DOI: https://doi.org/ 10.61427/jcpr.v4.i2.2024.123.
Vithanala Srinivasa Rao et al., J.Clin.Pharm.Res., 2024; 4(2): 4-6.

Journal of
Clinical and Pharmaceutical Research

RESEARCH OPEN ACCESS

A Study on the Assessment of Knowledge about Basic Life Support among Undergraduate and Post graduate Science Students

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ARTICLE INFO

Article History:
Received: 15.02.2024
Revised: 18.03.2024
Accepted: 21.04.2024

Keywords :
Basic Life Support
Cardiopulmonary Resuscitation
Medical Emergency

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ABSTRACT

Aim: To assess the knowledge about basic life support among undergraduate and post graduate science students.
Methods: A prospective observational study was conducted among the students of different colleges with various science courses. A total of 140 study participants were included in the study based on the study criteria. The data was collected using a questionnaire designed with the google form. The questionnaire consists of 20 questions regarding the basic life support. The google form was circulated among the social media groups and the responses recorded were analysed and interpreted. Students of both the genders of age above 18 years studying various science courses were included and students other than the life science courses in various colleges were excluded from the study.
Results: A total of 140 study participants were included in this study. Among them, 45 (32.1%) were found to be males and 95 (67.9%) were found to be females. Most of the study participants were in the age group 21-25 years (56.4%). In this study, a total of 20 questions were given in order to assess the knowledge of the students in the aspect of basic life support. Among the 140 study participants, 59 (42.1%) were observed to be with good knowledge, 75 (53.6%) were observed with moderate knowledge and 6 (4.3%) were observed to be with poor knowledge in the aspect of basic life support.
Conclusion: In this study, most of the study participants were having moderate knowledge (53.6%) followed by good knowledge (42.1%) in the aspect of basic life support. Almost 95.7% were having ample knowledge in the aspect of dealing the basic life support measures which seems to be very good sign and lack of knowledge in dealing these aspects among the various science background students will definitely impact the society in a negative way. In conclusion, we recommend the training in CPR/BLS should be implemented in the curriculum of all the students itself which will definitely be a valuable life saving skill set to the society.

Introduction

Basic Life Support will be the first line therapy which can be given by the bystander in the aspect of any injury or illness until the initiation of the medical intervention [1,2]. The survival rate of the patient depends on the early identification of the symptoms, accessing the emergency medical services at the initial stages and the bystanders providing basic life support.

In some studies, it was reported that BLS can decrease the risk of recurrence and associated complications related to the disease [2]. The standard BLS can include the identification of the sudden cardiac arrest (SCA), strokes, obstruction of airways by the external agents, heart attacks, usage of the CPR with automated external defibrillators and defibrillation [3,4]. In case of emergency situations, sufficient knowledge should be there for the individuals to provide the life saving measures. Globally, sudden cardiac arrest can be the predominant cause of death in various communities which can be associated with different survival rates [7,8]. Mortality & morbidity can be decreased by identification of the cardiac arrest at the early stages and by immediate initiation of cardiopulmonary resuscitation (CPR) [5-10].

Basic life support can be mediated by the first person and the usage of automated external defibrillator (AED) may double the probability of survival rate. Insufficient knowledge & training, low self-confidence, lack of skill and fear of the consequences of legal action can be the reasons or difficulties faced by the bystanders to perform the CPR [11].

To provide adequate care, there is necessity to train the individuals within the community regarding the BLS either through online mode or in person [12]. Creating awareness among the public and understanding the concept of BLS will be helpful in the management of the outcomes in emergency situations. The chance of survival rate of the patient is not only a major concern for the health care professionals but also for the general public, who have the opportunity to take an action while witnessing the accidents or injuries. There is a requirement of sufficient knowledge and awareness among the

doctors, other health care professionals and students to handle the medical emergencies. Creating awareness regarding the basic life support can acknowledge the social responsibility and strengthen the values. The main aim of this study is to assess the knowledge about basic life support among undergraduate and post graduate science students.

Materials and Methods

A prospective observational study was conducted among the students of different colleges with various science courses. A total of 140 study participants were included in the study based on the study criteria. Students of both the genders of age above 18 years studying various science courses were included and students other than the science courses were excluded from the study. The data was collected using a questionnaire designed with the google form. The questionnaire consists of 20 questions regarding the basic life support. The google form was circulated among the social media groups and the responses recorded were analysed and interpreted. [8].

Results and Discussion

A total of 140 study participants were included in this study. Among them, 45 (32.1%) were found to be males and 95 (67.9%) were found to be females.

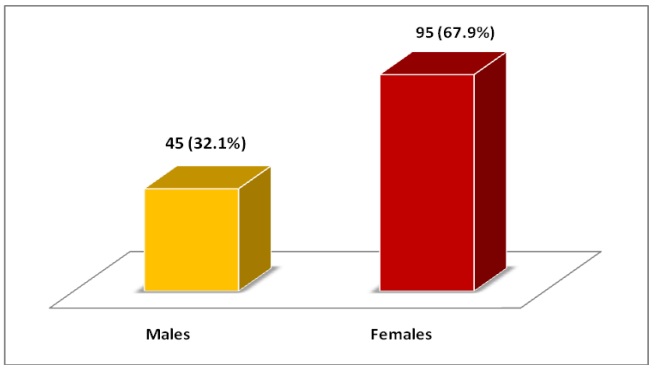

Figure 1: Gender wise categorization the study participants

Table 1 represents the age wise categorization of the study participants. Most of the study participants were in the age group 21-25 years (56.4%).

Table 1: Age wise categorization of the study participants

Age (in years)	Males (%)	Females (%)	Total (%)
≤ 20	9 (20)	32 (33.7)	41 (29.3)
21-25	30 (66.7)	49 (51.6)	79 (56.4)
≥ 26	6 (13.3)	14 (14.7)	20 (14.3)
Total	**45 (100)**	**95 (100)**	**140 (100)**

In this study, a total of 20 questions were given in order to assess the knowledge of the students in the aspect of basic life support. All the responses were recorded and were represented under table 2.

Table 2: Responses of the study participants

Q. No	Question	Correct (%)	Incorrect (%)	Total (%)
1	What do you mean by basic life support?	135 (96.4)	5 (3.6)	140 (100)
2	What does CPR stands for?	117 (83.6)	23 (16.4)	140 (100)
3	What does AED stands for?	67 (47.9)	73 (52.1)	140 (100)
4	What are the four links in chain of survival?	104 (74.3)	36 (25.7)	140 (100)
5	You come upon a person who has lost a significant amount of blood has a very pale skin colour and is confuse. What do you suspect the cause to be?	86 (61.4)	54 (38.6)	140 (100)
6	If you come across a collapsed victim what is the first thing you should do?	109 (77.9)	31 (22.1)	140 (100)
7	After finding an unresponsive child andconfirming that the child is not breathing what would be your next course of action?	58 (41.4)	82 (58.6)	140 (100)
8	What is the first thing you should do for severe bleeding?	71 (50.7)	69 (49.3)	140 (100)
9	If an adult person after accident is not responding to you even after shacking and shouting him what will be your immediate action plan?	111 (79.3)	29 (20.7)	140 (100)
10	Do you recommend performing mouth to mouth ventilation in cardiac arrest victims?	73 (52.1)	67 (47.9)	140 (100)
11	The recommended way to determine if a person is unresponsiveness to?	91 (65)	49 (35)	140 (100)
12	The preferred way to check for a person for breathing is to?	102 (72.9)	38 (27.1)	140 (100)
13	When an AED should be used?	72 (51.4)	68 (48.6)	140 (100)
14	When treating a 3rd-degree burn (severe burn), what you should do?	106 (75.7)	34 (24.3)	140 (100)
15	What is the recommended position for a person to be in when you are doing CPR?	130 (92.9)	10 (7.1)	140 (100)
16	Who can use an AED pads?	82 (58.6)	58 (41.4)	140 (100)
17	The first step to respond to someone with low blood sugar is to?	130 (92.9)	10 (7.1)	140 (100)
18	How should you do chest compressions on a small child?	77 (55)	63 (45)	140 (100)
19	When should you stop doing CPR on a victim?	66 (47.1)	74 (52.9)	140 (100)
20	What are the precautions to be followed while using an AED?	113 (80.7)	27 (19.3)	140 (100)

Among the 140 study participants, 59 (42.1%) were observed to be with good knowledge, 75 (53.6%) were observed with moderate knowledge and 6 (4.3%)

were observed to be with poor knowledge in the aspect of basic life support.

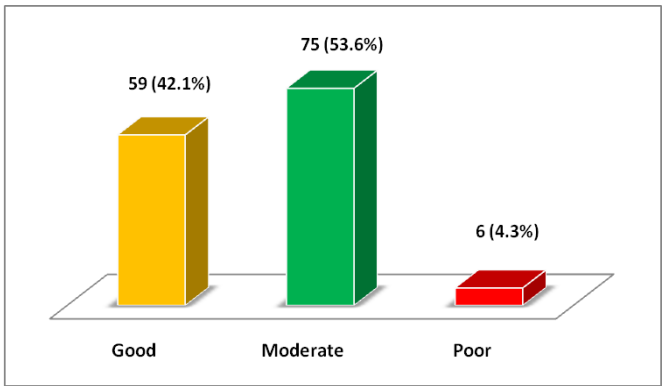

Figure 2: Grading of the knowledge based on responses to the questionnaire

Conclusion

In this study, most of the study participants were having moderate knowledge (53.6%) followed by good knowledge (42.1%) in the aspect of basic life support. Almost 95.7% were having ample knowledge in the aspect of dealing the basic life support measures which seems to be very good sign and lack of knowledge in the dealing these aspects among the various science background students will definitely impact the society in a negative way. In conclusion, we recommend the training in CPR/BLS should be implemented in the curriculum of all the courses which will definitely be a valuable life saving skill set to the society.

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