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**Original Research Article**

# A study evaluating the awareness among general population towards common medical emergencies

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## ABSTRACT

**Background:** Basic life support has been found to be lifesaving in common medical emergencies. The level of awareness about emergency care in general population and the approach of the common people with regards to common medical emergencies is an important determinant of positive outcome.
**Methods:** This study was conducted in 445 participants randomly selected from visitors of our outpatient department, to study the awareness in general public about the medical emergencies and basic life support skills.
**Results:** This study was conducted in 445 participants randomly selected from visitors of our outpatient department, to study the awareness in general public about the medical emergencies and basic life support skills.
**Conclusions:** Awareness about common medical emergencies is low in general public and there is a need to devise strategies to improve this awareness.

**Keywords:** Basic life support, Bystander cardiopulmonary resuscitation, Cardiac arrest, Choking

## INTRODUCTION

Early basic life support (BLS) is recognized as an effective lifesaving technique in out of hospital cardiac arrest (OHCA).[1] Early response with initiation of care is very important and hence onus of providing this care is being shifted from health care professionals to community members who actually witness the emergencies.[2-4] This is more important in developing and underdeveloped regions where response time may be prolonged due to less developed emergency medical services (EMS). Against this backdrop, a cross sectional study was undertaken in a medical college of Srinagar city of Kashmir valley to assess the awareness about common medical emergencies and basic life support in general population.

## METHODS

A cross sectional study was done in the Department of Internal Medicine, SKIMS Medical College, Bemina, Srinagar, Jammu and Kashmir, India in November 2016 to assess the awareness about basic life support in general population. Jammu and Kashmir is a sub-Himalayan state with a total population of about 1.2 million. The participants were selected randomly from the visitors of outpatients department and explained the purpose of the study as per the ethical guidelines of Helsinki. A 3-4 minutes short interview was held and after recording demographic data, a simple questionnaire was filled which had questions related to basic information about common medical emergencies and responses to case scenarios of an unconscious or choking person (Tables 1-3).

**Table 1: Questionnaire for assessment of awareness about emergencies.**

| Do you consider any of the following situations as serious if it occurs suddenly? | Yes | No |
|---|---|---|
| Chest discomfort | | |
| Weakness of a limb | | |
| Drooping of face | | |
| Breathlessness | | |
| Palpitations | | |
| Slurring of speech | | |
| Unconsciousness | | |
| Cough while eating | | |

**Table 2: Response to an unconscious person.**

| If a person is lying unconscious by the side of the road, what would you do next? |
|---|
| Try to wake him up |
| Call the police |
| Call people around |
| Shift to hospital |
| Ignore and walk away |

Employees of the hospitals were excluded as were the visitors below 15 years of age. The questions were asked in the language understood and preferred by the participant (Kashmiri, Urdu, Hindi, and English).

Scoring was done and awareness levels were categorized as poor, average and good, after allotting one mark for positive response for questions in the questionnaire (Table 4). The correct response for practical scenario was predefined as per Basic Life Support - 016 version. No deductions were made for negative /inappropriate responses. At the end subjects were thanked for their participation. The data was assessed with Microsoft (MS-Excel) Version 2010 and Statistical Package for the Social Sciences (SPSS Version 11) software.

**Table 3: Response to a choking person.**

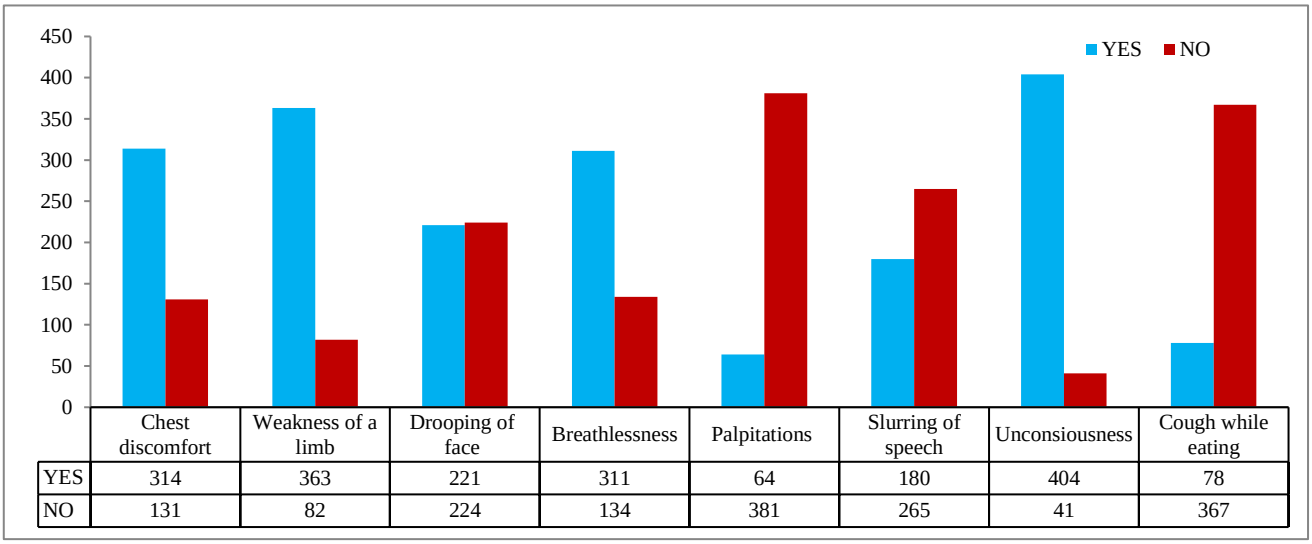
| If a person chokes while eating in your presence, what would you do next? |
|---|
| Offer water |
| Slap on the back |
| Encourage to cough |
| Shift to hospital |
| Abdominal thrusts |

**Table 4: Scoring system for assessment of the level of awareness about emergencies.**

| Question asked | Score |
|---|---|
| Poor awareness | 0- 4 |
| Average awareness | 5-6 |
| Good awareness | 7-8 |

## RESULTS

Out of the total of 3650 responses to questionnaire, 1935 (54.4%) were correct and 1625 (45.6%) were incorrect as shown in Figure 1. 223 (50%) participants had awareness score ranging from 0-4 and were put in poor awareness category; 117 (26%) had score of 5 or 6 and were put in average awareness category; and 105 (24%) had score of 7 or 8 and hence categorized as having good awareness as depicted in Figure 2.




| | Chest discomfort | Weakness of a limb | Drooping of face | Breathlessness | Palpitations | Slurring of speech | Unconsiousness | Cough while eating |
|---|---|---|---|---|---|---|---|---|
| YES | 314 | 363 | 221 | 311 | 64 | 180 | 404 | 78 |
| NO | 131 | 82 | 224 | 134 | 381 | 265 | 41 | 367 |

**Figure 1: Awareness about the medical emergencies.**

None of the participants secured zero score and 23 (5.2%) participants had full score of eight. For the practical skills, 16% were found to have correct approach to unconsciousness (Figure 3) and only 3% showed correct approach to choking as depicted in Figure 4.

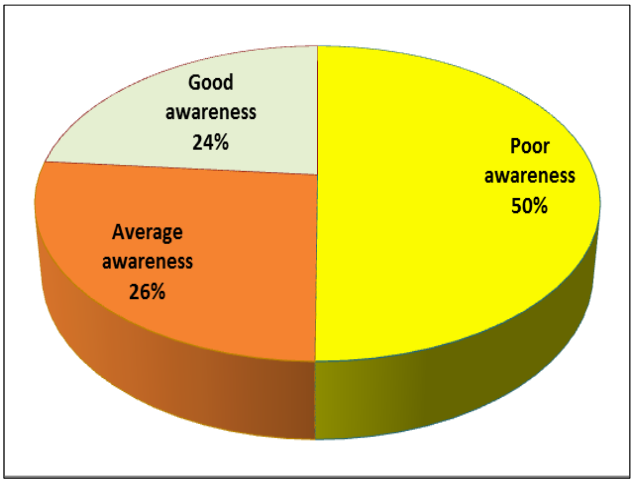



**Figure 2: Grading of levels of awareness about the medical emergencies.**

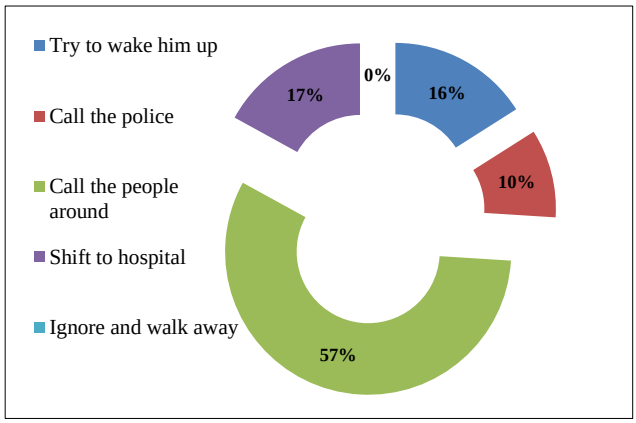



**Figure 3: Response on seeing an unconscious person.**

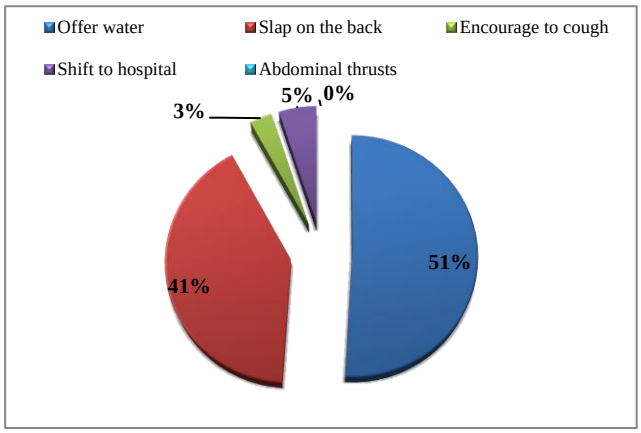



**Figure 4: Response to choking person.**

## DISCUSSION

Immediate bystander cardiopulmonary resuscitation (CPR) has emerged as the most essential factor for life saving in out-of-hospital cardiac arrest patients and multiple studies have been undertaken globally to estimate the level of awareness about emergency care in general population and measures for improvement have been suggested as per the outcomes of studies. The present population based study was done on similar line to derive information about the approach of the common people with regards to common medical emergencies.

As is evident from the results, only 50% of the participants had average to good theoretical awareness about the common emergencies that were studied as shown in Figure 1. This is far less as compared to awareness level seen in developed countries.[5] This difference can be explained due to organized and concerted effort from healthcare agencies in spreading the awareness about emergencies and bystander CPR in developed countries.[6] In India, not many studies have been conducted on the subject but many studies conducted by personnel involved in healthcare delivery have proven that there is great scope of improvement in the theoretical and practical knowledge regarding emergency health care. Aroor AR et al in 2014 published the results of descriptive cross-sectional study that was undertaken to determine the level of awareness on BLS and skills among undergraduate and postgraduate students of medical and dental profession, as well as nursing students and interns in a tertiary care hospital in South India and found awareness level to be below average, thereby indicating the importance of professional training at all levels.[7] Similar conclusions were drawn in the studies conducted by Narayan DP and Nambiar M.[8,9] In other developing countries, the situation is no different and similar conclusions have been derived from the studies.[10]

The level of knowledge about the practical skills on approaching an unconscious person showed that only 16% would try to wake up and assess the level of consciousness. And in case of conscious choking, only 3% would encourage coughing and would resort to actions that are not supported by current Basic Life Support Guidelines, thereby endangering the life of the patient. These figures point towards the need for concerted mass education of communities regarding the medical emergencies where common people have the potential to help. The fact that in neither of the practical skills, we had any participant who would ignore and walk away, points towards the fact that there is general willingness to help and it is only the lack of proper education that is the obstacle in achieving the goal.

In developed countries, this issue has been tackled by incorporating elements of Basic Life Support in school curriculum and teaching BLS to school teachers (11-12). In certain countries, it has been made compulsory for the

medical students to teach BLS to school children as an essential element of their own medical training and this step has resulted in superior practical skills in BLS of the students themselves as compared to conventional teaching, besides significantly improving the level of awareness in masses.[13] Even mere broadcasting of programmes on mass media like television has been found to show significant positive impact on the level of awareness of general public.[14]

Hence it is stressed that more population based studies be conducted on the issue of common medical emergencies and proper corrective measures be undertaken to improve the situation on this front.

## CONCULSION

Awareness about common medical emergencies is low in general public and there is a need to devise strategies to improve this awareness as has been achieved in developed regions of the world.

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