

Original Research Article

Dentist Awareness about Basic Life Support in Dental Colleges of NCR

Dr. Kumar Ravishankar^{1*}, Dr. Radhika Gupta², Dr. Roseneel Attreya³, Dr. Pranav Vaid⁴, Dr. Madhav Logani⁵, Dr. Mamta Singh⁶

¹MDS, Assistant Professor, Department of Periodontology, Aditya Dental College, Beed- 431122, India

²PGT, Department of Prosthodontics and Crown and Bridge, Subharti Dental College, Swami Vivekanand Subharti University, Meerut, U.P. India

³BDS, Dental Practitioner, Dr. Roseneel's Dental Clinic, New Delhi, India

⁴Subharti Dental College, Swami Vivekanand Subharti University, Subhartipuram, Delhi-Meerut-Haridwar Bypass, PIN Code: 250005, India

⁵BDS, Subharti Dental College, Swami Vivekanand Subharti University, Subhartipuram, Delhi-Meerut-Haridwar Bypass, PIN Code: 250005, India

⁶MDS, Assistant Professor, Department of Periodontics, Kothiwal Dental College and Research Centre, Mora Mustaqueem, Kanth Road, Moradabad, 244001, India

***Corresponding Author**

Dr. Kumar Ravishankar

Article History

Received: 27.01.2021

Accepted: 13.02.2021

Published: 19.02.2021

Abstract: *Aim:* This study aimed to assess Dentist Awareness of Basic life Support (BLS) among Dental colleges of NCR U.P India. *Materials and Methods:* A cross-sectional questionnaire survey was carried out in randomly selected 3 dental colleges out of 6 pursuing post-graduation courses in NCR. A prior permission was obtained from the concerned college authorities. The study was conducted by assessing responses to 20 selected basic questions regarding BLS among M.D.S Staff, P.G Student, and B.D.S Staff. A questionnaire with 20 questions regarding the awareness and skills involved in BLS was used to assess the levels of awareness to BLS and its practical knowledge. The aspects on which they were interrogated were about the abbreviation of BLS, AED and EMS (Emergency Medical Service), sequential steps in BLS, assessment and resuscitation techniques with regard to airway, breathing, circulation in unresponsive victims of different age groups, techniques regarding removal of foreign body obstruction, recognition of early signs of stroke and acute coronary syndrome. *Results:* The findings of present study are somewhat similar to Chandrashekar S *et al.*, [1] who stated that medical, dental, nursing students & faculty in the study group were severely lacking in the awareness of BLS whereas in the present study BDS faculty and postgraduates of dental were same but MDS faculty were somewhat aware about BLS. On comparison MDS Faculty showed more awareness as compared to PG student and BDS faculty in this study. *Conclusions:* It is also equally important that teachers, school children, public and all lay persons from the community be taught the facts of basic life support and first aid.

Keywords: Tooth agenesis; Proband, oligodontia; hypodontia; PAX9; nonsense mutation.

INTRODUCTION

Basic life support (BLS) is a level of medical care which is used for victims of life-threatening illnesses or injuries until they can be given full medical care at a hospital. It can be provided by trained medical personnel, including emergency medical technicians, paramedics, and by laypersons who have received BLS training [2].

Basic life support (BLS) includes recognition of signs of sudden cardiac arrest (SCA), heart attack, stroke, foreign-body airway obstruction (FBAO); cardiopulmonary resuscitation (CPR); and defibrillation with an automated external defibrillator (AED). It is very important that every person in the community know about BLS to save lives and improve the quality of community health [3].

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

MATERIALS AND METHODS

A cross-sectional questionnaire survey was carried out in randomly selected 3 dental colleges out of 6 pursuing post-graduation courses in NCR. A prior permission was obtained from the concerned college authorities. The study was conducted by assessing responses to 20 selected basic questions regarding BLS among M.D.S Staff, P.G Student and B.D.S Staff.

A questionnaire with 20 questions regarding the awareness and skills involved in BLS was used to assess the levels of awareness to BLS and its practical knowledge. The aspects on which they were interrogated were about the abbreviation of BLS, AED and EMS (Emergency Medical Service), sequential steps in BLS, assessment and resuscitation techniques with regard to airway, breathing, circulation in unresponsive victims of different age groups, techniques regarding removal of foreign body obstruction, recognition of early signs of stroke and acute coronary syndrome (Table-1).

Table 1:

A. Demographic Information

1. Sex

- a. Male
- b. Female

2. What is your academic status

- a) MDS Staff
- b) Post graduate student
- c) BDS staff

B. Questionnaire

1) What is the abbreviation of “BLS”?

- a) Best Life Support
- b) Basic Life Support
- c) Basic Lung Support
- d) Basic Life Services
- e) I don't know

2. When you find someone unresponsive in the middle of the road, what will be your first response? (Note: You are alone there)

- a) Open airway
- b) Start chest compression
- c) Look for safety
- d) Give two breathings
- e) I don't know

3. What does abbreviation of EMS stand for?

- a) Effective Medical Services
- b) Emergency Management Sciences
- c) Emergency Medical Services
- d) External Medical Support
- e) I don't know

4. What does abbreviation AED stands for?

- a) Automated External Defibrillator
- b) Automated Electrical Defibrillator
- c) Advanced Electrical Defibrillator
- d) Advanced External Defibrillator
- e) I don't know

5. If you confirm somebody is not responding to you even after shaking and shouting at him, what will be your immediate action?

- a) Start CPR
- b) Activate EMS
- c) Put him in recovery position
- d) Observe
- e) I don't know

6. What is the location for chest compression in a patient having no obvious injuries?

- a) Left side of the chest
- b) Right side of the chest
- c) Mid chest
- d) Xiphisternum
- e) I don't know

7. What is the location for chest compression in infants having no chest injury?

- a) One finger breadth below the nipple line
- b) One finger breadth above the nipple line
- c) At the intermammary line
- d) At Xiphisternum
- e) I don't know

8. If you do not want to give mouth-to-mouth CPR, the following can be done EXCEPT

- a) Mouth-mask ventilation and chest compression
- b) Chest compression only
- c) Bag mask ventilation with chest compression
- d) No CPR
- e) I don't know

9. How do you give rescue breathing in infants?

- a) Mouth-to-mouth with nose pinched
- b) Mouth-to-mouth and nose
- c) Mouth-to-nose only
- d) Mouth-to-mouth without nose pinched
- e) I don't know

10. Depth of compression in adults during CPR

- a) 1½ – 2 inches
- b) 2½ – 3 inches
- c) 1 – 1½ inches
- d) ½ – 1 inch
- e) I don't know

11. Depth of compression in Children during CPR

- a) 1½ – 2 inches
- b) 2½ – 3 inches
- c) One-half to one-third depth of chest
- d) ½ – 1 CM
- e) I don't know

12. Depth of compression in neonates during CPR

- a) 1½ – 2 inches
- b) 2½ – 3 inches
- c) ½ – 1 CM
- d) One-half to one-third depth of chest
- e) I don't know

13. Rate of chest compression in adult and Children during CPR

- a) 100 / min
- b) 120 / min
- c) 80 / min
- d) 70 / min
- e) I don't know

14. Ratio of CPR, single rescuer in adult is

- a) 15:2
- b) 5:1
- c) 30:2

- d) 15:1
- e) I don't know

15. In a new born the chest compression and ventilation ratio is

- a) 15:2
- b) 5:1
- c) 30:2
- d) 3:1
- e) I don't know

16. If you and your friend are having food in a canteen and suddenly your friend starts expressing symptoms of choking, what will be your first response?

- a) Give abdominal thrusts
- b) Give chest compression
- c) Confirm foreign body aspiration by talking to him
- d) Give back blows
- e) I don't know

17. You are witnessing an infant who suddenly started choking while he was playing with the toy, you have confirmed that he is unable to cry (or) cough, what will be your first response?

- a) Start CPR immediately
- b) Try to remove the suspected foreign body by blind finger sweeping technique
- c) Back blows and chest compression of five cycles each then open the mouth and remove foreign body only when it is seen
- d) Give water to the infant
- e) I don't know

18. You are witnessing an adult unresponsive victim who has been submerged in fresh water and just removed from it. He has spontaneous breathing, but he is unresponsive. What is the first step?

- a) CPR for two minutes and inform EMS
- b) CPR for one minute and inform EMS
- c) Compress the abdomen to remove the water
- d) Keep him in recovery position
- e) I don't know

19. You noticed that your colleague has suddenly developed slurring of speech and weakness of right upper limb. Which one of the following can be done?

- a) Offer him some drinks, probably hypoglycemia
- b) Possibly stroke, get him to the nearest clinic
- c) Possibly stroke, he may require thrombolysis and hence activate emergency medical services
- d) May be due to sleep deprivation, make him sleep.
- e) I don't know

20. A 50-year-old gentleman with retrosternal chest discomfort, profuse sweating and vomiting. What is next?

- a) Probably myocardial infarction, hence activates EMS, give an aspirin tablet and allow him to rest
- b) Probably acid peptic disease, give antacid and Ranitidine
- c) Probably indigestion, hence give soda
- d) Take him by walk to the nearest clinic.
- e) I don't know

STATISTICAL ANALYSIS

This study used descriptive statistics for general data presentation (pie-chart and Graphs) by using SPSS 20 version.

RESULTS

After excluding, the incomplete response forms the data was analyzed on 340 responders. The results were analyzed using an answer key prepared from the advanced cardiac life support manual (Table-2).

Table 2: Answer Key

**1 (b) 6 (c) 11 (d) 16 (c)
2 (c) 7 (a) 12 (a) 17 (c)
3 (c) 8 (d) 13 (c) 18 (d)
4 (a) 9 (b) 14 (d) 19 (c)
5 (b) 10 (c) 15 (a) 20 (a)**

Out of 340 responders 144 were male and 196 were female. 233 were MDS staff, 81 were post graduate students and 26 were BDS staff. 85.6% of the responders knew while 24.4% of the responders did not know the abbreviation of BLS as Basic life support. 46.2% failed to insist on looking for safety as the first step in BLS. 36.5% did not know the abbreviation of EMS ‘Emergency Medical Service’. 53.8% did not know the abbreviation of AED was ‘automated external defibrillator’. 32.9% failed to insist on activating EMS immediately after confirming the unresponsiveness in an adult.

65.6% did not know that the right location of chest compression was the mid chest. 72.4% of the responders did not know that the correct location of chest compression in an infant was one finger breadth just below the nipple line.

63.2% of the responders did not know alternative techniques of resuscitation when mouth-to-mouth ventilation was not opted. 65.9% of the responders ailed to select mouth-to-mouth and nose technique as the rescue breathing for infants. 69.4% did not know that the depth of chest compression in an adult was 1.5 to 2 inches.

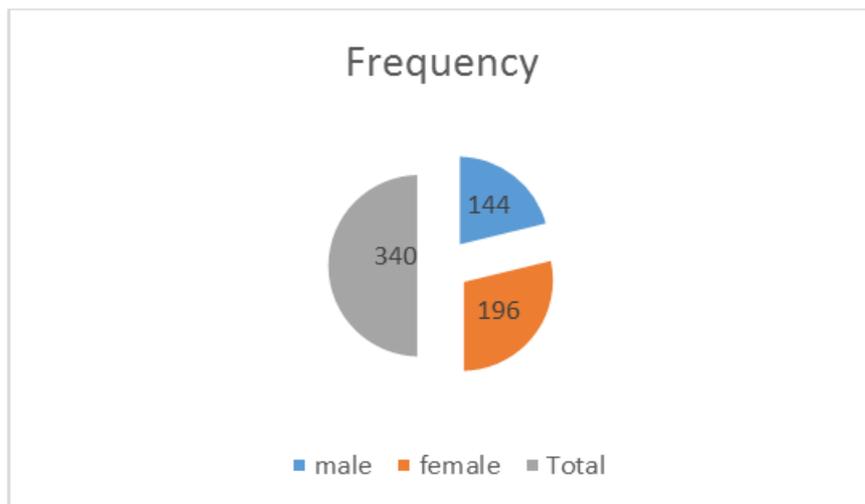
81.5% did not know that the depth of chest compression in a child was one-third to one-half the depth of the chest. 83.8% did not know that the chest compression in an infant was one-third to one-half the depth of the chest. Only 50.6% of the responders answered the rate of chest compression as 100/minute in adults and children CPR.

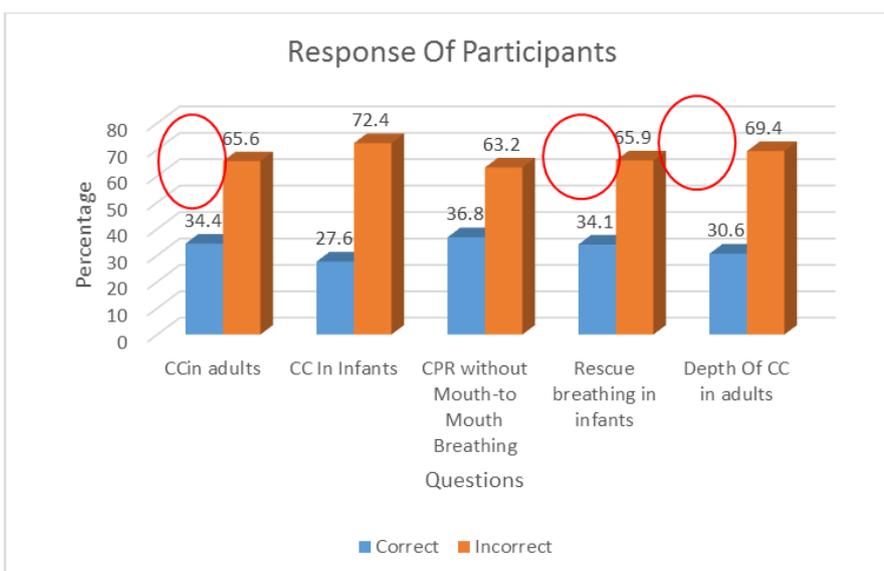
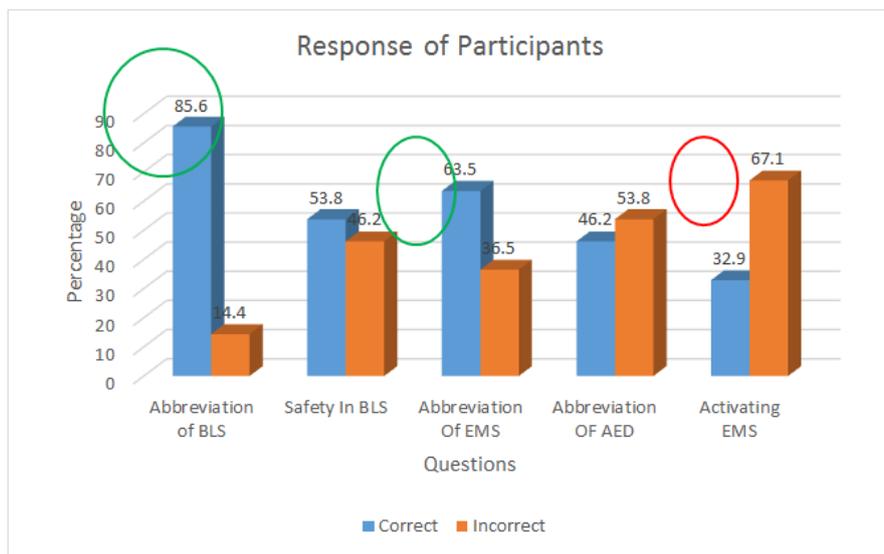
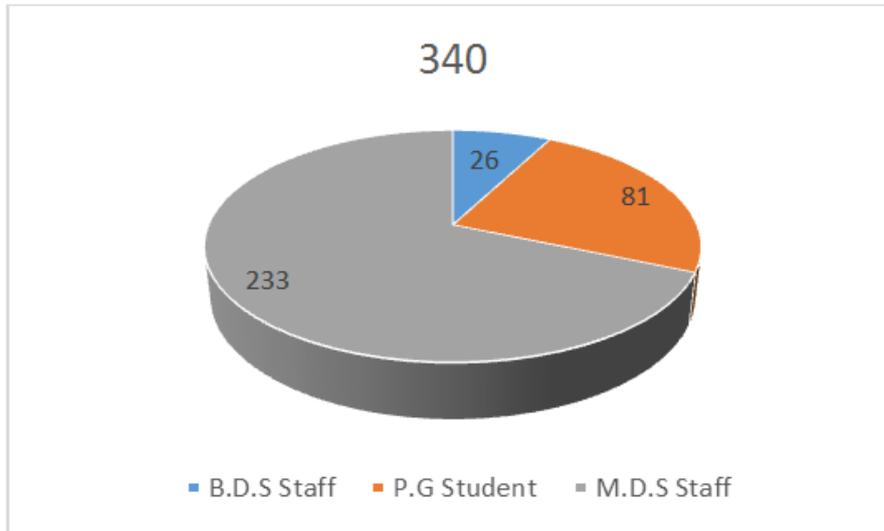
Only 35.9% of the responders had correctly answered that the compression ventilation ratio in a child and adult single rescuer CPR was 30:2. Only 33.5% knew that the ratio of compression ventilation in a new born was 3:1.

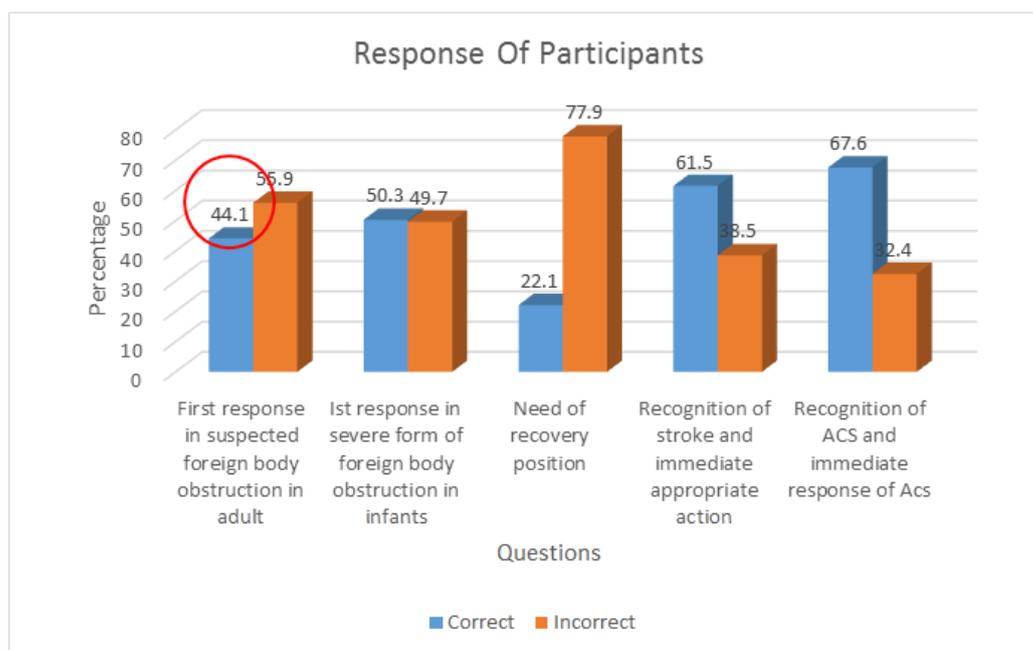
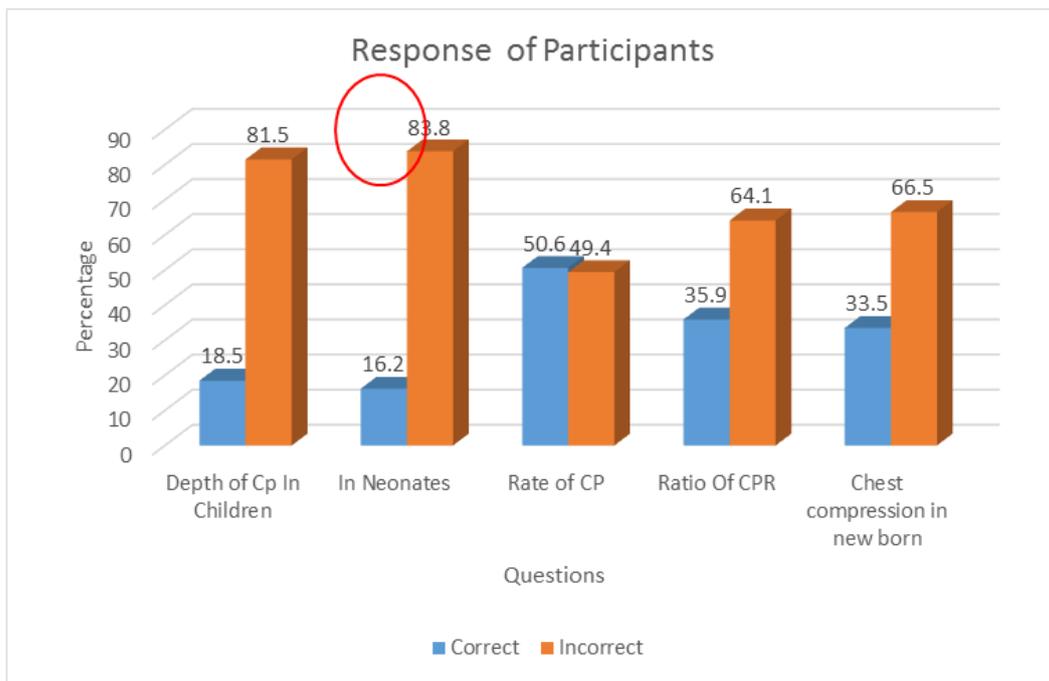
55.9% did not know that the first step in helping a suspected foreign body obstruction victim is to confirm the severity of obstruction by talking to him. 50.3% were aware about the right technique of foreign body removal from an infant. Only 22.1% knew about the role of the recovery position in a spontaneously breathing unresponsive victim.

60.1% of the responders did not know the early signs of stroke and only 32.4% per cent new how to recognise and help a patient with acute coronary syndrome.

No one among them had complete Knowledge of BLS. 248 out of 340(73%) had secured less than 50% marks:







DISCUSSION

The findings of present study are somewhat similar to Chandrasekaran S *et al.*, [1] who stated that medical, dental, nursing students & faculty in the study group were severely lacking in the awareness of BLS whereas in the present study BDS faculty and postgraduates of dental were same but MDS faculty were somewhat aware about BLS [4].

On comparison MDS Faculty showed more awareness as compared to PG student and BDS faculty in this study. So, It is also equally important that teachers, school children, public and all lay persons

from the community be taught the facts of basic life support and first aid [5].

CONCLUSIONS

Awareness of Basic Life Support (BLS) among B.D.S Staff, Post Graduates and M.D.S Staff in various colleges is very poor and needs to be improved.

REFERENCES

1. Chandrasekaran, S., Kumar, S., & Bhat, S. A. (2010). Awareness of basic life support among

- medical, dental, nursing students and doctors. *Indian journal of Anaesthesia*, 54(2), 121.
2. Beck, J. D., Eke, P., Heiss, G., Madianos, P., Couper, D., Lin, D., ... & Offenbacher, S. (2005). Periodontal disease and coronary heart disease: a reappraisal of the exposure. *Circulation*, 112(1), 19-24.
 3. Skinner, D. V., Camm, A. J., & Miles, S. (1985). Cardiopulmonary resuscitation skills of preregistration house officers. *British medical journal (Clinical research ed.)*, 290(6481), 1549-1550.
 4. Casey, W. F. (1984). Cardiopulmonary resuscitation: A survey among junior hospital doctors. *J R Soc Med*, 77, 921-924.
 5. Steen, P. A., & Kramer-Johansen, J. (2008). Improving cardiopulmonary resuscitation quality to ensure survival. *Current opinion in critical care*, 14(3), 299-304.

CITATION: Kumar Ravishankar *et al* (2021). Dentist Awareness about Basic Life Support in Dental Colleges of NCR *South Asian Res J Oral Dent Sci*, 3(1): 17-24.