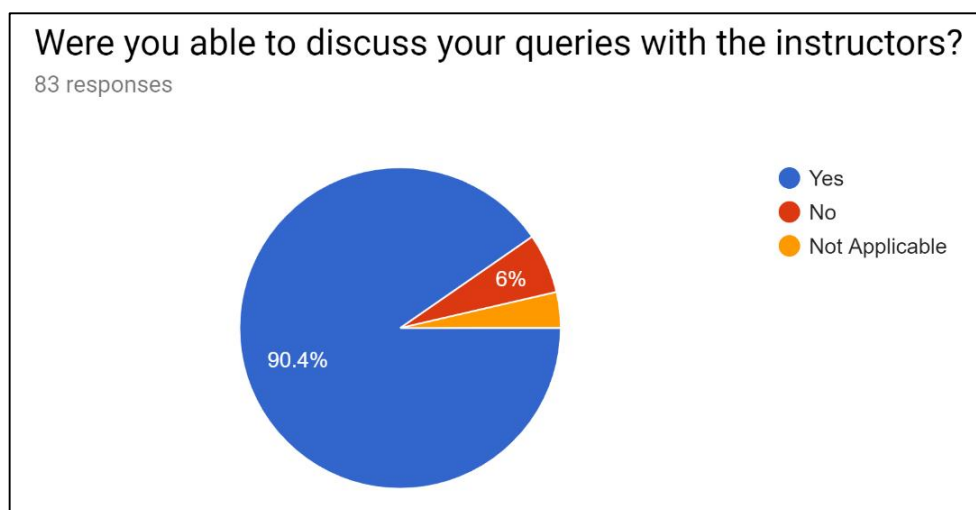


Fig. 2

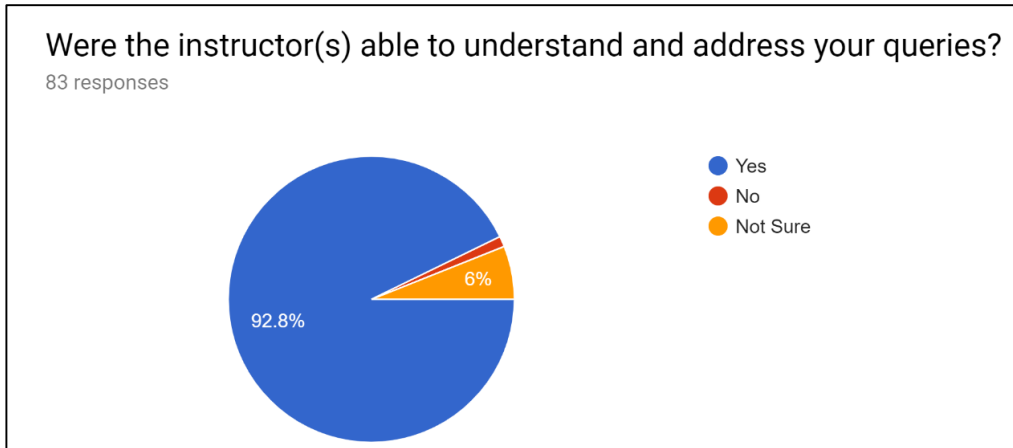


Fig. 3

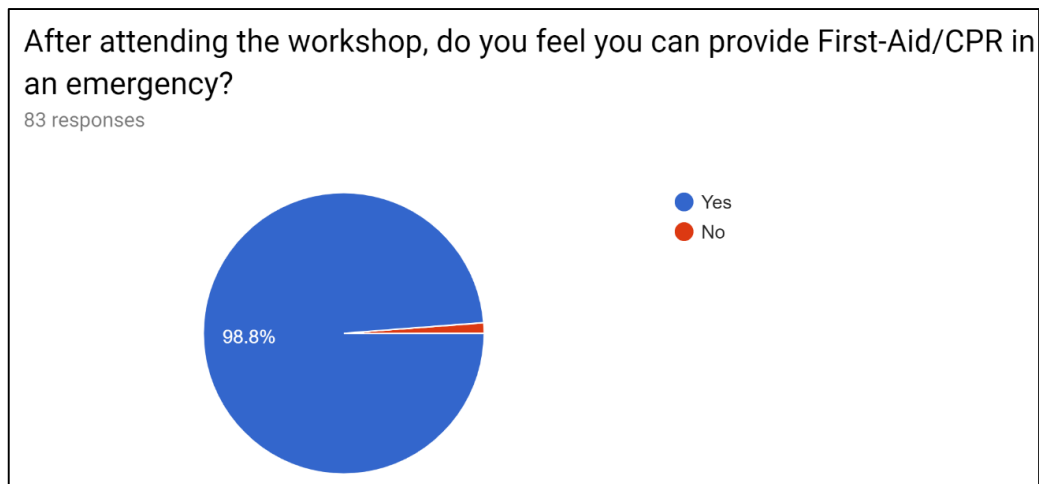


Fig. 4

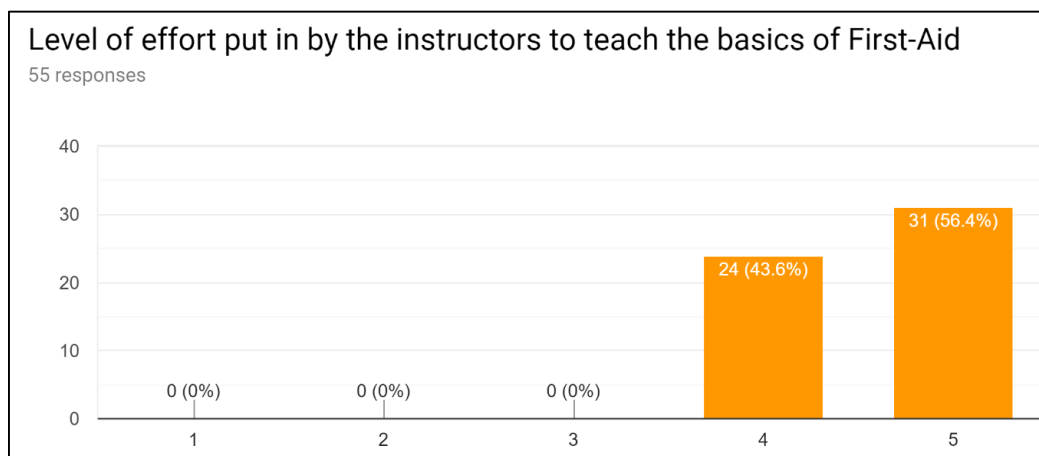


Fig. 5

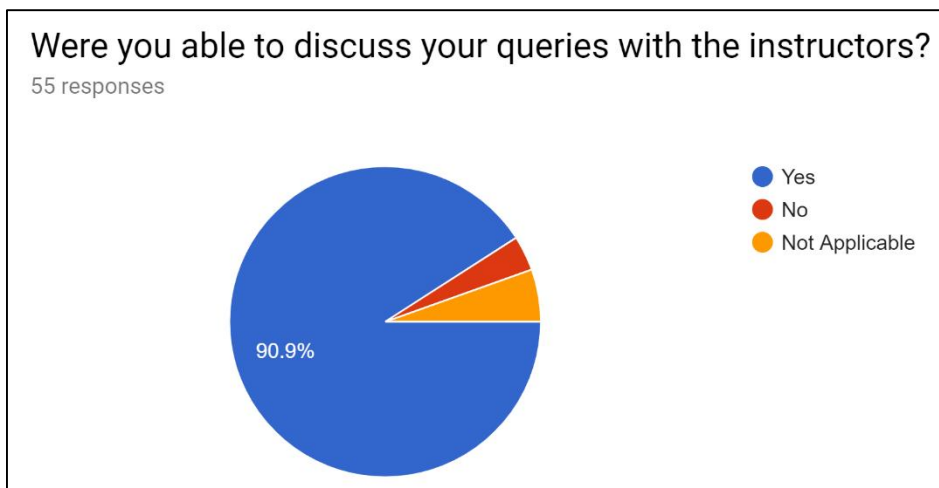


Fig. 6

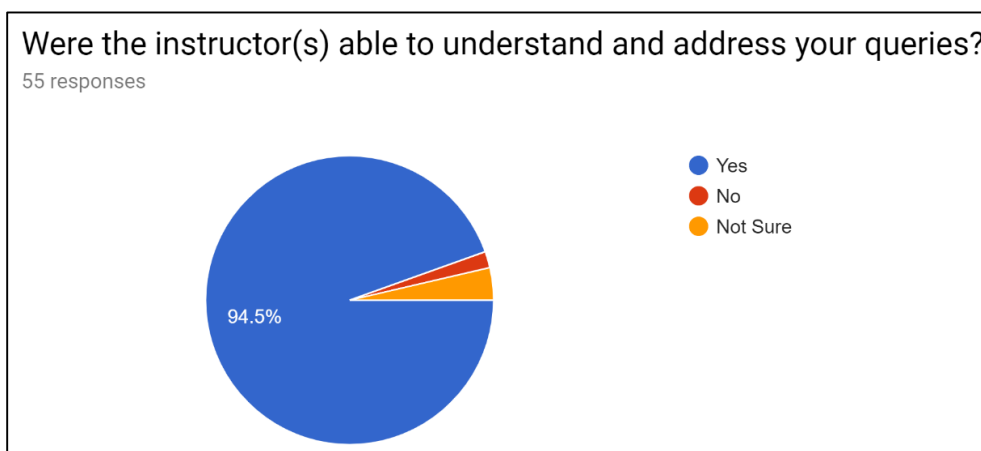


Fig. 7

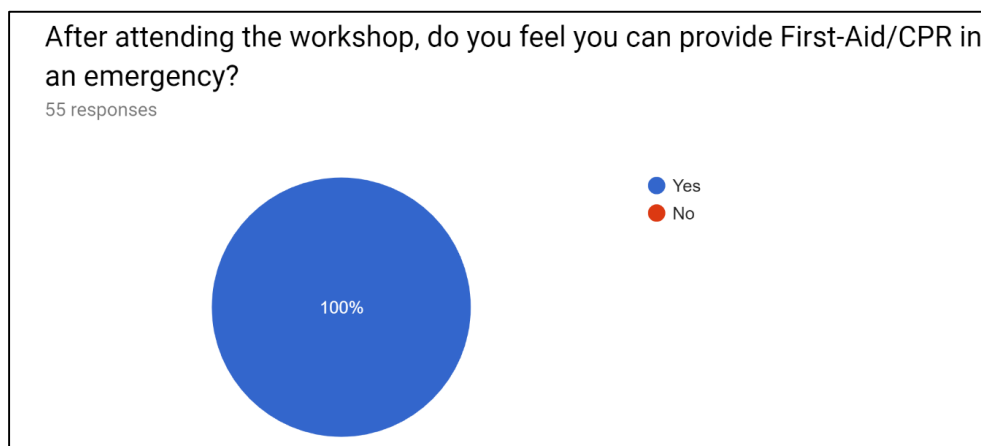


Fig. 8

**Discussion**

Pre hospital care of an accident victim includes all the activities conducted at the accident site and en-route the hospital till the victim is handed over to trained hospital staff. Research has shown that good pre-hospital services go a long way in reducing the overall morbidity and mortality among accident victims.<sup>5</sup> In a resource poor country like India there

is lack of ambulances and trained health staff especially in rural areas. Even in urban areas, the healthcare resources are overburdened and unequally distributed. This makes it essential to train lay responders to provide basic pre-hospital services before help arrives and the patient is shifted to the nearest hospital.

With this aim 2 faculty members from our college conducted a Hands-On First Aid Training Workshop at 2

institutions (professional colleges) located in Delhi NCR. All the students in both the institutions agreed that they were able to learn the basics of First-Aid by attending the workshop. 98.8% students in Institution A and 100% students in Institution B expressed confidence that they would be able to provide first-aid/CPR in an emergency situation.

The authors recommend that such basic First Aid training workshops should be made mandatory in schools and colleges across the country. This will go a long way in reducing morbidity and mortality rates among accident victims and reducing the burden on the overburdened emergency medical services.

### Source of funding

None.

### Conflict of interest

None.

### References

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