

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: <a href="http://www.journalijar.com">www.journalijar.com</a></p> <h2 style="text-align: center;">INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</h2> <p style="text-align: center;">Article DOI:10.21474/IJAR01/12462 DOI URL: <a href="http://dx.doi.org/10.21474/IJAR01/12462">http://dx.doi.org/10.21474/IJAR01/12462</a></p>	 <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407 Journal Homepage: <a href="http://www.journalijar.com">http://www.journalijar.com</a> Journal DOI:10.21474/IJAR01</p>
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### RESEARCH ARTICLE

#### ASSESSMENT OF KNOWLEDGE OF BASIC LIFE SUPPORT (BLS) AMONG TRAFFIC CONSTABLES WORKING IN SOUTHERN CHENNAI - A CROSS SECTIONAL STUDY

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#### Manuscript Info

##### Manuscript History

Received: 10 December 2020

Final Accepted: 14 January 2021

Published: February 2021

##### Key words:-

Basic Life Support, Assessment, Traffic Police, Training, Cardiac Arrest

#### Abstract

**Background:** Basic Life Support (BLS) is a lifesaving technique useful in many emergencies like heart attacks, drowning and accidents. BLS is the initial step of prompt recognition and to provide emergency support of ventilation and circulatory in case of respiratory or cardiac arrest. The Traffic Police who would be discharging his duty nearby the accident can help much in saving the lives of victims of RTA with his knowledge of BLS. In India the basic techniques of BLS are not offered to Traffic Police. Hence training the Traffic Constables with BLS techniques will result in improvement in survival rates of victims of RTA.

**Objective:** To assess the knowledge of Basic Life Support (BLS) among traffic constables working in Southern Chennai.

**Methods:** An interventional study design was used. Traffic constables who are working in Greater Chennai were included in the study. A semi structured questionnaire will be used to assess the knowledge on BLS among traffic constables. Then post intervention will be given based on the knowledge they gained.

**Result:** In our sample, most of the traffic policemen were in the age group of 31- 40 years (47.1%) and other 36.5 % of traffic policemen were in the age group of 41-50 years of age. Almost of the participants are married. Among the participants, more than 10 years of experienced people have the adequate knowledge. Remaining them need more information regarding Cardiopulmonary resuscitation. Among the participant, 60% of the traffic policemen were have adequate knowledge.

**Conclusion:** BLS is an integral part of training for first aid. The present study revealed the comprehension and familiarity of the traffic policemen with BLS and attitude towards BLS training. The results indicate that there is sufficient overall awareness of BLS training among traffic police officers and that significant improvements are needed to save lives.

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#### Introduction:-

**Basic Life Support (BLS)** is a lifesaving technique useful in many emergencies like heart attacks, drowning and accidents.(1). Basic Life Support (BLS) is an emergency procedure that is performed in an effort to maintain intact brain function manually until further action is taken to restore spontaneous blood circulation and breathing in a cardiac arrest person. BLS is the initial step of prompt recognition and to provide emergency support of ventilation

and circulatory in case of respiratory or cardiac arrest.(2) BLS involves chest compression of at least 5 cm deep and at a rate of 100 per minute is an effort to create an artificial circulation by manually pumping blood through heart. In addition, the rescuer may provide breaths by either exhaling air into the subjects mouth.(3).This process of external ventilation is referred to as artificial respiration. Its main aim is to restore the partial flow of oxygenated blood to the brain and the heart.

Earlier, BLS training was intended only for health professionals. Later, it was noted that many of these events occurred outside the hospital setting and that early BLS must be performed by those who witnessed the event.The BLS is said to be the skill of all people Quality of life is also found to be better for victims who receive BLS immediately, even in the absence of professional assistance.

The American heart association has recently developed a product for self-teaching of BLS less than 30 minutes called “CPR Anytime” and these tools may provide the training goals for BLS more feasible.(4) The adequate knowledge and suitable awareness of BLS technique and practices enable a person to effectively resuscitate a victim and can save a human life.Various studies suggest that in out- of-home cardiac arrests, interns, lay persons, traffic police or family members attempt BLS at between 14 and 45 per cent of the time, with a median of 32 per cent. This indicates that about a third of the out-of-home arrests have been attempted by the BLS.(4).

A recent study has shown that members of the public who have received BLS training in the past lack the skills and trust needed to save lives. These experts believe that better training is needed to improve the willingness to respond to cardiac arrests.(4).The emphasis of the BLS is on good quality chest compression. Now it's C-A-B; the contraction of the chest comes first, only then it works on the airway and the breathing.Just watching, listening, and thinking, but it's a practice, just judgment drives at least 2 inches deep into the chest. At the rate, 30 compressions should take 18 seconds.

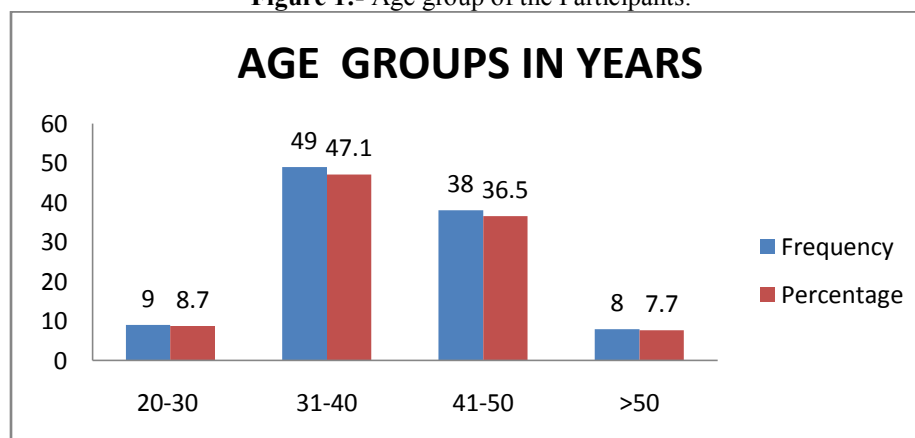
### Methods:-

The present study utilized a cross-sectional study design to assess the knowledge of basic life support technique among traffic constables working in southern Chennai. The study was conducted in Chennai - Adyar subdivision (south 2) . Simple random sampling technique was used for selected the traffic constables working in Southern Chennai. A total of 104 traffic constables are working in Adyar subdivision (south 2). All the people will be enrolled for this study. The study was conducted after the approval of Institution Ethical committee. Formal permission was obtained from higher authorities of the Chennai Traffic Police Department . The traffic police were explained about the purpose of the study. The formal consent was taken from them. Analysis and interpretation of the data of this study was done using descriptive and inferential statistics based on the objectives of the study by using SPSS version 24.

### Results and Discussion:-

In our sample, most of the traffic policemen were in the age group of 31- 40 years (47.1%) and other 36.5 % of traffic policemen were in the age group of 41-50 years of age.

**Figure 1:- Age group of the Participants.**



Almost of the participants are married. Among the participants, more than 10 years of experienced people have the adequate knowledge. Remaining them need more information regarding Cardiopulmonary resuscitation. Among the participant, 60% of the traffic policemen were have adequate knowledge. In our sample, most of the traffic policemen were in the age group of 31- 40 years (47.1%) and other 36.5 % of traffic policemen were in the age group of 41-50 years of age. Almost of the participants are married. Among the participants, more than 10 years of experienced people have the adequate knowledge. Remaining them need more information regarding Cardiopulmonary resuscitation. Among the participant, 70% of the traffic policemen were have adequate knowledge

**Table 1:-** Distribution of the Frequency and Percentage.

<b>Have you heard the term Basic Life Support (BLS)</b>		
Yes	102	98.1
No	2	1.9
<b>Do you think Knowledge about CPR is mandatory for all the Traffic constables and it should be made as compulsory?</b>		
Yes	104	100.0
No	-	-
Don't know	-	-
<b>Have you given BLS to anyone on your service?</b>		
Yes	16	15.4
No	88	84.6
<b>Did you receive prior training on BLS on your service?</b>		
Yes	92	88.5
No	12	11.5
<b>What will be your first response if a person is affected by cardiac arrest?</b>		
Check the pulse and breath of the person	41	39.4
Shift the person to a safe place	45	43.3
Give BLS to the person	18	17.3
<b>How do you open an unresponsive victim's airway?</b>		
Tilt their head back	26	25.0
Tilt their head back and lift the chin	53	51.0
Turn the victim on their side.	25	24.0
<b>If the pulse is absent in the victim, what will be the next appropriate step?</b>		
To begin chest compression	81	77.9
Administer breaths	22	21.2
No intervention required	1	1.0
<b>If the victim has a pulse but his/her breathing level is abnormal means, what will be the next step?</b>		
Administer rescue breaths	53	51.0
Begin chest compression	45	43.3
No intervention required	6	5.8
<b>Regarding the chest compression which of the following is recommended for adults?</b>		
In adults, rescuers should give two finger compressions.	1	1.0
In adults, rescuers should give two hand compressions.	103	99.0
<b>What is the ratio of breaths to chest compression for BLS?</b>		
30:2	31	29.8
20:2	41	39.4
15:2	32	30.8
<b>Which of the following is the correct compression depth for BLS?</b>		
2 cm	42	40.4
4 cm	43	41.3
5 cm	19	18.3

In our sample, the estimated total score of knowledge of CPR among traffic police was very high. CPR's understanding score, however, was higher than CPR's skill level. In a similar study, it was found that the existing CPR protocols were not up to date with both their knowledge and practical approach. Return to a prior quality of life and functional state of health is the ultimate aim of CPR and post-CPR care. High-quality CPR is the foundation of first aid and emergency medical care that can maximize outcomes after spontaneous movement returns. It is very important that all adults in a community know CPR to save lives in out - of-hospital SCAs. BLS knowledge and CPR technique practice guarantees the patient's survival long enough until skilled medical assistance arrives and is necessary for patient survival in most situations. Cardiac injuries and accidents, if not treated immediately, leave the patients with serious fatal morbidities. Fast detection and intervention of victims of cardiac arrest by administering CPR is the foundation of BLS, which aims to maintain the patient's life before medical care arrives and the patient is moved for further clinical treatment to hospital settings. Because of its scope and application, the present study is important in planning future plans and educational strategies to prepare traffic police for BLS / CPR training and their potential community assistance, particularly in the case of accidents. In view of the vulnerability of high-road trauma incidents, the significance of the present study will be highlighted, and the traffic police are the first person to encounter road accidents, therefore BLS / CPR education will improve the current situation.

### **Conclusion:-**

Furthermore, the timely introduction of BLS/CPR increases dramatically the cardiac arrest outcomes and predictions. BLS / CPR is an aspect of primary assistance training. This study demonstrated the understanding and familiarity of BLS/CPR traffic police officers and the approach to BLS training. The results show that the traffic police officers are well aware of the overall standard of BLS/CPR training and that major changes are needed to save lives. Our findings support the recommendation of first-aid services for all traffic police officers, including preliminary BLS/CPR training courses in their field of posting.

### **Recommendations:-**

Further analysis, using demonstration checklists to assess respondents' success after completing training, is recommended. BLS training is recommended regardless of the course you have taken, so that information is preserved so that it can be used when needed.

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